AMENDED AGENDA

City Council
Rich Kerr, Mayor
Jermaine Wright Sr. Mayor Pro Tem
Ed Camargo, Councilor
Charley B. Glasper, Councilor
John R. Woodard, Councilor

City Manager
Cynthia M. Herrera, MMC
City Manager

City Attorney
Curtis R. Wright, Esq.

REGULAR MEETING OF THE ADELANTO CITY COUNCIL, ADELANTO PUBLIC UTILITY AUTHORITY, ADELANTO COMMUNITY BENEFIT CORPORATION, AND THE SUCCESSOR AGENCY BOARD

JUNE 22, 2016

Adelanto Governmental Center
City Council Chambers
11600 Air Expressway, Adelanto

Closed Session: 6:00 p.m.
Open Session: 7:00 p.m.

Meetings held:
2nd & 4th Wednesday

NOTE: PLEASE TURN CELL PHONES OFF OR PLACE THEM ON VIBRATE DURING THE CITY COUNCIL MEETING AS A COURTESY TO OTHERS.

MEMBERS OF THE PUBLIC WISHING TO ADDRESS THE CITY COUNCIL MEMBERS ARE REQUIRED TO FILL OUT A SPEAKER REQUEST FORM AND PLACE IT IN THE TRAY ON THE PODIUM PRIOR TO MEETING. *Thank you, Administrative Staff*

The City Council packet may be reviewed by the public at the reception counter in City Hall. Any writings or documents pertaining to an open session item, provided to a majority of the City Council Members within 72 hours of a regular meeting, shall be made available for public inspection at the reception counter in City Hall at 11600 Air Expressway, Adelanto, California 92301, during normal business hours. Members of the public can view the agenda or download any staff reports in advance by accessing the City website at www.ci.adelanto.ca.us on Thursday the week before the scheduled meeting.

AMERICANS WITH DISABILITIES ACT: In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the City Clerk Department at (760) 246-2300 ext. 3018 no later than 72 hours prior to the meeting. (28 CFR 34.102.104)

A. CALL TO ORDER—CLOSED SESSION

TIME: _____

ROLL CALL:

Councilor Camargo	_____
Councilor Glasper	_____
Councilor Woodard	_____
Mayor Pro Tem Wright	_____
Mayor Kerr	_____

B. ANNOUNCEMENT OF CLOSED SESSION ITEMS

1. CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION PER GOVERNMENT CODE SECTION 54956.9(d)(1).

   (a) Adelanto Successor Agency et al. v. Walker et al., Sacramento County Superior Court case No. 34-2013-80001498

   (b) City of Adelanto v. Main Street Calif. LLC, DBA High Desert Mavericks, Case No. UD1600284 and SBSC Case No. CIVDS 1601251

2. CONFERENCE WITH LEGAL COUNSEL—ANTICIPATED LITIGATION PER GOVERNMENT CODE SECTION 54956.9(d)(2): 3 CASES.

C. PUBLIC COMMUNICATIONS ON CLOSED SESSION ITEMS

1.

D. CONVENE INTO CLOSED SESSION

TIME: _____

1. Motion to go into Closed Session.

M_____ **S**_____ **ACTION**_____

E. CALL TO ORDER—REGULAR MEETING

TIME: _____

ROLL CALL:

Councilor Camargo	_____
Councilor Glasper	_____
Councilor Woodard	_____
Mayor Pro Tem Wright	_____
Mayor Kerr	_____

INVOCATION: Desert Streams Baptist Church

FLAG SALUTE: _____

F. CONFLICTS OF INTEREST

1. Councilmembers will announce any possible Conflicts of Interest with the Agenda.

G. CLOSED SESSION REPORT

1. City Attorney or City Manager will make an oral report on any reportable actions taken in Closed Session.

H. DELETIONS/ADDITIONS TO AGENDA

1. City Manager to announce if there is any addition/removal of items from the agenda.

I. PRESENTATIONS

J. PUBLIC COMMUNICATIONS

Members of the public wishing to address the City Council Members are required to fill out the yellow speaker card and place it in the **SPEAKER CARD TRAY located on the podium**. The Clerk of the meeting will collect the cards and hand them to the Chair. **REMEMBER ONE CARD PER PERSON you can mark the card to address various items on the agenda**.

This is the time and place for members of the public to comment on any matter within the jurisdiction of the City Council. After receiving recognition from the Chair, the speaker will walk to the podium and state their name for the record. There is a time limit of three (3) minutes when giving your presentation.

Members of the audience may address the City Council on non-agenda items; however, in accordance with Government Code section 54954.2, the City Council may not take action on an item not appearing on the posted agenda.

K. CONSENT CALENDAR

Items on the Consent Calendar are considered routine in nature and non-controversial, and require no further discussion by the City Council. They may be acted on in one motion unless a member of the City Council or member of the audience requests a separate discussion on an item.

MOTION APPROVING THE CONSENT CALENDAR AS PRESENTED

1. Motion waiving the full reading of all ordinances and resolutions. Titles for ordinances and resolutions which appear on the public agenda shall be determined to have been read by title and further reading waived.

2. Approval of Meeting Minutes: May 25, 2016 – Regular Meeting
   June 7, 2016 – Workshop
   June 8, 2016 – Regular Meeting

3. Approval of Commercial and Residential Solid Waste and Recycling Department Report. (April)

4. Approval of Fire Department Report.

5. Approval of Code Compliance Department Report.

6. Approval of Animal Control Department Report.

7. Approval of Grant Writing Services Agreement with California Consulting Company.

8. Approval of Contract for Fire Services with San Bernardino County for Fiscal Year 2016-17.

9. Approval of 20th Amendment to Contract No. 01-1251 with San Bernardino County Sheriff's Department for Fiscal Year 2016-17.

10. Approval of Resolution No. 16-34 General Fund – Budget Amendment

RESOLUTION NO. 16-34

A RESOLUTION OF THE CITY COUNCIL OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA, AMENDING THE BUDGET, ADDING AND APPROPRIATING FUNDS FOR THE MUNICIPAL BUDGET YEAR 2015-2016

11 Approval of Inter-local Agreement Concerning Distribution of the 2016 Justice Assistance Grant Award

12. Approval of Resolution No. 16-35 – Amending Employee Emergency Loan Fund, and Repealing Resolution No. 12-47

RESOLUTION NO. 16-35

A RESOLUTION OF THE CITY COUNCIL, OF THE CITY OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA, ESTABLISHING AN EMPLOYEE EMERGENCY LOAN FUND, AND REPEALING RESOLUTION 12-47

13. Approval of Resolution No. 16-39, entitled:

RESOLUTION NO. 16-39

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA, CALLING AND GIVING NOTICE OF A GENERAL MUNICIPAL ELECTION TO BE HELD ON TUESDAY, NOVEMBER 8, 2016, FOR THE ELECTION OF CERTAIN OFFICERS AS REQUIRED BY THE PROVISIONS OF THE LAWS OF THE STATE OF CALIFORNIA RELATING TO CHARTER CITIES; AND REQUESTING THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO TO CONSOLIDATE A GENERAL MUNICIPAL ELECTION TO BE HELD ON NOVEMBER 8, 2016, WITH THE STATEWIDE GENERAL ELECTION TO BE HELD ON THE DATE PURSUANT TO SECTION 10403 OF THE ELECTION CODE

14. Approval of Resolution No. 16-40, entitled:

RESOLUTION NO. 16-40

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA, ADOPTING REGULATIONS FOR CANDIDATES FOR ELECTIVE OFFICE PERTAINING TO CANDIDATES STATEMENTS SUBMITTED TO THE VOTERS AT AN ELECTION TO BE HELD ON TUESDAY, NOVEMBER 8, 2016

15. Approval of Warrant:

a. Approval of City of Adelanto Warrant, 15/16-12-01, 134214 through 134304, for the total amount of $1,139,570.31.

b. Approval of City of Adelanto Electronic Fund Transfer, 15/16-12-01, 153 through 157, for the total amount of $20,685.14.

L. PUBLIC HEARING

PUBLIC HEARING OPEN: _____ **PUBLIC HEARING CLOSED: _____**

1. PUBLIC HEARING: APPROVAL OF THE 2015 URBAN WATER MANAGEMENT PLAN AND ORDER THE REPORT TO BE FILED WITH THE DEPARTMENT OF WATER RESOURCES. (Denise Landstedt)

RECOMMENDATION: Open Public Hearing and adopt APUA Resolution No. 16-01 approving the 2015 Urban Water Management Plan and order the report to be filed with the Department of Water Resources.

APUA RESOLUTION NO. 16-01

A RESOLUTION OF THE ADELANTO PUBLIC UTILITY AUTHORITY OF THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, CALIFORNIA, APPROVING THE 2015 URBAN WATER MANAGEMENT PLAN ADOPTION AND ORDERING THE REPORT TO BE FILED WITH THE DEPARTMENT OF WATER RESOURCES

M_____**S**_____**ACTION**_____

PUBLIC HEARING OPEN: _____ **PUBLIC HEARING CLOSED: _____**

2. PUBLIC HEARING: MEDICAL MARIJUANA MANUFACTURING APPLICATION FEE. (Mark De Manincor)

RECOMMENDATION: Adopt Resolution 16-36, adopt finding and approve the proposed Medical Marijuana Manufacturing Permit Application Fee.

RESOLUTION NO. 16-36

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, CALIFORNIA ADOPTING A MEDICAL MARIJUANA MANUFACTURING PERMIT APPLICATION FEE AND MAKING FINDINGS IN SUPPORT THEREOF

M_____S_____ACTION_____

M. ITEMS REMOVED FROM THE CONSENT CALENDAR

N. CITY MANAGERS ANNOUNCEMENTS AND REPORTS

O. ADJOURNMENT

The next Workshop Meeting of the City Council will be held on June 23, 2016 at 2:00 p.m. A Special Meeting of the City Council will be held on June 29, 2016 at 4:00 p.m.

TIME OUT: _____

M_____S_____ACTION_____

P. DECLARATION OF POSTING

I, CINDY M. HERRERA, CITY CLERK OF THE CITY OF ADELANTO, OR MY DESIGNEE, HEREBY CERTIFY THAT A TRUE, ACCURATE COPY OF THE FOREGOING AGENDA WAS POSTED ON JUNE 16, 2016, SEVENTY TWO (72) HOURS PRIOR TO THE MEETING PER GOVERNMENT CODE 54954.2 IN THE GOVERNMENTAL CENTER'S DISPLAY CASE, 11600 AIR EXPRESSWAY, AND ADELANTO, CALIFORNIA.

CYNTHIA M. HERRERA, CITY CLERK, MMC

YOUR CITY GOVERNMENT

CHARTER CITY: Ratified by the electors of the City at an election on November 3, 1992. "A Charter City can do what the Charter permits it to do, so long as there is not direct violation of the State Constitution."

CITY COUNCIL: The City Council of the legislative and policy-making body of the City. The City Council is composed of one elected Mayor and four Council Members, elected at large (to represent the entire City), to serve four year, staggered terms.

CITY MANAGER: The City Manager is the chief executive officer responsible for the administration of City affairs.

CITY COUNCIL MEETING: The regular meeting of your City Council is a vital part of the democratic process in the conduct of the City's affairs. These meetings are open to the public and conducted by your elected representatives who are responsible, as a body, for the operation of Adelanto's City Government. The Council appreciates your interest and urges citizen participation in government matters.

LEGISLATIVE TERMS

ORDINANCES: Ordinances are the means by which the City enacts its local laws. Unless an urgent situation exists, ordinances will first be presented at a Council meeting as a "first reading." At a subsequent Council meeting, there will be a second reading and adoption. Ordinances go into effect after a waiting period of thirty days, in most cases, during which time the summary of the ordinance is published in a local newspaper approved for this purpose.

RESOLUTIONS: Resolutions and minute orders are the means by which the City Council formally adopts policies or approves specific actions. These go into effect when adopted.

City of ADELANTO

Rich Kerr
Mayor

Jermaine Wright Sr.
Mayor Pro-Tem

Ed Camargo
Council Member

Charley B. Glasper
Council Member

John "Bug" Woodard Jr.
Council Member

Cynthia M. Herrera, MMC
City Manager

MEETING NOTICE

NOTICE OF A JOINT MEETING OF THE

CITY OF ADELANTO CITY COUNCIL

AND ADELANTO PUBLIC FINANCING AUTHORITY

AND ADELANTO PUBLIC UTILITY AUTHORITY

AND ADELANTO COMMUNITY BENEFIT CORPORATION
AND
THE SUCCESSOR AGENCY BOARD

NOTICE IS HEREBY GIVEN that the meeting of City Council, Adelanto Public Financing Authority, Adelanto Public Utility Authority, Adelanto Community Benefit Corporation, and the Successor Agency Board of the City of Adelanto will meet in a Joint Meeting at the following time and place.

TIME

Closed Session: 6:00 P.M.
Regular Meeting: 7:00 P.M.
Wednesday
June 22, 2016

PLACE

Adelanto Governmental Center
Adelanto Council Chambers
11600 Air Expressway
Adelanto, CA 92301

Cynthia M. Herrera

City Clerk of the City of Adelanto
and of the City Council thereof

DATED: June 16, 2016

MINUTES OF THE
JOINT REGULAR MEETING
OF THE ADELANTO CITY COUNCIL,
ADELANTO PUBLIC UTILITY AUTHORITY,
ADELANTO COMMUNITY BENEFIT CORPORATION,
AND THE SUCCESSOR AGENCY BOARD

MAY 25, 2016

A. CALL TO ORDER – CLOSED SESSION

The Adelanto City Council held a Closed Session on Wednesday, May 25, 2016, in Conference Room 1 of the Governmental Center located at 11600 Air Expressway, Adelanto, California. Mayor Kerr called the meeting to order at 5:36 p.m.

Council Members present: Glasper, Woodard, and Mayor Kerr

Council Members absent: Camargo and Mayor Pro Tem Wright

Staff present: City Manager Herrera, City Attorney Wright, and Deputy City Clerk Lopez

B. ANNOUNCEMENT OF CLOSED SESSION ITEMS

Matt Silver announced closed session items.

1. CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION PER GOVERNMENT CODE SECTION 54956.9(d)(1).

   (a) Adelanto Successor Agency et al. v. Walker et al., Sacramento County Superior Court case No. 34-2013-80001498

   (b) City of Adelanto v. Main Street Calif. LLC, DBA High Desert Mantric, Case No. UD1600284

   (c) Main Street California, LLC, a California Limited Liability Company v. City of Adelanto., SBSC Case No. CIVDS 1601251

2. CONFERENCE WITH LEGAL COUNSEL—ANTICIPATED LITIGATION PER GOVERNMENT CODE SECTION 54956.9(d)(2): 4 CASES.

C. PUBLIC COMMUNICATION ON CLOSED SESSION ITEMS

None

D. CONVENE INTO CLOSED SESSION

The Chair called for a motion to enter into Closed Session 5:38 p.m.

MOTION: Moved by Mayor Glasper, seconded by Woodard.

Motion carried unanimously 3-2-0. (Glasper, Woodard, and Mayor Kerr voting yes). (Camargo and Mayor Pro Tem Wright absent)

E. CALL TO ORDER – REGULAR MEETING

Mayor Kerr reconvened the regular meeting at 7:07 p.m.

Council Members present: Glasper, Woodard, Mayor Pro Tem Wright, Mayor Kerr

Council Members absent: Camargo

Staff present: City Manager Herrera, City Attorney Wright, and Deputy City Clerk Lopez

Invocation by: Johnny Salazar

The flag salute was presented by Mayor Kerr

F. CONFLICT OF INTEREST

None.

G. CONDUCT OF CLOSED SESSION

Matt Silver stated there was no reportable actions.

H. DELETIONS/ADDITIONS TO AGENDA

City Manager Herrera stated K-5 needed to be pulled off of the Agenda and add a presentation by Melva Davis representing ACRC.

I. PRESENTATIONS

1. Melva Davis representing ACRC presenting recognition to volunteers.

   She forgot the Recognition Certificate at the District Office. She would like to thank the City of Adelanto for helping the ACRC and keeping it afloat. She issued various certificated to members of the ACRC.

J. PUBLIC COMMUNICATIONS

1. *Manooch:* He talked about the processing permit being approved. He discussed taxing along with getting illegal cannabis processers. He does not want the City name being tarnished for illegal activity.

2. *Joy Jeannette:* She was proud to be there is a POW flag flying in front of the City Hall. She wanted everyone to remember everyone who is serving.

3. *Manny Serrano:* He is the spokesman for the High Desert Cannabis Association. He congratulated the Council along with the City staff. He received many calls from across the nation. The City will be a model to follow.

4. *Manuel:* He is an insurance broker who specializes in the Cannabis Industry. He is there for all the potential business owners in the audience.

5. *Joy Jeannette:* She wanted the Council to stop dragging their feet on the Cannabis issue. She talked about the donations for the Dog Park.

K. CONSENT CALENDAR

MOTION: Moved by Mayor Kerr, seconded by Glasper to approve the Consent Calendar minus item number 5.

1. Motion waiving the full reading of all ordinances and resolutions. Titles for ordinances and resolutions which appear on the public agenda shall be determined to have been read by title and further reading waived.

2. Approval of Meeting Minutes: March 7, 2016 – Special Meeting
   March 9, 2016
   March 23, 2016

3. Approval of Fire Department Report

4. Approval of Authorization to sign Amendment of Solicitation/Modification of Contract issued by U.S. Immigration and Customs Enforcement. (ICE)

5. Approval of Contract with Wilson F. So for the Position of Director of Public Services /City Engineer **DELETED FROM AGENDA**

6. Approval of 2nd Reading of Ordinance 545 entitled.

ORDINANCE NO. 545

AN ORDINANCE OF THE CITY COUNCIL OF 1 THE CITY OF ADELANTO, CALIFORNIA, AMENDING SECTION 17.80.080 OF THE ADELANTO MUNICIPAL CODE RELATING TO MEDICAL MARIJUANA CULTIVATION AND ADDING SECTION 17.80.090 OF THE ADELANTO MUNICIPAL CODE RELATING TO MEDICAL MARIJUANA MANUFACTURING

7. Approval of Pace Program Resolution No. 16-23.

RESOLUTION NO. 16-23

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO CONSENTING TO THE INCLUSION OF PROPERTIES WITHIN THE TERRITORY OF THE CITY IN THE CSCDA OPEN PACE PROGRAMS; AUTHORIZING THE CALIFORNIA STATEWIDE COMMUNITIES DEVELOPMENT AUTHORITY TO ACCEPT APPLICATIONS FROM PROPERTY OWNERS, CONDUCT CONTRACTUAL ASSESSMENT PROCEEDINGS AND LEVY CONTRACTUAL ASSESSMENTS WITHIN THE TERRITORY OF THE CITY; AND AUTHORIZING RELATED ACTIONS

8. Approval of Warrant:

a. Approval of City of Adelanto Warrant, 15/16-11-02, 134060 through 134132, for the total amount of $117,803.97

b. Approval of City of Adelanto Electronic Fund Transfer, 15/16-11-02, 135 through 150, for the total amount of $71,107.85

Motion carried 3-2-0. (Camargo, Glasper, Woodard, Mayor Pro Tem Wright, Mayor Kerr voting yes). (Camargo and Mayor Pro Tem Wright absent.)

L. ITEMS REMOVED FROM THE CONSENT CALENDAR

None.

M. CITY MANAGERS ANNOUNCEMENTS AND/OR REPORTS

City Attorney Herrera mentioned Movies in the Park is starting June 3, 2016. The first movie will be Inside Out.

N. CITY COUNCILS ANNOUNCEMENTS AND/OR REPORTS

Council Member Woodard wanted to thank the City Council. He mentioned breaking ground on new improvements.

Council Member Glasper talked about the City workers helping improve the City.

Mayor Kerr talked about the Convention he attended. He spoke about potential businesses coming to Adelanto.

Council Member Glasper asked for a future update on projects to be on the Agenda.

O. ADJOURNMENT

The next Regular Meeting of the City Council will be held on June 8, 2016, at 7:00 p.m. unless a Special Meeting is called.

There being no further business the Chair entertained a motion to adjourn the meeting at 7:44 p.m.

Moved by Mayor Kerr, seconded by Glasper

Motion carried unanimously 3-2-0 (Glasper, Woodard, and Mayor Kerr voting yes). (Camargo and Mayor Pro Tem Wright absent)

_____
Rich Kerr, Mayor

_____
Cindy Herrera, City Clerk, MMC

Clerk of the Meeting: Brenda Lopez, Deputy City Clerk
Prepared by: Jordyn Thomas, Intern

MINUTES OF THE WORKSHOP OF THE ADELANTO CITY COUNCIL

JUNE 7, 2016

A. CALL TO ORDER – CLOSED SESSION

The Adelanto City Council held a Workshop on Wednesday, April 27, 2016, in Conference Room 1 of the Governmental Center located at 11600 Air Expressway, Adelanto, California. Mayor Pro Tem Wright called the meeting to order at 12:10 p.m.

Council Members present: Camargo, Glasper, Woodard, Mayor Pro Tem Wright, and Mayor Kerr

CLERK'S NOTE: Mayor Kerr entered the Council Chambers at 12:15 p.m.

Staff present: City Manager Herrera, City Attorney Wright, and Deputy City Clerk Lopez

B. PUBLIC COMMUNICATIONS

1. *Joy Jeannette:* She talked about Workshops needing to be posted 30 days prior to the meeting date so citizens can be informed. She mentioned sewer availability and it being unfair to pay it on vacant property. She believes that topic should be pushed ahead.

   Mayor Pro Tem Wright stated they are discussing taxes and fees on marijuana.

2. *ET Snell:* He talked about this becoming a Hindenburg situation. He wanted to know when the first seed will be planted.

   Senior Planner De Manincor stated he will talk to him after the meeting.

C. NEW BUSINESS

1. CITY FEES AND TAXES WORKSHOP—COMPREHENSIVE DISCUSSION REGARDING CITY FEES AND TAXES, ESPECIALLY PERTAINING TO BUSINESS LICENSES, MARIJUANA ACTIVITY, PERMITS, AND DEVELOPMENTS.

   RECOMMENDATION: For discussion, feedback, and direction to City Staff from the City Council, there is no City Staff recommendation at this time.

   City Attorney Wright explained that they need separate discussions on taxes and fees. He stated fees are an attempt to recover costs and have no profitable revenue. Taxes are profitable revenue. He wanted to know if they staff would be

able to do their own study on fees or if a third party agency should do the studies.

Senior Planner De Manincor talked about development fees are too low and need to increase by 25%. He stated that current fees do not cover staff time. He forgot to talk to Attorney Wright about the $7,000 cultivation permit and possible manufacturing permit cost of $7,000. He mentioned that the fees haven't increased in 10 years.

City Engineer So interjected and stated that they can look at the fees adopted in the past. He talked about looking at an index in order to determine fees.

City Attorney Wright asked the Council if they would accept a staff recommended resolution with inflation.

Council Member Camargo asked if it had to do with the business licenses.

Senior Planner De Manincor stated it is with regards to entitlement.

Council Member Woodard doesn't want to go above the neighboring City fees.

City Engineer So would like to look at the index yearly and to do a slow increase.

City Attorney Wright asked if the Council would be interested in something like that.

Mayor Pro Tem Wright doesn't want this to drive away people.

City Engineer So wanted to compare the other cities.

City Attorney Wright explained that these fees are not for profit. They City needs to get back the money spent to provide services.

Mayor Pro Tem Wright mentioned that the funds haven't been raised in years and they shouldn't dump it on all at once.

City Engineer So mentioned a fee structure can be done.

Senior Planner De Manincor talked about a past work study they could do.

City Engineer So stated the fees are lower than he recommended before he retired a few years back.

City Attorney Wright wanted to know if the Council would like a yearly increase to be put gradually.

Council Member Camargo asked how much they have lost over the years.
City Engineer So explained it cannot be calculated because the money is being put in a fund for City services and they take money out for development improvements so there is no way of calculating that.

Senior Planner De Manincor explained it is a cost recovery basis. They deposit money, but when they run out they have no way of doing services.

Mayor Pro Tem Wright talked about their only being 2 recent developments doing cost recovery in the City and that isn't making the City any money.

City Attorney Wright said that fund is for future capital improvements. He talked about the City Drainage Plan as an explained. The fund that is there for it has minimal money. If they do not have money for improvements, the plan has to be subsidized. All Cities have impact fees and they are publicly available. The fees needs to change over time.

Mayor Pro Tem Wright wanted to know where the money went for the road improvements.

City Engineer So talked about the fees being low and the City has not kept up with capital improvements. It needs to be revisited.

City Attorney Wright stated there is an assessment type authority in line for fees. If people are not paying the fees, they can look into seeing if it is enforceable at this time. They need to just look forward.

Mayor Pro Tem Wright asked at what point they stopped looking at the fees.

City Engineer So stated they just need to look forward.

Council Member Woodard is concerned about people not coming to the City. If they raise the fee gradually, and not go higher than other cities, he would be okay with it.

City Attorney Wright stated that the direction so far is staff doing they study, and the fees to increase gradually with a comparison of other neighboring cities.

Council Member Glasper reiterated that this fee has been addressed and if the staff makes a recommendation they have to get it done. Cities are maintained on fees and taxes.

Mayor Kerr appreciates the staff bringing information to the Council. He talked about bringing in business and the City has nothing to offer. He is against raising any type of fees.

City Engineer So talked about the past having a recession and it happened to all of the cities. He talked about just trying to look at the fees with a slow increase.

Mayor Kerr talked about reducing impact fees in 2012 by 50% to get developers like DR Horton to build.

City Engineer So heard they needed to do special things to get DR Horton to build. The fees are already on the low side and they need to do a study.

Mayor Kerr has no problem with the study but what money are they going to use for this study.

City Engineer So said it is going to take time.

Senior Planner De Manincor talked about staff processing fees in development is where he created the 25% increase in just his department.

Mayor Kerr wants an outside agency.

City Engineer So talked about a third party charging fees and they might not even do it correctly.

Senior Planner De Manincor suggested reflecting the County's fees.

Mayor Pro Tem Wright believes this workshop was premature. They don't direct the staff and they need to be more prepared.

City Manager Herrera stated that the staff wanted Council to gibe feedback as a group and to talk in front of the public to see how they felt. That way the staff can put together something.

City Attorney Wright emphasized that they put in helpful input already.

Mayor Pro Tem Wright just wanted research and information.

City Engineer So stated the staff needed the Council's input and that this time is not wasted.

Council Member Woodard asked if they could look at the neighboring cities.

City Manager Herrera stated they will give that information for comparison. Does the Council wanted staff to start now.

Mayor Pro Tem Wright asked if each department should be looking at their fees when doing the budget every year. If they need for money they adjust.

Senior Planner De Manincor stated that the departments only get a certain amount of money to work with.

City Engineer So explained they need to stop looking at the past.

Accounting Supervisor Rose is familiar with most departments and that they usually do not give input into the budget. She knows they were given a certain amount and have to work with it. In the future years she hopes they can put input. Other City fees are for the services and there is no revenue. The taxes pay for some services but do they do not cover for engineering and development. The tax from the other cities does not associate with their fee schedule. They are looking to recover for cost of service.

Mayor Kerr talked about a City's previous impact fee reduction.

Council Member Camargo agrees with Mayor Kerr about bringing in business, but it is important to stay afloat and to make up for costs.

Senior Management Analyst Jarvis suggested building in an option on the resolution for possible increase but not needing to always do so.

Mayor Kerr agrees to that but needs to get that started.

Senior Management Analyst Jarvis stated that this is a way for the City to recover and wanted the idea looked at.

Council Member Woodard wants Adelanto to be competitive.

City Attorney Wright wanted to move on to business licenses. He stated that the City has specific business amount categorized for the tax. His cities have a flat tax which is the base pay fee including a percentage tax. He wanted it to be fair to all size businesses.

The Council was in consensus with that idea.

There was discussion on the previous business license tax.

City Attorney Wright stated taxing off of gross receipt would be easiest.

Council Member Glasper asked about point of sale. He wants the City to get money.

Accounting Supervisor Rose recommended a two part business license that way industrial companies would still have to pay the same fees.

City Attorney Wright explained he has gotten his direction and wanted to move on taxes. He explained there are 5 types of business they can take and suggested taxes them evenly across the board at 3% to meet the same tax line as alcohol. He gave multiple examples on how to tax.

Senior Planner De Manincor mentioned the disadvantage to gross sales and the CUP because it stays with the land. He also mentioned the application fee.

There was discussion with the levels on licensing.

Johnny Salazar: He talked about taxing the retail and growers differently. He spoke about other manufacturers needing the same tax. He explained he has been here for 5 years and spend $75,000 of his own money to save the City.

Council Member Woodard asked about Desert Hot Springs and if they were successful.

Johnny Salazar stated they are growing and selling.

Manooch: He stated they are shooting themselves in the foot. He talked about wholesale not being as expensive. He said no one is going to agree to pay a 15% tax. They are basing information off of an unreliable source.

Mayor Pro Tem Wright explained it is only a 5% tax.

ET Snell: he talked about locking people in the room and getting things done. He talked to Kojima and said he has too many partners. He went on about getting the grow started.

City Attorney Wright got guidance by have 5% per activity on gross revenue, but did they want cultivation to be different.

The Council came to a consensus to keep it 5% across the board to be hair.

D. ADJOURNMENT

There being no further business the Chair entertained a motion to adjourn the meeting at 2:30 p.m.

MOTION: Moved by Council Member Glasper, seconded by Mayor Pro Tem Wright

Motion carried unanimously 5-0 (Camargo, Glasper, Woodard, Mayor Pro Tem Wright, Mayor Kerr voting yes.)

_____
Rich Kerr, Mayor

_____
Cindy Herrera, City Clerk, MMC

Clerk of the Meeting: Brenda Lopez, Deputy City Clerk
Prepared by: Jordyn Thomas, Intern
Reviewed by: Brenda Lopez, Deputy City Clerk

MINUTES OF THE
JOINT REGULAR MEETING
OF THE ADELANTO CITY COUNCIL,
ADELANTO PUBLIC UTILITY AUTHORITY,
ADELANTO COMMUNITY BENEFIT CORPORATION,
AND THE SUCCESSOR AGENCY BOARD

JUNE 8, 2016

A. CALL TO ORDER – CLOSED SESSION

The Adelanto City Council held a Closed Session on Wednesday, June 8, 2016, in Conference Room 1 of the Governmental Center located at 11600 Air Expressway, Adelanto, California. Mayor Kerr called the meeting to order at 6:06 p.m.

Council Members present: Camargo, Glasper, Woodard, Mayor Pro Tem Wright, and Mayor Kerr

Staff present: City Manager Herrera, City Attorney Silver, and Deputy City Clerk Lopez

B. ANNOUNCEMENT OF CLOSED SESSION ITEMS

City Attorney Silver announced Closed Session Items

1. CONFERENCE WITH LEGAL COUNSEL—EXISTING LITIGATION PER GOVERNMENT CODE SECTION 54956.9(d)(1).

   (a) Adelanto Successor Agency et al. v. Walker et al., Sacramento County Superior Court case No. 34-2013-80001498

   (b) City of Adelanto v. Main Street Calif. LLC, DBA High Desert Mavericks, Case No. UD1600284

   (c) Main Street California, LLC, a California Limited Liability Company v. City of Adelanto., SBSC Case No. CIVDS 1601251

2. CONFERENCE WITH LEGAL COUNSEL—ANTICIPATED LITIGATION PER GOVERNMENT CODE SECTION 54956.9(d)(2): 2 CASES.

C. PUBLIC COMMUNICATION ON CLOSED SESSION ITEMS

None.

D. CONVENE INTO CLOSED SESSION

The Chair called for a motion to enter into Closed Session 6:07 p.m.

MOTION: Moved by Mayor Kerr, seconded by Glasper.

Motion carried unanimously 5-0. (Camargo, Glasper, Woodard, Mayor Pro Tem Wright, Mayor Kerr voting yes).

E. CALL TO ORDER – REGULAR MEETING

Mayor Kerr reconvened the regular meeting at 7:17 p.m.

Council Members present: Camargo, Glasper, Woodard, Mayor Pro Tem Wright, and Mayor Kerr

Staff present: City Manager Herrera, City Attorney Silver, and Deputy City Clerk Lopez

Invocation by: Mayor Pro Tem Jermaine Wright.

The flag salute was presented by Mayor Kerr.

F. CONFLICT OF INTEREST

None

G. CONDUCT OF CLOSED SESSION

City Attorney Silver stated there was no reportable action taken.

H. DELETIONS/ADDITIONS TO AGENDA

City Manager Herrera mentioned item L-6 was revised and given out to the public and City Council. She also stated an item for California Consulting LLC will be pushed to the June 22nd meeting.

I. PRESENTATIONS

None

J. PUBLIC COMMUNICATIONS

1. *Allison Richards (California Consulting, LLC):* She wanted to make the Council aware that they gave information to the City for grant writing.

   Mayor Kerr mentioned they are bringing great things to the City by grant writing to get money for the City.

2. *Amber Wright (Greater Hope Foundation):* She would like to invite them to the graduation of some Foster Children.

3. *Shad Boyd:* He wanted to thank the Fire and Police Department. He wanted to complain about the City workers. He also mentioned dirt being dumped by Safe Soil. He wanted to make sure the City is aware of that.

   Council Member Woodard explained that dirt is cooked in 500 degrees so nothing survives in it. The City requested them to bring it in to use for roads.

   Mayor Kerr would like to add an agenda that item is to be brought to the next meeting for a report.

4. *Joy Jeannette:* She talked about the Dog License and Vaccination Clinic. The first 100 Adelanto residents get free chips. She spoke about a photographer coming out to take pictures with residents and their animals. She also mentioned the restrooms in Richardson Park is not suitable for use. She believes the Workshops should be posted at least 2 months in advance.

5. *Shawna Noweki (UGUSA Local 880):* She wanted the Council's help to figure out why the prison workers of the facilities in Adelanto are the lowest paid in the State of California. She believes the Council didn't keep their word.

   Mayor Kerr stated they will form a meeting with her, himself, Mr. Black, the Council, and the City Manager.

6. *Mary McCormick (UGUSA Local 880):* She talked about the previous Council Meeting she spoke about the Geo wages. She was upset that they did not put it on the Agendas. She mentioned a Council Member speaking to a Supervisor of Geo and nothing being done for the wages.

K. CONSENT CALENDAR

MOTION: Moved by Mayor Kerr, seconded by Woodard to approve the Consent Calendar as presented.

1. Motion waiving the full reading of all ordinances and resolutions. Titles for ordinances and resolutions which appear on the public agenda shall be determined to have been read by title and further reading waived.

2. Approval of Meeting Minutes: April 07, 2016 – Special Meeting
April 13, 2016 – Regular Meeting
April 27, 2016 – Workshop
April 27, 2016 – Regular Meeting
May 11, 2016 – Regular Meeting

3. Approval of Development Services Department Report.

4. Approval of Building and Safety Department Report.

5. Approval of Public Works Department Report.

6. Approval of Resolution No.'s 16-32 and 16-33 Consenting to Inclusion of the City of Adelanto Properties in the California Home Finance Authority PACE Programs and Associate Membership in California Home Finance Authority

RESOLUTION NO. 16-32

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA, CONSENTING TO INCLUSION OF PROPERTIES WITHIN THE CITY'S JURISDICTION IN THE CALIFORNIA HOME FINANCE AUTHORITY, PROGRAM TO FINANCE RENEWABLE ENERGY GENERATION, ENERGY AND WATER EFFICIENCY IMPROVEMENTS AND ELECTRIC VEHICLE CHARCHING INFRASTRUCTURE AND APPROVING ASSOCIATE MEMBER IN THE JOIN EXERCISE OF POWERS AUTHORITY RELATED THERTO.

AND

RESOLUTION NO. 16-33

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA CONSENTING TO INCLUSION OF PROPERTIES WITHIN THE CITY'S JURISDICTION IN THE CALIFORNIA HOME FINANCE AUTHORITY COMMUNITY FACILITIES DISTRICT NO. 2014-1 (CLEAN ENERGY) TO FINANCE RENEWABLE ENERGY IMPROVEMENTS, ENERGY EFFICIENCY AND WATER CONSERVATION IMPROVEMENTS AND ELECTRIC VEHICLE CHARGING INFRASTRUCTURE AND APPROVING ASSOCIATE MEMBERSHIP IN THE JOINT EXERCISE OF POWERS AUTHORITY RELATED THERETO.

7. Approval of Bid Results for SCADA System Upgrade.

8. Approval of Warrant:

   a. Approval of City of Adelanto Warrant, 15/16-12-01, 134133 through 134213, for the total amount of $196,155.25.

   b. Approval of City of Adelanto Electronic Fund Transfer, 15/16-12-01, 151 through 152, for the total amount of $232.48.

Motion carried unanimously 5-0. (Camargo, Glasper, Woodard, Mayor Pro Tem Wright, Mayor Kerr voting yes).

L. PUBLIC HEARING

The Sherriff's Department spoke about a restricted fund for juvenile gang and drug restriction. The Sherriff presented Council Member Glasper $7,500.00 to the Glasper Center from this fund to help the kids of the City out.

1. **PUBLIC HEARING:** OPEN PUBLIC HEARING AND APPROVE APUA RESOLUTION NO. 16-01 APPROVING THE WATER AND SEWER STANDBY CHARGES. (LARRY)

   RECOMMENDATION: Approve APUA Resolution 16-01 approving the Water and Sewer Standby Charges on vacant parcels of land within the City Limits for Fiscal Year 2016/17.

APUA RESOLUTION NO. 16-01

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ADELANTO PUBLIC UTILITY AUTHORITY PROVIDING FOR THE COLLECTION OF WATER AND SEWER STANDBY FEES BY THE COUNTY TAX COLLECTOR AT THE SAME TIME AS AND TOGETHER WITH THE GENERAL TAXES OF THE CITY

Senior Management Analyst Jarvis presented the staff report. He explained this is a yearly charge. These revenues are set aside for future use for the City. If the water and sewer is not enough to make a profit, they cannot reclaim the money from the General Fund. He rounded it to $27.00 per year, per acre.

Mayor Pro Tem Wright asked if the water and sewer is available currently.

Senior Management Analyst Jarvis stated no.

Mayor Pro Tem Wright said they are going to be charged for a service they cannot get currently.

Accounting Supervisor Rose explained there is a main water line. The availability charge is there so they can use the services. These charges are to pay for the development of those additional lines.

Mayor Kerr asked if this is an impact fee for future development upgrades.

Accounting Supervisor Rose explained it is for maintenance and future upgrades.

The Chair opened Public Hearing at 7:47 p.m.

1. Joy Jeannette (Resident): She is concerned about that. She talked about her septic tank failing. She wanted to be put on sewer but did not have a line to do so. She then installed a new septic tank. She think it's unfair to be taxes for sewer availability and cannot get it. She also mentioned water for vacant land.

2. Joanne (Resident): She agrees with Joy. She disagrees with those fees.

   Mayor Kerr asked how long these fees have been in place

   Senior Management Analyst Jarvis stated it has in place since 1996.

   Mayor Kerr explained the people who have water are not paying these fees.

3. Chris Waggener (Resident): He is going to look up the fees.

The Chair closed Public hearing at 7:51 p.m.

MOTION: Moved by Camargo, seconded by Glasper to approve APUA Resolution 16-01 approving the Water and Sewer Standby Charges on vacant parcels of land within the City Limits for Fiscal Year 2016/17.

Motion carried 4-1. (Camargo, Glasper, Woodard, and Mayor Kerr voting yes). (Mayor Pro Tem Wright voting no.)

2. **PUBLIC HEARING:** OPEN PUBLIC HEARING AND APPROVE RESOLUTIONS 16-25 AND 16-26 RELATED TO THE LEVY AND COLLECTIONS OF ASSESSMENTS FOR THE ADELANTO STREETLIGHT MAINTENANCE ASSESSMENT DISTRICT NO. 1 FOR THE FISCAL YEAR 2016-17. (LARRY)

RECOMMENDATION: Open a public hearing and approve Resolutions 16-25 and 16-26 as presented to approve the Engineer's Report and levy and collection of assessments for the Adelanto Streetlight Maintenance Assessment District No. 1 for the Fiscal Year 2016-17.

RESOLUTION NO. 16-25

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA, ORDERING THE LEVY AND COLLECTION OF ASSESSMENTS RELATED TO THE ADELANTO LANDSCAPE MAINTENANCE ASSESSMENT DISTRICT NO. 01, FOR FISCAL YEAR 2016-2017.

AND

RESOLUTION NO. 16-26

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO CALIFORNIA, APPROVING THE ENGINEER'S REPORT FOR THE ADELANTO LANDSCAPE MAINTENANCE ASSESSMENT DISTRICT NO. 01, FOR FISCAL YEAR 2016-2017.

Senior Management Analyst Jarvis present the staff report. This created in October of 2005 and there are six tracts included. There are a total 527 lots with a total assessment is $29,094.00

Mayor Pro Tem Wright wanted to know why these taxes are up for renewal every year when these are needed. He has gone to other Cities where the tax didn't need to be renewed.

The Consultant Susana Medina explained these assessments were a part of the 1972 Act Law for streets and lighting. It is just a technicality.

The Chair opened Public Hearing at 7:56 p.m.

No Comment

The Chair closed Public Hearing at 7:57 p.m.

MOTION: Moved by Glasper, seconded by Camargo to approve Resolutions 16-25 and 16-26 as presented to approve the Engineer's Report and levy and collection of assessments for the Adelanto Streetlight Maintenance Assessment District No. 1 for the Fiscal Year 2016-17.

Motion carried 4-1. (Camargo, Glasper, Woodard, and Mayor Kerr voting yes). (Mayor Pro Tem Wright voting no.)

3. **PUBLIC HEARING:** OPEN PUBLIC HEARING AND APPROVE RESOLUTION NO'S 16-27 AND 16-28 RELATED TO THE LEVY AND COLLECTION OF ASSESSMENTS FOR THE ADELANTO LANDSCAPE MAINTENANCE ASSESSMENT DISTRICT NO. 1 FOR FISCAL YEAR 2016-17. (LARRY)

RECOMMENDATION: Open a public hearing and approve Resolution No's 16-27 and 16-28 as presented to approve the Engineer's Report and levy and collection of assessments for the Adelanto Landscape Maintenance Assessments District No. 1 for the Fiscal Year 2016-17.

RESOLUTION NO. 16-27

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA, APPROVING THE ENGINEER'S REPORT FOR THE ADELANTO STREETLIGHT MAINTENANCE ASSESSMENT DISTRICT NO. 01, FOR FISCAL YEAR 2016-2017.

AND

RESOLUTION NO. 16-28

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA, ORDERING THE LEVY AND COLLECTION OF ASSESSMENTS RELATED TO THE ADELANTO STREETLIGHT MAINTENANCE ASSESSMENT DISTRICT NO. 01, FOR FISCAL YEAR 2016-2017.

Senior Management Analyst Jarvis presented the staff report. He explained this is the same district and this is the second part that takes care of the landscaping.

The Chair opened Public Hearing at 7:58 p.m.

1. Resident: She asked if there is public records that show where the money goes.

Senior Management Analyst Jarvis showed her the spreadsheet.

The Chair closed Public Hearing at 7:59 p.m.

MOTION: Moved by Mayor Kerr, seconded by Glasper to approve Resolution No's 16-27 and 16-28 as presented to approve the Engineer's Report and levy and collection of assessments for the Adelanto Landscape Maintenance Assessments District No. 1 for the Fiscal Year 2016-17.

Motion carried 4-1. (Camargo, Glasper, Woodard, and Mayor Kerr voting yes). (Mayor Pro Tem Wright voting no.)

4. **PUBLIC HEARING:** OPEN A PUBLIC HEARING AND ADOPT RESOLUTION 16-29 ORDERING THE LEVY AND COLLECTION OF SOLID WASTE CHARGES ON THE PROPERTY TAX ROLL FOR FISCAL YEAR 2016-17. (LARRY)

RECOMMENDATION: Staff recommends opening a public hearing and adopting Resolution No. 16-29 ordering the levy and collection of solid waste charges on the property tax roll for Fiscal Year 2016-17.

RESOLUTION NO. 16-29

A RESOLUTION OF THE ADELANTO CITY COUNCIL, PROVIDING FOR THE LEVY AND COLLECTION OF SOLID WASTE FEES BY THE COUNTY TAX COLLECTOR IN THE SAME MANNER AND AT THE SAME TIME AS GENERAL TAXES.

Senior Management Analyst Jarvis presented the staff report. He explained the City currently contracts with Burrtec and the tax is added onto property tax. They suggest a 1.1% increase to residential properties and a 0.38% increase in commercial properties. They would also like to include street sweeping which would be $0.94 fee per month in residential and a $1.02 per month/per yard in commercial areas. They cover 354 curb miles every other week in the City and the streets will be swept twice a month. In addition, Burrtec has asked for a 7 year contract extension and an annual renewing in future years to come. Burrtec will also donate a used trash collection vehicle that meets all requirements. They want to provide options for senior to pay their bills if they cannot pay the standard property tax bill.

Council Member Glasper asked about the larger trash cans they asked for and were never received 6 months ago. A representative of Burrtec stated they would do that for them.

The Council explained to Council Member Glasper that was only a discussion and was not voted on.

Mayor Kerr explained the citizen has to pay for larger cans if they would like one.

Mayor Pro Tem Wright personally has a problem with extending these contracts so far out and does not want future Councils to have their hand ties with past contracts. He would like to go back and put less time on the contract.

Richard Nino (Burrtec Representative) explained they were looking for a ten year term and when they had conversations with City staff they negotiated down to a seven year term.

City Manager Herrera explained that the costs were so low because Burrtec absorbed some of the cost so the residents didn't pay over $0.94 cents a month. The City needs a new vehicle for street sweeping and that is what Burrtec is offering. She explained to the Council that they even lowered the contract term.

Mayor Pro Tem Wright made mentioned that they are adding a tax onto something.

Richard Nino (Burrtec Representative) explained that other Cities have adopted contracts similar to this. He implemented several of the type of public works programs and it did not require a 218 notification process.

Mayor Pro Tem Wright asked if this is a fee and not a tax.

City Manager Herrera stated it was a fee.

Mayor Pro Tem Wright asked if this is a fee then there is no profit coming from the services. This is only to recuperate the costs.

Accounting Supervisor Rose explained they are contracting out for this service because if the City tried to do it, it would cost a lot more to the residents. The City looks at other waste hauling services and Burrtec has created a plan that would help the residents with the street sweeping program.

Mayor Pro Tem Wright stated residents that currently have property and do not have trash services do not have to pay for the street sweep program and other properties do.

Richard Nino (Burrtec Representative) explained the street sweeping fee can be applied to all the parcels.

Mayor Pro Tem Wright does not want to have to worry about people with vacant property coming to complain about the City charging them and trying to get refund checks.

Richard Nino (Burrtec Representative) explained that they could do it either way. They could add it to all of the properties, or just the ones subscribed to trash services. It is the will of the Council.

Mayor Pro Tem Wright explained the Catch 22 of this because the property owners with vacant homes will reap the benefit of street sweeping without having to pay for it.

City Manager Herrera explained some of the benefits include free service to clean community parking lots. With Public Works being downsized, this frees the workers to do other City jobs.

Council Member Woodard would like to see streets cleaner and the cost isn't that high.

Council Member Glasper asked that if someone who has property in Adelanto, even if they don't live there, should still pay too.

Council Member Camargo suggested that there should be notification of street sweeping so residents do not park on the sidewalk during that time. He just doesn't know how that would be funded to get signage out.

City Manager Herrera asked if this is time sensitive.

Richard Nino (Burrtec Representative) stated there are deadlines to submit levy information to the County. With Council Member Camargo's inquiry, Burrtec would do a direct mailing and outreach campaign to the residents letting them know about the program with maps that coincide with the trash collection schedule. Beyond that, various Cities evaluate a no parking program. Burrtec can make Code Enforcement aware of abandoned vehicles that interfere with street sweeping and take action if they choose so.

Mayor Kerr said Burrtec is doing an outstanding job. Whenever the City calls to Burrtec to get help, they do what they can. He believes the street sweeping is perfect. There are future funds that could cover the signage needed. They need to start thinking big and moving forward.

The Chair opened up Public Hearing at 8:19 p.m.

1. Joy Jeannette (Resident): She believes people who have the services, keep billing them the same. Though, the City should separate the fee and charge everyone. She believes $0.94 a month is not a big deal.

2. Jeannette Ansu (Resident): She stated that the property owners are getting billed this fee. In the North side there aren't many sidewalks, but with the help of Burrtec the streets look so much better. She appreciates that they are included. She think the $0.94 is a no brainer. With other Cities they have signs to make people aware of street sweeping. They should get fined when they do not comply and that will give the City a little bit of money.

3. Resident: She doesn't mind paying $0.94 a month. She has an issue with Burrtec not paying attention to people not paying for trash. She doesn't agree paying an extra fee for them. She mentioned squatter leaving their trash out to be collected.

   Mayor Kerr stated the call him and he will take care of the squatters.

4. Ernesto Marines (Resident): He agrees that this is a simple decision because they need their streets cleaned. He thinks the fee price is just right. With regards to tax, he believes they should adjust for the people who are already paying for the services versus the ones who are not. He stated that Burrtec has done a semi decent job. He has called numerous times about biologic material on his property on a windy day. He wish Burrtec would be a little better about going out and cleaning that type of waste. He mentioned to Council Member Glasper about how he did not want those large bins. If recycled properly, the waste would be a lot less.

5. Shad Boyd: He wanted to know how Code Enforcement is going to cite people who aren't moving their cars.

Mayor Kerr stated hopefully in 6 months this will be implemented.

The Chair closed Public Hearing at 8:25 p.m.

Mayor Pro Tem Wright asked that they table this until they figure out the issues with people currently paying trash and those who are not. They want to make sure everyone is paying for street sweeping.

Council Member Glasper stated they will do it for property owners so they can bill them that way.

Richard Nino (Burrtec Representative) explained it is for every single family residence whether they are vacant or not. If there is no building or structure on the property they can include them into the numbers which would make the fee less than $0.94. The submittal as presented while including the unimproved property would decrease the fee.

Mayor Pro Tem Wright asked who is currently in the number on report.

Richard Nino (Burrtec Representative) explained it is every property with a single family structure.

Mayor Pro Tem Wright mentioned that currently they are not charging all of them for trash services.

Richard Nino (Burrtec Representative) stated they charge for all single family structures.

Mayor Pro Tem Wright stated that is incorrect because he has seen people come into City Hall requesting refunds because their home is vacant. So the numbers that were given to the Council are not correct.

Glasper asked why the street sweeping has anything to do with the trash. Someone owns the house whether or not someone is living in it, should pay for the street sweeping.

Council Member Woodard mentioned that he owns four houses and would pay for it.

Mayor Pro Tem Wright is trying to explain that they need to go back and make sure everyone is paying correctly.

City Manager Herrera and City Attorney Silver discussed this and City Manager Herrera would like the City Attorney to give the Council direction.

City Attorney Silver made options such as approving resolution as presented and there can always be an amendment made.

Council Member Woodard asked the Burrtec Representative how restricted is his time frame and if it would be okay to bring it back to the following meeting.

Richard Nino (Burrtec Representative) said it would be okay. He doesn't know if he would be able to be present for the meeting but he could have another representative come in.

Council Member Camargo asked if he has experienced a similar situation

Richard Nino (Burrtec Representative) explained that people who don't live on the property can get refunds. He mentioned seniors who are strained by property tax, they take provision with a select amount of seniors for quarterly payments.

Senior Management Analyst Jarvis talked about not currently residing in the home and apply for the refund still have to pay for street sweeping.

Richard Nino (Burrtec Representative) explained that is correct.

MOTION: Motioned by Mayor Pro Tem Wright, seconded by Glasper to table until following meeting.

Motion Failed 2-3 (Glasper and Mayor Pro Tem Wright voting yes) (Camargo, Woodard, and Mayor Kerr voting no.)

MOTION: Moved by Camargo, seconded by Woodard to adopting Resolution No. 16-29 ordering the levy and collection of solid waste charges on the property tax roll for Fiscal Year 2016-17.

Motion carried 4-1. (Camargo, Glasper, Woodard, and Mayor Kerr voting yes). (Mayor Pro Tem Wright voting no.)

The Chair dismissed the Council for a break.

The Chair reconvened at 9:00 p.m.

******CLERKS NOT ITEMS 5 AND 6 WERE DISCUSSED AT THE SAME TIME**

5. **PUBLIC HEARING:** OPEN A PUBLIC HEARING AND APPROVE RESOLUTION NO. 16-30 ORDERING THE LEVY AND COLLECTION OF ANNUAL CFD 2006-5 SPECIAL TAXES FOR FISCAL YEAR 2016-2017. (LARRY)

   RECOMMENDATION: Staff recommends to open a public hearing and adopt Resolution No. 16-30 ordering the levy and collection of Annual CFD 2006-2 special taxes for Fiscal Year 2016-2017

RESOLUTION NO. 16-30

A RESOLUTION OF THE CITY OF THE CITY OF ADELANTO, CALIFORNIA, ORDERING THE LEVY AND COLLECTION OF ANNUAL SPECIAL TAXES RELATED TO THE CITY OF ADELANTO COMMUNITY FACILITIES DISTRICT (CFD) 2006-5 FOR FISCAL YEAR 2016-2017

Senior Management Analyst Jarvis presented the staff report. He stated that this CFD is a yearly fee. The Tax A has been zeroed out. They are just assessing Tax B. The total levy is $14,315.00. It is a yearly assessment.

Mayor Kerr asked how long it has been going for.

Senior Management Analyst Jarvis has stated it has been going on since 2006.

Mayor Pro Tem Wright and Council Member Camargo wanted to know the difference in cost.

Senior Management Analyst Jarvis stated it has gone up a little less than $200.00. There was a slight increase because of administrative costs.
Mayor Pro Tem Wright talked about last year discussing Tax B and reducing it.

Senior Management Analyst Jarvis explained this is a different tax.

Mayor Pro Tem Wright asked if this was the one they just implemented that they cannot touch.

Senior Management Analyst Jarvis stated that is not the same one.

Council Member Camargo explained this is a different property area that has a special tax.

Mayor Pro Tem Wright asked if they looked at reducing the tax in another area, they have to look to reduce this one as well.

Senior Management Analyst Jarvis explained this tax was voted on by the residents.

Mayor Pro Tem Wright wanted the tax fairly for both areas.

Camargo stated they need to keep in mind the units in the area.

Mayor Pro Tem Wright asked if the Tax A is to pay off the bond debt.

Senior Management Analyst Jarvis stated there is not Tax A.

Mayor Pro Tem Wright asked if it is a different developer

Senior Management Analyst Jarvis stated it was.

Accounting Supervisor Rose stated it is a different area and no bond was issued for infrastructure and development improvements. That was paid for when it was build.

Mayor Pro Tem Wright wanted to know why it was on there then.

Accounting Supervisor Rose explained that they did it because there were not police and fire services at this end of town. It was going to take longer time for them to get to this area to service them. This tax is for police and fire services.

Mayor Pro Tem Wright wanted to know why Tax A be on the Report.

Accounting Supervisor Rose stated there is no Tax A.

Mayor Pro Tem Wright asked if the Tax B is the same tax on other areas. He then asked if this is for police and fire services. This cost is smaller because it is a smaller location. He mentioned item 6 is looking to be dropped so this item should be dropped as well.

Council Member Camargo explained to Mayor Pro Tem Wright that if you dropped the tax it would then go back to the voters for next year.

Accounting Supervisors Rose stated if they want to lower the tax, they would have to go back and have the Engineer recalculate the assessment. If they decide to abolish it, then the City General Fund absorb those costs.

Council Member Camargo wanted to make his comments on both item 5 and 6. He strongly feels it should be recalculate for the entire City.

Senior Management Analyst Jarvis had comments that apply to both taxes.

Council Member Camargo asked if Council would be able to reapply or if it went to the voters if abolished.

Supervisor Penny Rose explained it would go on the Measure to go to voters if they wanted to bring it back.

Mayor Pro Tem Wright asked if they suspend it, they could bring it back.

The Consultant stated that it could be suspended for a year and have the general fund pay for it as long as they don't abolish it. She stated that back in 2006 approved the formation of the CFD's because new developments were coming for the City that the services couldn't cover. This CFD is normal and every City in California does it. The City's constrained budget could not cover that. This CFD is only for police and fire services in this area. This is for the time and effort for those departments. It is a requirement to disclose to the purchasers of the mello-roos tax. Some people were not aware when signing, though it was on their paperwork. It is the Title Companies obligation to disclose this. Her advisement is to stay with this tax. It was necessary ten years ago and is necessary now. The General Fund needs the help.

Senior Management Analyst Jarvis talked about looking into other ways to help out with Fire and Police services. Those include meeting with LAFCO, being a part of the San Bernardino County Fire Protection and if any things worked out they can go back and revisit the taxes when the new services start. There has been talk of a City wide CFD, but it would be very difficult to pass with the voters. The residents need to know it is needed. If they do have business tax and marijuana tax that passes, they might be able to re-examine this tax at a later time.

Council Member Camargo made mention that is no guarantee.

Senior Management Analyst explained the Staff is trying to bring in revenue, but they are still in a deficit.

Mayor Kerr wanted it explained if it was cancelled, it would have to be brought back.

The Consultant stated they can opt to lower or zero tax and continue in future year as long as they don't make a resolution eliminating the tax.

Mayor Kerr asked if it would have to come out of the general fund if they zero the tax.
The Consultant said that is correct.

Mayor Kerr stated the difference would have to be made up by the general fund

The Consultant stated there isn't sufficient funds to do other services.

Accounting Supervisor Rose stated there will still be a deficit with the budget cuts for the following year. She explained the Tax B have been assessed since it was started in 2006 and the residents have been paying it since then. The only issue is when they levied the Tax A which is for infrastructure until bonds were issued.

Public Hearing opened at 9:25 p.m.

1. Shad Boyd (Resident): He bought his house and this tax wasn't levied on him. He stated when they bought the house, it was in the paperwork. They have to deal with that.

2. Ernesto Marines (Resident): He is disappointed that the citizens no more about this then the Council. The developer and City paid for infrastructure in past. This new development is requiring the residents to pay for it. He believes it is unfair to pay for a lot more for the same service. He wants all the citizens to pay for it.

3. Resident: He thinks it's embarrassing that the residents know more about it then the Council. He thinks a City service should be done equally. He also thinks the services are crappy.

4. Resident: She has a college degree and read the contract thorough. She has two homes and the difference is tremendous in taxes for the same services. She wanted them to reconsider and charge them across the board. She stated this tax was not on her paperwork. She stated everyone is going to leave

5. Terry Delgado (Resident): He has sympathy for these people. He stated if they went to a judge for a case they could go a lot further then at this meeting. A judge will look at these issues. He gave the idea of signing a petition and make a possible law suit.

6. Adriane (Resident): She called in May because her property taxes went up. They responded that is was from the bond agreement with the City. She explained that she thought the taxes were going to go down after this year.

7. Eugenia Robles (Resident): She lives in the Manzanita community. When they did the paperwork, the Title Company did not disclose the tax. She opposes the tax and they are struggling and might move back to Orange County and rent. She would like them to reconsider the tax.

8. Ramiro Diaz (Resident): He moved to Adelanto 2008 and did not know anything about taxes. He is not willing to pay that much. He believes they need to spread this tax to everyone.

9. Resident: Her payment has gone up $500.00. She has to either sell her home or lose it.

The Chair closed Public Comment Closed at 9:31 p.m.

Mayor Kerr explained they would like to move these items to talk to legal counsel. He read those contracts and they put in the tax on 51 contracts he read. He explained there was only one person who spoke to the dais to plea for help.

Council Member Glasper explained that in 2007 DR Horton came to the City and delayed the tax for 7 years. The City doesn't not have the money to cover those taxes for the citizen.

Council Member Camargo wants to help the residents. He believes staff has done wonderful with the budget and has great ideas with saving costs. He would like staff to look at the tax and help out with the minimum they can. He suggests suspend it for at least a year.

MOTION: Moved by Mayor Pro Tem Wright, seconded by Woodard to continue this item to the July 13th meeting.

Motion carried 4-0. (Camargo, Glasper, Woodard, and Mayor Pro Tem Wright, Mayor Kerr voting yes)

6. **PUBLIC HEARING:** OPEN A PUBLIC HEARING AND APPROVE RESOLUTION NO. 16-31 ORDERING THE LEVY AND COLLECTION OF ANNUAL CFD 2006-2 SPECIAL TAXES FOR FISCAL YEAR 2016-2017. (LARRY)

RECOMMENDATION: Staff recommends to open a public hearing and adopt Resolution No. 16-31 ordering the levy and collection of Annual CFD 2006-2 special taxes for Fiscal Year 2016-2017

RESOLUTION NO. 16-31

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, ACTING AS THE LEGISLATIVE BODY OF THE CITY OF ADELANTO COMMUNITY FACILITIES DISTRICT NO. 2006-2 (MANZANITA AND ESPINOSA) AUTHORIZING THE LEVY OF A FACILITIES SPECIAL TAX IN IMPROVEMENT AREA NO. 1 OF THE CITY OF ADELANTO, COMMUNITY FACILITIES DISTRICT NO. 2006-2 (MANZANITA AND ESPINOSA) AND IMPROVEMENT AREA NO. 2 OF THE CITY OF ADELANTO COMMUNITY FACILITIES DISTRICT NO. 2006-2 (MANZANITA AND ESPINOSA)

The Chair opened Public Hearing at 9:59 p.m.

1. Resident: She wanted clarification on the tax assessment. She wanted to know if that is every year.

   The Council stated it is every year.

   Council Member Camargo also mentioned is a 2% increase every year.

   Accounting Supervisor Rose explained each bond have an A and B tax. The A Tax covers the cost of infrastructure. The B Tax has been being paid all along. The B Tax is being paid for Police and Fire services.

   The Resident wanted the budget plan for the citizens to see.

2. Ernesto Marines (Resident): He just wants equality.

   Mayor Kerr explained the Brown Act prohibits talking to individual Council Members outside of the Council Chambers. It is against the Law. They will have this item at the meeting on July 13th. He also mentioned they will have a Workshop on July 11th at 4 p.m. about these taxes.

3. Resident: He wanted the Council to drive through the neighborhood and see how many homes are for sale. He mentioned DR Horton planning to do road improvements and never did.

MOTION: Moved by Mayor Kerr, seconded by Woodard to continue this item to the July 13th meeting.

Motion carried 5-0. (Camargo, Glasper, Woodard, Mayor Pro Tem Wright, and Mayor Kerr voting yes).

M. NEW BUSINESS

1. NEW BUSINESS - ORAL REPORT - UPDATE ON PALMDALE & BELLFLOWER ROAD PROJECT. (WILSON)

   RECOMMENDATION: No recommendation Council to receive and update.

City Engineer So talked about him a meeting with Caltrans. The City convinced them to set the requirements on DR Horton. They have agreed on general requirements. DR Horton is supposed to have a left turn lane on Verbena. DR Horton is also required to have a right turn lane onto Bellflower. He wanted to make sure everyone was on the same page. They need coordination. There were various requirements eliminated to move construction coming.

Council Member Woodard told the City to look at the roads and construction. He mentioned things are getting started.

City Engineer so mentioned that on Mojave and 395 there is a water contract and SoCal Edison is working to do underground work. The money comes from Measure I funds.

N. ITEMS REMOVED FROM THE CONSENT CALENDAR

None.

O. CITY MANAGERS ANNOUNCEMENTS AND/OR REPORTS

City Manager Herrera mentioned the first Movie in the Park for the year and thought it was successful. The next Movie in the Park will be held July 8, 2016.

P. CITY COUNCILS ANNOUNCEMENTS AND/OR REPORTS

Council Member Camargo thanked the residents for coming and encouraged them to attend the workshop. He talked about the Air Quality Board Meeting having no reportable action.

Council Member Woodard talked about the vehicles being parked on the street. He talked about cars that are inoperable vehicles and they should work on that.

Council Member Glasper appreciated Council Member Woodard bringing that up because he has so many inoperable vehicles in his neighborhood making it look bad.

Mayor Pro Tem Wright talked about the Weight Loss Challenge and how it has begun. He talked about Apple Valley finishing their program and is trying to beat them. He attended his VVTA Meeting. They set the budget for this year. He mentioned Barstow and Needles being included in the Program. There is now an opportunity to take a commuter bus down the hill. He also mentioned funding Fort Irwin for employment transportation. He is still discussing his place in office with his family. He has never voted for a tax, but he needs to do his job. He made a promise to never raise taxes to people who cannot afford it. He knows he was thrown under the bus with regards to Geo. The truth he has done everything he can. He cannot fix contracts they signed with other people. He can do the best he can to give information and research to the citizens and at the end of the day they need to fight for themselves. If they sign a contract there is nothing he can do about that. He reached out to the CEO to get a meeting set for next week. They are fixing things from other Councils. The $5,000 that was given from Geo to the City of Adelanto for their non-profits for parades, movies, and there was money to fix Marconi Park. He wanted transparency.

Q. ADJOURNMENT

The next Regular Meeting of the City Council will be held on July 13, 2016, at 7:00 p.m. unless a Special Meeting is called.

There being no further business the Chair entertained a motion to adjourn the meeting at 8:55 p.m.

MOTION: Moved by Mayor Pro Tem Wright, seconded by Mayor Kerr to adjourn the meeting.

Motion carried unanimously 5-0. (Camargo, Glasper, Woodard, Mayor Pro Tem Wright, Mayor Kerr voting yes).

_____
Rich Kerr, Mayor

_____
Cindy Herrera, City Clerk, MMC

Clerk of the Meeting: Brenda Lopez, Deputy City Clerk
Prepared by: Jordyn Thomas, Intern
Reviewed by: Brenda Lopez, Deputy City Clerk

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cynthia M. Herrera, MMC, City Manager/ City Clerk

BY: Belen Cordero, Conservation Specialist/Recycling Coordinator

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SUBJECT: MONTHLY COMMERCIAL & RESIDENTIAL SOLID WASTE & RECYCLING REPORT-APRIL 2016

ATTACHMENTS:

1. Burrtec's monthly commercial & residential solid waste & recycling report April 2016

BURRTEC
WASTE INDUSTRIES, INC.
"We'll Take Care Of It"

May 20, 2016

Ms. Belen Cordero
City of Adelanto
11600 Air Expressway - P.O. Box 10
Adelanto, CA 92301

Re: Monthly Commercial & Residential Report – April 2016

Dear Ms. Cordero:

The following information is provided as the monthly report for the solid waste and recyclables collection services:

Solid Waste Collected

Attached is a copy of the Waste Generation and Diversion Report, which provides a breakdown of the tonnage, collected by commodity type. Additional information based on program code and AB939 reporting format is also included.

The recycling tonnage is received and processed at the Victor Valley Material Recovery Facility. A detailed commodity breakdown by customer type is included. The solid waste is taken to the Victorville Landfill.

Call Logs

Attached are the detailed call logs.

Compliments	0
Complaints	0
Missed pick-ups	3

Used Oil Collection Activity

Burrtec provides a used oil collection program. Under this program, participating residents have their used oil and oil filters collected at curbside. The following summarizes the used oil and oil filters collection activity.

Oil Container Deliveries	0
Used Oil Collection	0

9890 Cherry Avenue • Fontana, California 92335 • 909-429-4200 • FAX 909-429-4290

Sharps Container Activity

Burrtec provides a used Sharps container distribution program. Under this program, participating residents may exchange their used containers for a new container at the Burrtec facility and can also drop off used Sharps containers at the new site located at City Hall.

Sharps Container Distribution	12
Used Sharps Container Collection	12

Universal Waste & E-Waste Collections

Universal waste includes such items as batteries, fluorescent lamps, and mercury thermostats among others. Electronic waste or E-waste includes such items as computer monitors, television sets, stereos, etc. The following summarizes the Universal Waste and E-waste residential collections:

Televisions	19
Other (Microwaves, Refrigerators, Washer/Dryers, etc.)	49

Warning Notices

No warning notices were issued during the month.

Problems Encountered

No problems were encountered.

Other Noteworthy Items

Bulky Item Collections: During the month we received 179 calls for bulky-item pick-ups, including: end tables, cabinets, desks, beds, mattresses, entertainment centers, BBQs, cribs, bookcases, and recliners. A detailed report of the bulky items collection calls is attached.

Community Involvement

Burrtec assisted the Community Clean-up that occurred during the week of April 16th – 22nd with free disposal services and gloves for volunteers. Burrtec also sponsored a Free Dump Day at Maverick's Stadium on Saturday, April 23, 2016. Photos from both events are attached.

Commercial Recycling Program

Outreach: Below please find the activity summary for the Commercial and Multi-Family Recycling Program:

Date	Customer Name	Remarks
4/6/16	Capri Mobile Home Park	Conducted Waste Survey
4/6/16	Desert Capri Mobil Home Park	Conducted Waste Survey
4/14/16	Adelanto RV Park	Conducted Waste Survey

If you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

Richard Niño
Vice President

/sr

SOLID WASTE COLLECTED

VICTORVILLE DISPOSAL
City of Adelanto

Waste Generation and Diversion Report
March_2016

Route Description	Refuse	Recycling	E-waste	Greenwaste	Tires (Transformation)	Tin/White Goods	Scrap Metal	Wood	Inert	Comm'l Select	Total Tonnage Generated		
Residential Total	786.56	179.53	-	-	-	-	-	-	-	-	966.09		
Christmas Tree Total	-	-	-	-	-	-	-	-	-	-	-		
Bulky Item Total	22.47	-	2.21	-	-	3.06	-	-	-	-	27.74	*993.83*	*Residential*
Clean Up Total	-	-	-	-	-	-	-	-	-	-	-		
Multi-Family Total	123.52	7.04	-	-	-	-	-	-	-	-	130.56	*130.56*	*Multi-Family*
Residential Bin Total	4.57	-	-	-	-	-	-	-	-	-	4.57		
Commercial Total	326.77	46.80	-	-	1.08	-	1.25	0.57	1.25	-	377.72	*382.29*	*Commercial*
Rolloff Total	556.12	-	-	4.73	-	-	-	2.59	-	1.16	564.60	*564.60*	*Rolloff*
Grand Total	1,820.01	233.37	2.21	4.73	1.08	3.06	1.25	3.16	1.25	1.16	2,071.28		
	(a)												

Diverted Tonnage											Total Tonnage Diverted	Residue %	Residue Tons	Net Tonnage Diverted
Residential Recyling		179.53									179.53	33.62%	60.36	119.17
Resd'l Recyling- External Bulky		-	2.21			3.06	-				5.27	0.00%	-	5.27
Multi-Family Recy		7.04									7.04	30.32%	2.13	4.91
Commercial Recycling		46.23									46.23	30.32%	14.02	32.21
Commercial Recycling - B&B Plastics		0.57									0.57	0.00%	-	0.57
Commercial-Other Recycling				-	1.08	-	1.25	0.57	1.25		4.15	0.00%	-	4.15
Rolloff Select Loads										1.16	1.16	40.00%	0.46	0.70
Rolloff-Other Recycling				4.73	-	-	-	2.59	-		7.32	0.00%	-	7.32
Total Diverted Tonnage	-	233.37	2.21	4.73	1.08	3.06	1.25	3.16	1.25	1.16	251.27		76.97	174.30
CIWMB Program	*Refuse*	*Recycling*		*Composting*	*Transformation*	*Special Waste - 4000 Series*				*Facility Recovery*			*Refuse*	*All Programs*
CIWMB Program-Code		*2000 Series*		*3000 Series*	*8000 Series*		*(c)*			*7000 Series*			*(b)*	*(e)*

Gross Diversion	12.13%	**Net Diversion**	8.42%
Residential	18.59%	*Residential*	12.52%
Multi-Family	5.39%	*Multi-Family*	3.76%
Commercial	13.33%	*Commercial*	9.66%
Rolloff	1.50%	*Rolloff*	1.42%

Reconciliation of Tonnage to CIWMB Report:

Total refuse generated	1,820.01	(a)
Total residue	76.97	(b)
Total Refuse	1,896.98	
Net Tonnage Diverted	174.30	(e)
Total Reported	2,071.28	

Total special waste 8.72

Commercial MRF credit for diversion only

VICTORVILLE DISPOSAL
CITY OF ADELANTO

CIWMB Program Code	Description	Jan-16	Feb-16	Mar-16	Y-T-D
Refuse					
	Residential Refuse	686.90	678.57	786.56	2,152.03
	Residential Bulky Items	10.99	18.75	22.47	52.21
	Residential Refuse (residue)	56.43	53.31	60.36	170.10
	Clean Up Refuse	0.00	0.00	0.00	0.00
	Government Refuse				0.00
	School Refuse				0.00
	Residential Bin Refuse	4.11	4.10	4.57	12.78
	Residential Bin Refuse (residue)	0.00	0.00	0.00	0.00
	Multi-Family Refuse	110.90	110.58	123.52	345.00
	Multi-Family Refuse (residue)	2.06	1.93	2.13	6.12
	Commercial Refuse	291.57	289.43	326.77	907.77
	Rolloff Refuse	391.52	471.54	556.12	1,419.18
	Commercial Refuse (residue)	13.62	12.70	14.02	40.34
	Rolloff Refuse (residue)	0.50	0.29	0.46	1.25
Refuse Totals		1,568.60	1,641.20	1,896.98	5,106.78
Source Reduction					
1000-SR-XGC	Xeriscaping, Grasscycling				0.00
1010-SR-BCM	Backyard Composting				0.00
1020-SR-BWR	Business Source Reduction				0.00
1030-SR-PMT	Procurement				0.00
1040-SR-SCH	School Source Reduction				0.00
1050-SR-GOV	Government Source Reduction				0.00
1060-SR-MTE	Material Exchange, Thrift Shops				0.00
1070-SR-OTH	Other Source Reduction				0.00
Source Reduction Totals		0.00	0.00	0.00	0.00
Recycling (net of residue)					
2000-RC-CRB	Residential Curbside Recycling	111.37	105.27	119.17	335.81
2010-RC-DRP	Residential Drop-Off Recycling				0.00
2020-RC-BYB	Residential Buy-Back Centers				0.00
2030-RC-OSP	Commercial On-Site Pickup	35.95	34.37	37.69	108.01
2040-RC-SFC	Commercial Self Haul Recycling				0.00
2050-RC-SCH	School Recycling				0.00
2060-RC-GOV	Government Recycling				0.00
2070-RC-SNL	Special Collection - Seasonal	5.21	0.00	0.00	5.21
2080-RC-SPE	Special Collection - Events				0.00
2090-RC-OTH	Other Recycling-Pre Sorted Roll-off	0.00	0.00	0.00	0.00
Recycling Totals		152.53	139.64	156.86	449.03
Composting					
3000-CM-RCG	Residential Curbside Greenwaste	0.00	0.00	0.00	0.00
3010-CM-RSG	Residential Self Haul Greenwaste				0.00
3020-CM-COG	Commercial On-Site Greenwaste	0.00	3.75	4.73	8.48
3030-CM-CSG	Commercial Self Haul Greenwaste				0.00
3040-CM-FWC	Food Waste Composting	0.00	0.00	0.00	0.00
3050-CM-SCH	School Composting				0.00
3060-CM-GOV	Government Composting				0.00
3070-CM-OTH	Other Composting				0.00
Composting Totals		0.00	3.75	4.73	8.48
Special Waste					
4000-SP-ASH	Ash				0.00
4010-SP-SLG	Sludge (sewage industrial)				0.00
4020-SP-TRS	Tires	0.00	0.00	0.00	0.00
4030-SP-WHG	White Goods	2.34	2.70	3.06	8.10
4040-SP-SCM	Scrap Metal	1.48	1.77	1.25	4.50
4050-SP-WDW	Wood Waste	0.00	0.00	3.16	3.16
4060-SP-CAR	Concrete/Asphalt/Rubble	1.25	0.00	1.25	2.50
4070-SP-DSD	Disaster Debris				0.00
4080-SP-SGL	Shingles				0.00
4090-SP-RND	Rendering				0.00
4100-SP-OTH	Other Special Waste	0.00	0.00	0.00	0.00
Special Waste Totals		5.07	4.47	8.72	18.26

VICTORVILLE DISPOSAL
CITY OF ADELANTO

CIWMB Program Code	Description	Jan-16	Feb-16	Mar-16	Y-T-D
Public Education & Outreach					
5000-ED-ELC	Electronic (radio, TV, WWW, Hotlines)				0.00
5010-ED-PRN	Printed Media				0.00
5020-ED-OUT	Outreach (workshops, fairs, field trips)				0.00
5030-ED-SCH					0.00
5040-ED-OTH	Other Public Education				0.00
Public Education & Outreach Totals		0.00	0.00	0.00	0.00
Policy Incentives					
6000-PI-PLB	Product & Landfill Bans				0.00
6010-PI-EIN	Economic Incentives				0.00
6020-PI-ORD	Ordinances				0.00
6030-PI-OTH	Other Policy Incentives				0.00
Public Education Totals		0.00	0.00	0.00	0.00
Facility Recovery					
7000-FR-MRF	Material Recovery Facility	0.98	0.44	0.70	2.12
7010-FR-LAN	Landfill				0.00
7020-FR-TST	Transfer Station				0.00
7030-FR-CMF	Composting Facility				0.00
7040-FR-ADC	Alternate Daily Cover				0.00
7050-FR-OTH	Other Facility Recovery				0.00
Facility Recovery Totals		0.98	0.44	0.70	2.12
Transformation					
8000-TR-WTE	Waste-to-Energy	0.21	0.08	0.00	0.29
8010-TR-WDW	Biomass (wood waste)				0.00
8020-TR-TRS	Tires	0.40	0.35	1.08	1.83
8030-TR-OTH	Other Transformation				0.00
Transformation Totals		0.61	0.43	1.08	2.12
Household Hazardous Waste					
9000-HH-PMF	Permanent Facility				0.00
9010-HH-MPC	Mobile/Periodic Facility				0.00
9020-HH-CSC	Curbside Collection				0.00
9030-HH-WSE	Waste Exchange				0.00
9040-HH-EDP	Educational Programs				0.00
9045-HH-EWA	Electronic Waste	0.85	2.28	2.21	5.34
9050-HH-OTH	Other Household Hazardous Waste				0.00
HHW Totals		0.85	2.28	2.21	5.34
All Programs Total		160.04	151.01	174.30	485.35
Total Refuse		1,568.60	1,641.20	1,896.98	5,106.78
Total Tonnages Generated		1,728.64	1,792.21	2,071.28	5,592.13
Multi Family Net Diverted Tonnage					
2030-RC-OSP	Multi Family Curbside Recycling	4.74	4.42	4.91	14.07
3020-CM-COG	Multi Family Curbside Greenwaste	0.00	0.00	0.00	0.00
7000-FR-MRF	Multi Family Material Recovery Facility	0.00	0.00	0.00	0.00
Residential Bin Net Diverted Tonnage					
2030-RC-OSP	Residential Bin Curbside Recycling	0.00	0.00	0.00	0.00
3020-CM-COG	Residential Bin Curbside Greenwaste	0.00	0.00	0.00	0.00
7000-FR-MRF	Residential Bin Material Recovery Facility	0.00	0.00	0.00	0.00
Oil Waste (in Gallon)					
9010-HH-MPC	Mobile/Periodic Facility	0.00	0.00	0.00	0.00

CALL LOGS

CITY OF ADELANTO MISSED PICK-UPS
APRIL 2016

WO #	STR #	SERVICE ADDRESS	DATE	SERVICE NOTES
55846	15240	ALEXANDRIA ST	04/07/16	SERVICE BLUE RECYCLE BARREL
56805	10426	THORNDALE ST	04/13/16	SERVICE GREEN BARREL. P/MARIA
59776	19031	JOSHUA ST	04/29/16	SERVICE BARRELS. 760-246-0617

CITY OF ADELANTO COMPLIMENTS
APRIL 2016

WO #	STR #	SERVICE ADDRESS	DATE	SERVICE NOTES

NONE TO REPORT

CITY OF ADELANTO COMPLAINTS
APRIL 2016

WO #	STR #	SERVICE ADDRESS	DATE	SERVICE NOTES
		NONE TO REPORT		

USED OIL PROGRAM

CITY OF ADELANTO USED OIL PROGRAM
APRIL 2016

WO #	STR #	SERVICE ADDRESS	DATE	SERVICE NOTES
		NONE TO REPORT		

SHARPS CONTAINER ACTIVITY

CITY OF ADELANTO SHARPS PROGRAM
APRIL 2016

COLLECTED	DELIVERED
12	12

BULKY PICK UPS

CITY OF ADELANTO BULKY PICK-UPS
APRIL 2016

WO #	STR#	SERVICE ADDRESS	DATE	SERVICE NOTES
53851	10593	INYO CT	04/01/16	COUCH, CHAIR IYONA OWENS 661-233-3099
54132	11946	CHAMBERLAINE WAY	04/01/16	3 MATTRESSES 760-523-6891
54696	12093	LEE AVE	04/01/16	4 CHAIRS, WASHER
54050	17768	CARSON CIR	04/01/16	COUCH, DRESSER, WATER TANK
54678	18057	JONATHAN ST	04/01/16	MATTRESS, BED FRAME, 2 VACUUM CLEANERS PER SHELAUNDRA 760-246-9786
54253	18166	LILAC RD	04/01/16	CHAIR
54040	18484	THOMAS CT	04/01/16	COUCH, WASHER, DRYER. KELLY MARTINEZ 760-220-0260
54057	18512	CASABA RD	04/01/16	2 COUCHES, MATTRESS, BOOKSHELF
54868	11795	OXFORD ST	04/04/16	2 DOORS, BOILER, DRESSER, AND MATTRESSES PER JOSE 760-261-2121
53918	15044	DRAGON TREE DR	04/04/16	5 MATTRESSES PER LATASHA 760-927-4460
53842	15142	BRAXTON ST	04/04/16	4 CHAIRS MARINA VALDEZ 909-838-8361
54996	10618	THORNDALE ST	04/05/16	REFRIGERATOR COLEEN PITCHFORD 818-857-9978
54499	10930	PERSHING DR	04/05/16	WASHER LUZ CABALLERO 760-246-5652
55094	11085	TOLLIVER WAY	04/05/16	DRESSER, MIRROR KARRIE KENUTH 760-900-5313
54180	11116	TOLLIVER WAY	04/05/16	MATTRESS, CHAIR PER RESHINA 760-486-3251
55063	11202	WESTBROOK DR	04/05/16	COUCH, STEPHANIE LAWSON 760-812-0587
55182	14459	COLUMBIA CT	04/05/16	MATTRESS, BOX SPRING ALBERT CANO 760-246-9324
55253	14612	ALAN ST	04/05/16	SWING, BED FRAME, 2 DOORS, CHAIR, BUNDLE OF METAL
53584	14625	SUNFLOWER CT	04/05/16	MATTRESS, BOX SPRING P/PAM -760-646-6340
54960	14644	ALAN ST	04/05/16	STOVE, DISHWASHER. DEANDRA 760-686-5985
55174	14749	DELICIOUS ST	04/05/16	10 ROLLS OF CARPET
55391	10611	PLAINFIELD ST	04/06/16	2 LOUNGE CHAIR FRAMES, PLASTIC TUB OF POOL POST, BBQ, BROKEN TABLE TOP, BOX SPRING, LAWNMOWER, SLIDE, GARAGE DOOR OPENER LISA 909-917-7510
54553	10742	JOSHUA ST	04/06/16	MATTRESS, 2 BOX SPRINGS LUIS 760-246-2903
54805	10747	TOLLIVER ST	04/06/16	3 MATTRESSES, COUCH, CHAIR PER CAROLYN 760-867-6345
55289	11222	SHANANDOAH ST	04/06/16	3 MATTRESSES, 2 PLASTIC BED FRAMES PATRICK 909-676-3936
55396	11229	MEREDITH ST	04/06/16	SINK, 4 PIECES OF COUNTER TOP. MAELE 760-780-7535
55514	11559	EMMY CT	04/06/16	2 SOFAS
54404	14821	DAISY RD	04/06/16	2 MATTRESSES, BED FRAME, 2 COUCHES FOR TAAFURI 360-689-0728
55277	15028	INDIGO ST	04/06/16	2 COUCHES, RECLINER CHAIR, DRESSER, STEREO CABINET GRADY BERRY 760-246-4226
55494	15043	DAISY RD	04/06/16	CHAIR, CABINET, 2 SHOWER DOORS, ROLL OF CARPET PEDRO DIAZ 213-434-2087
55485	15044	RADFORD AVE	04/06/16	5 ROLLS OF CARPET
55487	15056	MILFORD AVE	04/06/16	TV STAND, EASY UP
55515	15088	HENDERSON ST	04/06/16	TOILET, CABINET, MIRROR
55172	15166	LAKE ST	04/06/16	MATTRESS, 2 BOX SPRINGS

CITY OF ADELANTO BULKY PICK-UPS
APRIL 2016

WO #	STR#	SERVICE ADDRESS	DATE	SERVICE NOTES
55066	15188	REIMAN ST	04/06/16	2 COUCHES, 2 MATTRESSES, BED FRAM PER LESLIE 760-475-1248
55423	15204	REIMAN ST	04/06/16	COUCH, 5 CHAIRS PER JOSE 760-523-6333
55179	9928	KAY ST	04/07/16	WEIGHT BENCH, 3 WICKER CHAIRS. P/AMBER
54741	11541	AUTUMN ST	04/07/16	REFRIGERATOR PER PAMELA 760-885-9867
54772	11742	DRAKE CT	04/07/16	COUCH, 2 MATTRESSES, DESK AND POOL LINER
55680	11743	MAYWOOD CT	04/07/16	DOOR, TABLE TASHA 323-492-6406
55615	19041	PANTHER AVE	04/07/16	2 SOFAS, TABLE
55667	10347	PONY EXPRESS DR	04/08/16	MATTRESS, SATELLITE DISH, FRAME
55377	10367	PONY EXPRESS DR	04/08/16	WATER HEATER PER LUCY 760-552-2125
55617	10410	CIMMERON TRAIL DR	04/08/16	CHAIR, LOVESEAT, COUCH, SWAMP COOLER, WHEELCHAIR *MERLE FISHER 760-246-8721
55622	10708	WHITE AVE	04/08/16	2 CHAIRS, TABLE FRAME, SHELF
55855	17964	KENDALL CIR	04/08/16	RECLINER. TERESA RAYFORD 760-246-4163
55149	18051	VERBENA RD	04/08/16	PET CARRIER, BUNDLED PARTY TENT, 2 FOOD BUCKETS
55661	10974	MCKINLEY AVE	04/11/16	CHAIR
55307	11001	MCKINLEY AVE	04/11/16	2 SECTIONAL COUCHES RAYMOND SOMSUKCHAREAM 562-440-6653
54959	11276	CLAY ST	04/11/16	MATTRESS JESUS 760-246-8195
55431	11424	DARTMOUTH CT	04/11/16	4 TIRES, 2 DOLL HOUSES, BOX SPRING, TABLE, SPEAKER, CAR SEAT PER LIKINA 909-284-6898
55714	11757	NEHMANS WAY	04/11/16	FUTON, HEADBOARD, TABLE PER DEVONTE 760-514-7619
55118	11796	OXFORD ST	04/11/16	MATTRESS, DRESSER RENE ESPINOZA 760-246-9107
55080	11826	CORNELL ST	04/11/16	MATTRESS, DISHWASHER. PER JAMES
55402	11935	CLIFFROSE CT	04/11/16	MATTRESS, PICTURE FRAME, 3 CHAIRS
56179	14235	SAVANNA ST	04/11/16	4 CLOSET DOORS, BUNDLE OF POOL POLES SHEILA THREET 760-912-5199.
55645	14245	TIERRA DEL SUR ST	04/11/16	3 MATTRESS, DAY BED FRAME JESSIE ATKINS
55060	14255	SIERRA GRANDE ST	04/11/16	MATTRESS. REANNA 909-320-0841
55593	14340	SAVANNA ST	04/11/16	WATER HEATER
56053	14372	CAROLINE ST	04/11/16	MATTRESS, BED FRAME, 2 DOORS, STROLLER PER CAROLINE 760-810-2464
56064	15248	BRAXTON ST	04/11/16	COUCH, MATTRESS, BOX SPRING, 2 CHAIRS WILLIE 213-985-6137
56328	10434	THORNDALE ST	04/12/16	MATTRESS, 2 HEADBOARD, PLASTIC BARREL
55651	10604	PALMYRA ST	04/12/16	STEREO, 2 SPEAKERS, REFRIGERATOR. SAIRA BARRIOS 760-987-0971
56324	10740	THORNDALE ST	04/12/16	STOVE, FREEZER. TIMOTHY WILDER 760-508-4639
55369	10930	PERSHING DR	04/12/16	WINDOW, BUNDLE OF WOOD, BASKET OF WOOD, 3 TIRES PER LUZ 760-246-5652
56153	10954	WILLOW LN	04/12/16	5 MATTRESSES, 2 COUCHES, DISHWASHER. CYNTHIA LARA 760-530-7415
55872	11045	DESERT ROSE DR	04/12/16	MATTRESS, BOX SPRING SHERLYN 760-246-2022

CITY OF ADELANTO BULKY PICK-UPS
APRIL 2016

WO #	STR#	SERVICE ADDRESS	DATE	SERVICE NOTES
55663	11099	VILLA ST	04/12/16	PING PONG TABLE, ROCKING CHAIR, BLINDS, PLASTIC COVER
55459	11157	VILLA ST	04/12/16	2 BIG ROLLS OF CARPET, PIECE OF WOOD PER ROBERT 760-628-9026
56038	14625	PALMYRA WAY	04/12/16	2 COUCHES P/ARMINA- 424-702-8343
55047	14653	DANA ST	04/12/16	MATTRESS, BOX SPRING, 2 HEADBOARDS TERESA 760-246-2300
56326	14790	DELICIOUS ST	04/12/16	2 MATTRESS, 2 RUGS, DOG HOUSE
55576	14821	IRIS ST	04/12/16	3 MATTRESSES, COUCH, AND 1 BUNDLE OF BEDRAILS
56713	10544	ARLINGTON ST	04/13/16	BED FRAME, DESK. MARISELA 760-523-1658
56277	10575	PLAINFIELD ST	04/13/16	COUCH, 2 MATTRESSES, 2 BUNDLES OF WOOD 760-963-5404 CHARLIE
56571	10706	PLAINFIELD ST	04/13/16	BBQ, RECLINER, RAQUEL HERRERA 760-881-9416 OR 760-246-6031
56592	10716	JOSHUA ST	04/13/16	MATTRESS, BED RAIL
56357	10773	E WAKEFIELD ST	04/13/16	TABLE, GLASS DOOR, PORCH SWING, COUCH, GARAGE DOOR OPENER *DAWN 760-522-7301
55533	10795	TOLLIVER ST	04/13/16	BIKE, BED FRAME, 2 MATTRESSES, REFRIGERATOR. 951-218-4816 VICTORIA
56753	10805	PEMBERTON ST	04/13/16	4 MATTRESSES, COUCH, DESK P/JAVIER 605-9576
56624	11222	SHANANDOAH ST	04/13/16	3 CHAIRS, WALKER, PLASTIC TOY. PATRICK 909-676-3936
55552	11223	SHANANDOAH ST	04/13/16	COUCH, BED AND 3 BUNDLES OF PLASTIC MATERIAL PER OLIVIA 760-508-7292
56779	11508	RUSSET PL	04/13/16	2 TREADMILLS, REFRIGERATOR. P/VERONICA- 626 202-6692
55941	11563	RUSSET PL	04/13/16	RECLINER CARL 760-508-9941
56567	15080	KINGSFORD AVE	04/13/16	MATTRESS, BOX SPRING, BED FRAME. MARIA PEREZ 760-523-1776
57032	11436	AUTUMN ST	04/14/16	2 DRESSERS 3 BIKES, MELE NAU 760-442-3607
56829	11590	WINTER PL	04/14/16	MATTRESS, DRESSER, 2 KIDS ITEMS PER MELINDA MELENDEZ 760-927-7185
55778	11632	DESERT FALLS ST	04/14/16	COUCH, FUTON, TABLE, WASHER. P/VERLENA
56789	11660	DURANGO DR	04/14/16	MATTRESS, BOX SPRING, BED FRAME ILIANA 760-475-1251
56928	11801	BROAD OAK CT	04/14/16	3 ROLLS OF CARPET, MATTRESS, BOX SPRING CONSULEO 760-246-5157
56566	18555	COLONIAL AVE	04/14/16	FUTON FRAME, DOLLHOUSE, DISHWASHER. LINDA BLAKEY 702-517-8960
56490	18828	CEDAR CT	04/14/16	3 MATTRESSES 760-514-8787
56782	19010	PANTHER AVE	04/14/16	4 ROLLS OF CARPET
56918	19020	JOSHUA ST	04/14/16	BOX SPRING, RECLINER, 2 FANS PER JERALD 760-526-3988
56319	19027	PANTHER AVE	04/14/16	CHAIR PER JEAN 760-530--0655
56944	19043	MUSKRAT AVE	04/14/16	MATTRESS NACHERYL SEALS 310-461-2909
57175	10470	JASPER CT	04/15/16	CANOPY, KIDS TOY CAR, KIDS TOY MOTORCYCLE, CHAIR, BASKETBALL HOOP *MARCO TORRES 760-246-4621

CITY OF ADELANTO BULKY PICK-UPS
APRIL 2016

WO #	STR#	SERVICE ADDRESS	DATE	SERVICE NOTES
57285	10705	WHITE AVE	04/15/16	TOILET SUSAN SMITH 760-805-6989
56042	17934	HERMOSA RD	04/15/16	WATER SOFTENER, PLASTIC CONTAINER, WATER HEATER. GRACE HSIAO 909-452-1167
56860	17951	KENDALL CIR	04/15/16	BED FRAME, MATTRESS, BASE BOARDS 323-512-1359
56776	18142	CASABA RD	04/15/16	COUCH, MATTRESS
57138	18509	CASABA RD	04/15/16	2 DOORS, LADDER, BIKE, STOVE. PER JOHN 760-963-4994
56698	10874	HICKORY ST	04/18/16	4 COUCHES, DRESSER DAVID FILATOFF 562-254-6678
56221	11324	DARTMOUTH CT	04/18/16	COUCH, TABLE, FILE CABINET, CURIO CABINET P/MARYANN-2458691
57230	11417	BRISTOL CT	04/18/16	3 CHAIRS, MATTRESS, COUCH BEATRIZ 760-677-1484
56213	11700	TAYLOR ST	04/18/16	2 TIRES, 2 COUCHES ELIZABETH 661-540-3730
56226	11758	STAR ST	04/18/16	3 CHAIRS, SWING, TABLE, SHARDE MCKENNEN 760-605-3431
57100	11814	NEHMANS WAY	04/18/16	TABLE TOP, BOX SPRING, CHEST, 2 CHAIRS PER DELIA AMAYA 760-508-6576
56625	11831	CLIFFROSE CT	04/18/16	BIKE, BABY BED RAILS BUNDLED, 4 DOORS, CHAIR, BABY MATTRESS, 2 STORAGE CONTAINER TOTES BENISHA MCCOY 909-743-3338
56950	11869	CLIFFROSE CT	04/18/16	2 BED FRAMES, 2 COUCHES, DRESSER PATRICIA 909-246-6534
56591	14313	NICOLES WAY	04/18/16	MATTRESS, BOX SPRING. ALMA ADAMS 760-246-8504
57342	14326	CHESTNUT ST	04/18/16	2 DOORS, 3 BUNDLES OF WOOD FENCING
57248	14449	DELICIOUS ST	04/18/16	3 COUCHES, BBQ AMERICA MENDEZ 760-953-0999
57394	14452	RACHEL DR	04/18/16	MATTRESS, BOX SPRING, HEAD BOARD, BICYCLE REBECCA 909-278-0865
56744	10854	THORNDALE ST	04/19/16	DRESSER, PLASTIC BOX, WOODEN BOX SYLVIA 760-686-7060
57611	11060	SHERMAN WAY	04/19/16	BOX SPRING, MATTRESS, WHEEL CHAIR, PORTABLE TOILET, CABINET
56844	11070	SHERMAN WAY	04/19/16	COUCH PER EVANGELINE 760-985-3305
57165	11106	TAMARISK RD	04/19/16	HIGH CHAIR, FAN, 2 COMPUTER CHAIRS MARGARITA MENDOZA 760-486-1176
56626	11176	TAMARISK RD	04/19/16	COMP CHAIR, CHRISTMAS TREE IN A BOX, TRICYCLE CYNTHIA VILLA 760-261-8319
57144	11373	ESSEX CT	04/19/16	COUCH ESPARANZA HERNANDEZ 760-442-7003
57504	11406	HIGHLAND CT	04/19/16	COUCH, BBQ, DRESSER
57022	11625	DANIELLE DR	04/19/16	2 MATTRESSES, COUCH, DRYER. FRANKIE JENKINS 323-972-4960
57512	11668	PRAIRIE DR	04/19/16	BASKETBALL HOOP, SPA COVER
56816	14527	SCOTTSDALE CIR	04/19/16	BED FRAME, CABINET, TABLE, SEED SPREADER, ELIZABETH JOHNSON 760-221-0919.

CITY OF ADELANTO BULKY PICK-UPS
APRIL 2016

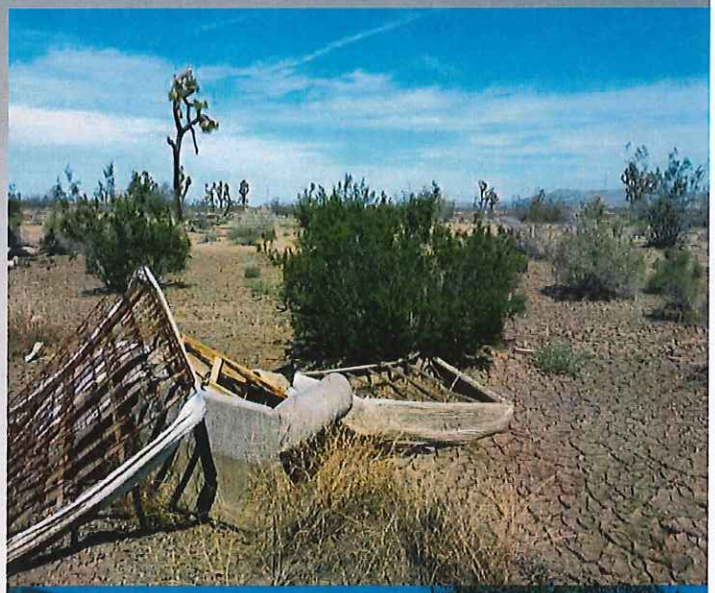
WO #	STR#	SERVICE ADDRESS	DATE	SERVICE NOTES
57396	14563	MONTEREY PL	04/19/16	LOVESEAT, COUCH, 2 DRESSERS URSULA 760-900-2788
57577	14691	KIMBERLY ST	04/19/16	MATTRESS, BOX SPRING, REFRIGERATOR. PER EBONY 760-508-6754
57661	10510	VILLA ST	04/20/16	FUTON COUCH, TABLE, LAMP, DRESSER. P/SHIRLEY 626-367-1509
57672	10536	JOSHUA ST	04/20/16	2 TOILETS, SMALL PIECE OF MARBLE PER CASSANDRA 661-903-6368
57702	10737	TOLLIVER ST	04/20/16	RECLINER, HAMSTER CAGE
57892	10786	PERSHING ST	04/20/16	DESK, BASKETBALL COURT, TIRE, WASHER, DRYER
56849	10972	CONTINENTAL ST	04/20/16	BBQ, 2 VACUUMS. DISHWASHER. ELIZABETH DELGADO 760-577-3223
57598	10989	CONTINENTAL ST	04/20/16	MATTRESS, BOX SPRING, DRESSER VERONICA REYES 760-605-2001
57542	11155	FAIRMONT ST	04/20/16	2 DRESSERS KRISTIN CORTEZ 562-506-8684
57729	14764	REDWOOD ST	04/20/16	2 MATTRESSES, 2 TIRES, REFRIGERATOR
56839	15150	ALEXANDRIA ST	04/20/16	2 DRESSER, NIGHT STAND, MATTRESS PER MONIQUE 760-523-1427
57953	15166	DAISY RD	04/20/16	3 CHAIRS, CHRISTMAS TREE CAROLYN 760-867-5411
57758	15174	DESERT ST	04/20/16	2 DRESSERS, MATTRESS JASMINE HORN 760-217-7208
57949	10365	ORCHARD AVE	04/21/16	2 MATTRESSES, 3 CHAIRS
57991	11718	CLOVERLAWN CT	04/21/16	3 MATTRESSES CRYSTAL
57817	11781	LUPIN RD	04/21/16	LAWN CHAIR, TRAMPOLINE, CRIB FRAME, BEDRAILS LINDA AYALA 909-477-8638
57882	11791	DANA DR	04/21/16	MATTRESS, BOX SPRING, TABLE, COUCH
58094	15710	OX HILL CT	04/21/16	MATTRESS, TABLE P/JOHN 217-7016
57115	15828	DESERT ROCK ST	04/21/16	2 MATTRESS, BED FRAME, DRESSER. PER ARTHUR ROJAS 760-523-1428
58205	16731	BELLFLOWER ST	04/21/16	2 MATTRESSES, BOX SPRING, 2 COUCH FRAME JOSÉ 760-246-2300
57713	18802	CEDAR CT	04/21/16	MATTRESS , BOX SPRING PER STEPHANIE 626-392-7649
57690	10438	RODEO CIR	04/22/16	2 COUCHES, 2 TABLES, VACUUM MARTHA CRUZ 760-561-2952
57520	10446	CIMMERON TRAIL DR	04/22/16	2 COUCHES PER MARIA 760-269-2809
58465	10470	JASPER CT	04/22/16	BBQ, KIDS KITCHEN, VACUUM, STROLLER PER MARCO 760-246-4256
57346	12028	CHAMBERLAINE WAY	04/22/16	SOFA, REFRIGERATOR, WASHER, DRYER. TONI SOTO 760-403-5908
58343	17800	AVERY ST	04/22/16	2 COUCHES, MATTRESS, BOX SPRING, BED FRAME 760-601-4437 MONICA
58392	17964	KENDALL CIR	04/22/16	HEADBOARD, 2 BOX SPRINGS, NIGHT STAND TERESA RAYFOR 760-246-4163
58353	17971	LANDON CT	04/22/16	SEE SAW
58347	17990	VERBENA RD	04/22/16	3 MATTRESSES, HEADBOARD, FOOTBOARD RON 760-909-9050
57464	10840	FLORAL ST	04/25/16	COUCH, BENCH, CHAIR TIFFANY 909-441-8956

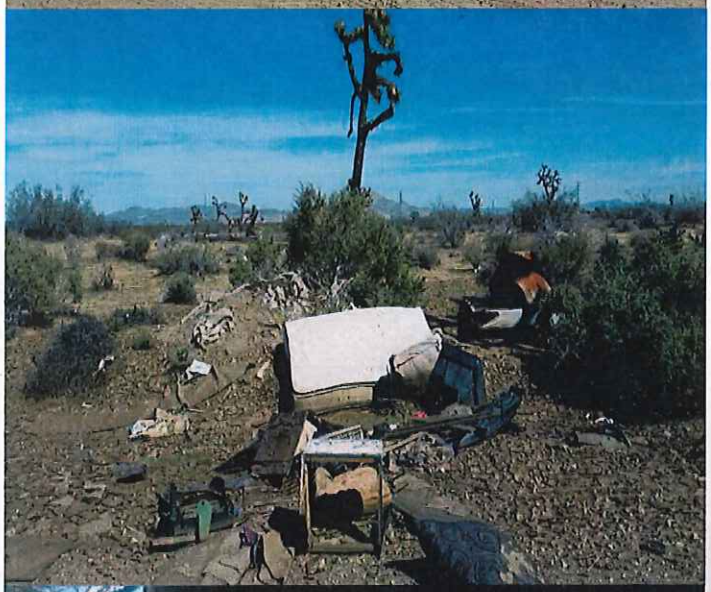
CITY OF ADELANTO BULKY PICK-UPS
APRIL 2016

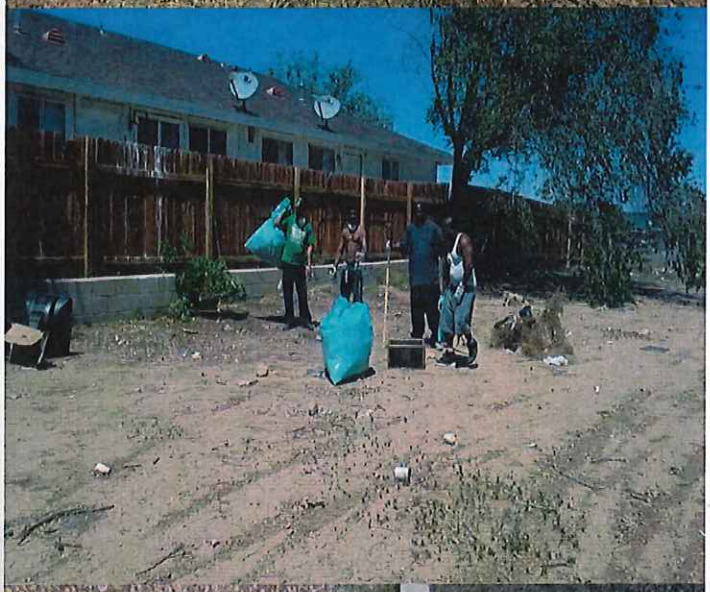
WO #	STR#	SERVICE ADDRESS	DATE	SERVICE NOTES
57617	11811	CLIFFROSE CT	04/25/16	SOFA, CHAIR, CLOSET DOOR, WATER HEATER
58283	15248	BRAXTON ST	04/25/16	DRESSER, CHAIR, 2 COUCHES, SPEAKER PER WILLIE 213-985-6137
58277	10995	WILLOW WAY	04/26/16	2 SLIDING GLASS DOORS
58678	11195	VILLA ST	04/26/16	BUNDLES OF BRANCHES, 3 CHAIRS AND PICNIC TABLE.
58309	14612	PALMYRA CT	04/26/16	2 DRESSERS, STACKABLE WASHER/DRYER. CARL CRAIN 760-508-7561
57754	14777	SANDSTONE ST	04/26/16	3 PIECE SECTIONAL, OTTOMAN, TABLE LAUREN TAYLOR 909-265-5160
58915	10575	PLAINFIELD ST	04/27/16	2 BUMPERS, 3 BUNDLES OF WOOD
58934	14827	KIMBERLY ST	04/27/16	COUCH, LOVESEAT, BUNDLE OF LAMINATE WOOD, DISHWASHER. CARLOTA BOTELLO 909-545-2792
58683	14968	DAVINCI CT	04/27/16	2 LOVESEATS, COUCH, MATTRESS, BOX SPRINGTAMMY 760-985-2376
58965	15044	RADFORD AVE	04/27/16	2 DOORS DANIEL RAMOS 760-246-0138
58781	15111	DESERT ST	04/27/16	MATTRESS, POWER WHEEL, BARBIE JEEP, WATER DISPENSER
58754	10452	NAPA RD	04/28/16	DESK, DRESSER, WATER HEATER
58920	11454	WINTER PL	04/28/16	BOX SPRING, BED FRAME, HEADBOARD, FOOTBOARD, TREADMILL. ERIN 909-367-8798
58620	11675	ENGLISH CT	04/28/16	MATTRESS, BED FRAME, 2 BOXES OF CLOTHES AND TABLE PER ANNA 951-347-9576
59175	11943	POPPY RD	04/28/16	2 MATTRESSES, 2 HEAD BOARDS, 2 FOOT BOARDS, DRESSER, DESK, MIRROR, WATER HEATER
59239	15344	PEARMAIN ST	04/28/16	MATTRESS, BOX SPRING
59524	15646	FREMONT DR	04/28/16	REFRIGERATOR
58750	10221	LAWSON AVE	04/29/16	2 MATTRESSES, 2 LAMPS, A/C UNIT
58901	10578	LEE AVE	04/29/16	MATTRESS P/NANCY -530-7051
58727	10593	INYO CT	04/29/16	HEADBOARD, TABLE
59162	11279	CHAPPARAL AVE	04/29/16	DRESSER, MIRROR FRAME, 3 SHELVES SANDRA ROLAND 760-261-1048
58542	17820	MONO CT	04/29/16	6 BUNDLES OF WOOD PER BEN 760-559-6468
58708	17940	VERBENA RD	04/29/16	REFRIGERATOR PER MARYANN 760-246-6115
59163	18205	LARKSPUR RD	04/29/16	2 MATTRESSES, 2 BED FRAMES PER DANIELLE 760-508-4534
59479	18474	PEARMAIN ST	04/29/16	DRESSER, CHINA CABINET, BBQ, 2 REFRIGERATORS. MELODY 760-867-5617

OUTREACH

Adelanto Community Clean-up Event 4/16 – 4/22/16





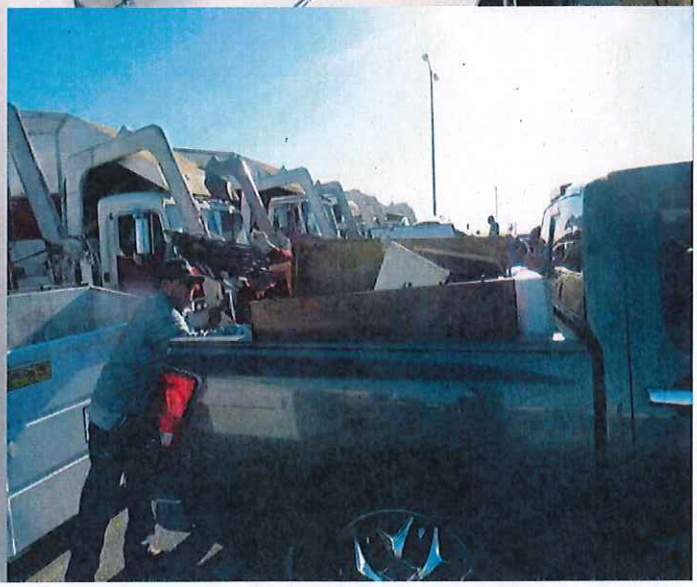


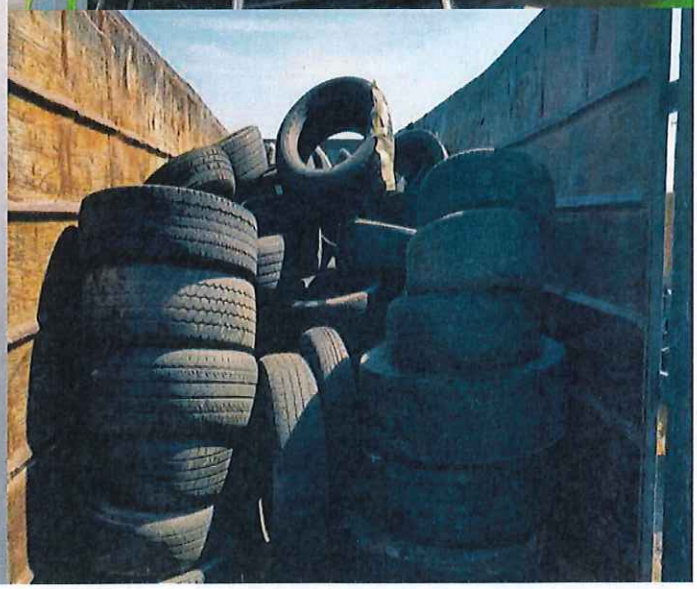
CITY OF ADELANTO CALIFORNIA

"Progress through unity"

INCORPORATED DECEMBER 22, 1970

Free Dump Day at Maverick's Stadium 4/23/16





BURRTEC

"We'll Take Care Of It"

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cindy Herrera, City Manager

BY: Dan Mejia, Battalion Chief – San Bernardino County Fire Department

SUBJECT: FIRE DEPARTMENT REPORT MAY 2016

ATTACHMENTS:

Monthly Fire Department Response Stats

2016 Responses
For The City of Adelanto

Mark Hartwig *Fire Chief*

CONTACT: **Dan Mejia** ***Battalion Chief***

RESPONSE TYPE	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	YTD
Hazardous Materials	1	2	1	0	0								
Hazardous Other	4	2	0	1	21								
Medical	496	364	422	424	428								
Other Fire	7	6	4	4	9								
Other Incident	36	15	22	23	26								
Public Service	4	4	8	8	10								
Rescue	0	0	0	0	0								
Structure Fire	19	4	20	25	6								
T/C with Extrication	3	1	4	6	4								
Traffic Collision	30	13	24	25	32								
Vegetation Fire	8	3	2	3	3								
Vehicle Fire	1	0	2	2	4								
TOTALS	**609**	**414**	**509**	**521**	**543**								
Other units into AD	168	182	141	212	168								

- Methodology used: "responses." Responses indicate number of times units went "in route" to an incident. (This is vs. using "incidents," the actual number of calls.)
- Hazardous Other: any call that can't be typed specifically as hazardous material. Could be smell of gas, etc.
- Other Incident: miscellaneous category for calls not in list.
- **Training in May: County Fire continues to training on wildland training, which includes hose line deployment and assessing structures that are threatened during a fire.**

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cynthia M. Herrera, MMC, City Manager / City Clerk

BY: Steve Peltier, Community Safety Manager

SUBJECT: CODE COMPLIANCE DEPARTMENT MONTHLY REPORT – MAY 2016

STAFF RECOMMENDATION:

Staff requests the City Council approve the Code Compliance monthly report for May 2016.

BACKGROUND:

Property Inspections:	363
Apartment Inspections:	2
Other Service Calls:	65
Total Parking Citations:	49
Total Administrative Citations:	39

FISCAL IMPACT:

Cost recovery, apartment inspections and citation fines have a positive fiscal impact of $11,372.27

ATTACHMENTS:

1. Monthly Report
2. Detailed daily overview of work completed by individual officers.

CITY OF ADELANTO CODE COMPLIANCE MONTHLY STATS FISCAL YEAR 2015-2016

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	Totals
Property Inspections Conducted	346	292	208	282	268	139	323	385	321	221	363		3148
Apartment Inspections Conducted	189	33	72	0	0	22	2	1	0	0	2		321
Other Service Calls	7	21	5	17	15	19	52	29	34	32	65		296
Abatement Warrants Issued	0	0	0	0	0	4	0	4	1	0	0		9
Total Parking Citations Issued	11	25	51	38	18	27	7	19	58	44	49		347
Total Administative Citations Issued	11	31	28	55	53	22	54	60	30	17	39		400
Criminal Citations Issued	0	0	0	0	0	0	0	0	0	0	0		0
Apartment Inspections Paid	$850.00	$2,026.46	$1,312.34	$10,180.00	$650.00	$25.00	$12,862.00	$31,834.00	$18,670.00	$6,570.00	$1,639.00		$86,618.80
Parking Citations Paid	$3,271.65	$601.00	$259.60	$2,024.59	$617.93	$1,106.65	$1,452.07	$1,280.00	$4,189.16	$3,866.67	$1,074.20		$19,743.52
Administrative Citations Paid	$1,600.00	$1,022.50	$1,154.17	$792.51	$1,177.50	$2,040.00	$2,390.00	$1,194.17	$650.00	$2,710.83	$1,300.00		$16,031.68
Statement of Cost Paid	$3,718.10	$1,002.85	$2,186.25	$1,202.58	$5,006.98	$3,985.88	$12,829.23	$1,235.32	$10,881.44	$2,750.32	$7,359.07		$52,158.02
Civil Restitution Fees Paid	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		$0.00
	$9,439.75	$4,652.81	$4,912.36	$14,199.68	$7,452.41	$7,157.53	$29,533.30	$35,543.49	$34,390.60	$15,897.82	$11,372.27	$0.00	TOTAL $174,552.02

CASE LOAD

May-16 *Officer P. Avalos*

Date	Tire Grant					CDBG / South																					
	Surveillance		Tire Inspections		Miles Driven	Total # of Calls		Apartment Inspection	Inspections		Warrants		Cites		Other Calls		Code Tech		Notices		Closed		ACO		Housing Units receivings Violations:	Housing units where Code violations	Housing units where code violations
	Hours	# Tires	Hours	Inspect		CDBG	South	CDBG	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	Reg	O.T.	CDBG Only	CDBG Only	CDBG Only
50516							2							2								2			0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
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																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
Total	0.00	0	0.00	0	0	0	2	0	0	0	0	0	0	2	0	0	0.00	0	0	0	0	2	0.00	0.00	0	0	0

South-Inspections, citations, other contacts and warrants =South 2 calls for service.

CDBG-Inspections, citations, other contacts and warrants =CDBG 0 calls for service.

CASE LOAD

May-16 *Officer K. Bowen*

Date	Tire Grant					CDBG / South																				
	Surveillance		Tire Inspections		Miles Driven	Total # of Calls		Apartment Inspection	Inspections		Warrants		Cites		Other Calls		Code Tech		Notices		Closed		ACO		Housing Units receivings Violations:	Housing units where Code violations	Housing units where code violations
	Hours	# Tires	Hours	Inspect		CDBG	South	CDBG	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	Reg	O.T.	CDBG Only	CDBG Only	CDBG Only
050216						2	10		2	7				3			1.5	0.5	2	1					2	0	0
050316						3	10		3	8						2	1			2					0	0	0
050416						4	5		3	4					1	1	2		2	2					2	0	0
050516						8	3	1	3					1	4	2	1	0.5	3	1					3	0	0
050916						2	11							3	2	8	2	0.5	1	1					0	0	0
051016						13							1		12		1	0.5	2						2	0	0
051116						9	3						1		8	3	1	0.5	2	1					2	0	0
051616						3	10							4	3	6	1	0.5		3					0	0	0
051716						2	15								2	15	1	0.5	1	3					1	0	0
051816						6	5		1				1	2	4	3	2	0.5	3	1					3	0	0
051916						1	6							1	1	5	1								0	0	0
052316						8	3		2						6	3	2	0.5	2						2	0	0
052416						2	11							6	2	5	1	0.5		1					0	0	0
052516						1	13							5	1	8	2			1					0	0	0
052616						5	6							3	5	3	2	0.5	3	1					3	0	0
053116						5	6								5	6	2	0.5		1					0	0	0
Total	0.00	0	0.00	0	0	74	117	1	14	19	0	0	3	28	56	70	23.5	6	21	19	0	0	0.00	0.00	20	0	0

South-Inspections, citations, other contacts and warrants =South 117 calls for service.

CDBG-Inspections, citations, other contacts and warrants =CDBG 74 calls for service.

CASE LOAD

May-16 *Officer R. Cravens*

Date	Tire Grant					CDBG / South																					
	Surveillance		Tire Inspections		Miles Driven	Total # of Calls		Apartment Inspection	Inspections		Warrants		Cites		Other Calls		Code Tech		Notices		Closed		ACO		Housing Units receivings Violations:	Housing units where Code	Housing units where code
	Hours	# Tires	Hours	Inspect		CDBG	South	CDBG	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	Reg	O.T.	CDBG Only	CDBG Only	CDBG Only
51316						14	1		7				7	1			1		2		4				2	4	0
51416						2	17		2	12				4		1	1			10		2			0	0	0
51716							16			8				8			1			5		2			0	0	0
52116						20	2		11	2			9				1	0.5	5		4	1			5	4	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
																									0	0	0
Total	0	0	0	0	0	36	36	0	20	22	0	0	16	13	0	1	4	0.5	7	15	8	5	0	0	7	8	0

South-Inspections, citations, other contacts and warrants =South 36 calls for service.

CDBG-Inspections, citations, other contacts and warrants =CDBG 36 calls for service.

CASE LOAD

May-16 *Officer R. De La Torre*

Date	Tire Grant					CDBG / South																					
	Surveillance		Tire Inspections		Miles Driven	Total # of Calls		Apartment Inspection	Inspections		Warrants		Cites		Other Calls		Code Tech		Notices		Closed		ACO		Housing Units receivings Violations:	Housing units where Code violations	Housing units where code violations
	Hours	# Tires	Hours	Inspect		CDBG	South	CDBG	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	CDBG	South	Reg	O.T.	CDBG Only	CDBG Only	CDBG Only
050216																	2	8							0	0	0
050316																	2	8							0	0	0
050416																	2	8							0	0	0
050516						1		1									2	7							0	0	0
050916						4			3						1		2	4.5							0	0	0
051016						18			11				7				2	1.5	2		6				2	6	0
051116						17			11				4		2		2		5		6				5	6	0
051616						3			2				1				2		1						1	0	0
051716						13			11				2				2				10				0	10	0
051916						1									1		1.5	1							0	0	0
052316						16			11				4		1		1.5	0.5	1		6				1	6	0
052416						2	1								2	1	1	1							0	0	0
052516						12			9				3				1.5	1.5	4		4				4	4	0
052616						5	5		3	4					2	1	1.5	2.5	2	1		3			2	0	0
																									0	0	0
																									0	0	0
Total	0.00	0	0.00	0	0	92	6	1	61	4	0	0	21	0	9	2	25	43.5	15	1	32	3	0.00	0.00	15	32	0

South-Inspections, citations, other contacts and warrants =South 6 calls for service.

CDBG-Inspections, citations, other contacts and warrants =CDBG 92 calls for service.

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cynthia M. Herrera, MMC, City Manager/ City Clerk

BY: Steve Peltier, Community Safety Manager

SUBJECT: ANIMAL CARE & CONTROL DEPARTMENT MONTHLY REPORT – MAY 2016

STAFF RECOMMENDATION:

Staff requests that City Council approve the Animal Care & Control report for May 2016

BACKGROUND:

See attached

FISCAL IMPACT:

None

ATTACHMENTS:

1. Monthly report for May 2016

ANIMAL CARE & CONTROL DEPARTMENT MONTHLY REPORT – MAY 2016

Calls received by phone/dispatch/VM:	**184**			
NOV's issued to Public:	**7**			
Citations issued to Public:	**11**			
Canvassing / licenses sold in field:	**1**			
LIVE Dog / cat picked up for the month:	Dogs	**60**	Cats	**27**
Dog(s) captured at large:	Dogs	**24**		
DOA Dog / cat picked up for the month:	Dogs	**9**	Cats	**8**
Animal bite reports taken:	**4**			
Dog / cat on quarantine:	Dogs	**4**	Cats	**0**
Owner turn in / release:	Dogs	**3**	Cats	**1**
Dog / cat returned to owner:	Dogs	**5**	Cats	**0**
Dog / cat stolen, escaped, etc:	Dogs	**0**	Cats	**0**
Dog / cat euthanized at veterinarian:	Dogs	**0**	Cats	**0**

Farm animals picked up: **0** Snakes picked up: **1** Bees: **1**

NOTES:

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cindy Herrera, City Manager

SUBJECT: APPROVAL OF GRANT WRITING SERVICES AGREEMENT WITH CALIFORNIA CONSULTING, LLC

RECOMMENDATION:

Staff Recommends approval of Grant Writing Services Agreement with California Consulting LLC.

BACKGROUND:

Founded in 2004, California Consulting, LLC has a solid reputation for hard work and a commitment to success for its clients. California Consulting, LLC is the largest grant writing firm in California. With offices in Southern California, Northern California and Central California, we have almost 80 clients statewide. We have 30 members of our team from Chico in the North, to Los Angeles in the South.

California Consulting has developed an expertise in representing public agencies, private companies, and non-profit organizations. We have secured over $1.5 billion for our clients since inception through grant writing and government advocacy efforts combined.

The California Consulting team boasts nearly 25 grant writers. Through years of experience our grant writers have a proven track record of success and have mastered their skills of identifying, researching, and obtaining funding for significant projects at every level of government. California Consulting grant writers have written over 700 competitive grants that have been funded, generating over $170 million for our clients. Our aggressive, hard-working, and results-oriented style has translated into millions of dollars for our clients. Our professional grant writers are diligent and stay current on every Federal and State grant available on a myriad of different topics and public policy areas. Whether it is recreation, education, parks money, or public safety our grants team knows where to locate grant funds and how to successfully write the applications.

ATTACHMENTS:

1. Grant Writing Services Agreement

FISCAL IMPACT:

1. Per Grant Option

GRANT WRITING SERVICES AGREEMENT

DATED: June 2, 2016

PARTIES: California Consulting, LLC, A California Limited Liability Company (hereinafter the "Consultant"); and

City of Adelanto, (hereinafter the "Client")

AGREEMENT:

The undersigned hereby agree to the following terms and conditions:

Section 1. **Duties of Consultant:** During the term of this Agreement, Consultant shall provide the Client as follows:

a. Grant research, targeted grant research on projects specifically identified by the client, and identification of funding opportunities;

b. Grant writing at direction of Client; and

c. Offering Client general advice on matters involving funding mechanisms, grants research, identification, and writing.

Section 2. **Time for Performance of Duties:** Notwithstanding any other term or condition of this Agreement, Client specifically acknowledges that Consultant has other clients and/or outside employment. Consultant shall have control over the time and manner of performing its duties described in Section 1, and shall make available such time as it, in its discretion along with Client input, shall deem appropriate for the performance of its duties under this Agreement.

Section 3. **Term of the Agreement:** The effective date of this Agreement is June 2, 2016, and shall continue on a month to month basis, allowing both parties to discuss potential new contract terms at any time.

Section 4. **Compensation:** Client shall pay Consultant on a per grant basis as compensation for Consultant's grant writing services. Client shall pay Consultant at the rate of $95.00 per hour for all services performed at direction of Client when not related to a specific grant selected by Client. Consultant shall provide client with a written invoice monthly. Client agrees to pay invoice within 30 days of receipt.

The following is a breakdown of cost per grant:

Grant Amount	Cost
Up to $10,000	$1,000
$10,001 - $50,000	$3,000
$50,001 - $100,000	$4,000
$100,001 - $250,000	$6,000
Over $250,000	$8,000 - $12,000

Cost will be determined based on complexity of grant preparation for all grants exceeding $250,000. Consultant will provide Client with cost prior to commencing work on grant selected by Client.

If Client decides to withdraw the application or cease work on the application prior to submission and after work has begun, Client agrees to pay Consultant for work completed at an hourly rate of $95.00, not to exceed the total amount of the per grant rate. Consultant will provide Client with breakdown of time spent along with invoice.

Section 5. **Expenses:** The Client agrees to reimburse the Consultant for reasonable out-of-pocket expenses related to performing services on behalf of the Client. Such expenses typically might include, but are not limited to, mileage, conference calls, copies, binding costs, postage, parking, travel, and lodging expenses. Mileage is generally incurred when Consultant team members attend meetings on behalf of Client. Expenses for copies, binding and postage/overnight courier charges are generally incurred when the granting agency for a grant requires hard copy submittal rather than online submittal. Expenses for conference calls are only incurred if a conference call meeting is required and Client conference account is utilized. Consultant shall provide Client with a receipt and a description of the expense with the invoice. Any expenses related to travel and lodging are rare and Consultant agrees to obtain Client approval prior to incurring.

Section 6. **Relationship:** Consultant shall perform its services hereunder as an independent contractor and not as an employee of the Client or an affiliate thereof. It is expressly understood and agreed to by the parties hereto that Consultant shall have no authority to act for, represent or bind the Client or any affiliate thereof in any manner, except as may be agreed to expressly by the Client in writing from time to time.

Section 7. **Confidentiality:** Except in the course of the performance of its duties hereunder, each party agrees that it shall not disclose any trade secrets, know-how, or other proprietary information not in the public domain learned as a result of this Agreement. Similarly, the parties agree that they shall not disclose or divulge this Agreement, or any of its term or conditions to third parties, except as is necessary to perform the terms and conditions stated herein.

Section 8. **Indemnification:** Each party shall defend any third party claim against the other party arising from the death of or physical injury to any person or damage to the indemnified party's property to the extent proximately caused by the negligence of the indemnifying party or its agents or employees, and indemnify and hold harmless the other party and its respective officers, directors, employees and volunteers from and against damages, liabilities and reasonable costs and expenses, including reasonable legal fees incurred in connection therewith. Consultant maintains liability insurance in the amount of one million dollars.

Section 9. **Assignment:** This Agreement shall not be assignable by either party; provided however, that Consultant shall have the discretion to allocate its duties hereunder to owners, affiliates, or employees of Consultant.

Section 10. **No Guaranteed Result:** Client acknowledges and agrees that Consultant does not have control over third party decision makers, and therefore Consultant makes no representations, warranties or guarantees that it can achieve any particular results. Consultant, however, shall act in good faith toward the performance of its duties described above. By executing this Agreement, Consultant represents that it has demonstrated trustworthiness and

possesses the quality, fitness and capacity to perform work in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances. Consultant represents that its financial resources, surety and insurance experience, service experience, completion ability, personnel, current workload, experience in dealing with private consultants, and experience in dealing with public agencies all suggest that Consultant is capable of performing the proposed contract and has a demonstrated capacity to deal fairly and effectively with and to satisfy a public agency. City acknowledges and agrees that Consultant does not have control over third party decision makers and therefore Consultant makes no representations, warranties or guarantees that it can achieve any particular results. Consultant, however, shall act in good faith toward the performance of its duties described above.

Section 11. **Prior Agreements:** This Agreement shall supersede any prior agreements between the parties, and serves as the sole and only agreement between them. This Agreement may only be modified by a writing signed by both parties.

Section 12. **Governing Law:** This Agreement shall be deemed to be a contract made under the laws of the State of California and for all purposes shall be construed in accordance with the laws of said State.

Section 13. **Attorney's Fees:** The prevailing party in any action filed that arises out of this Agreement shall be entitled to recoup their reasonable attorney's fees and costs from the other party.

Section 14. **Notices:** All notices will be sent via certified mail or overnight courier such as Federal Express, to:

Consultant at: California Consulting, LLC
2491 Alluvial Ave., Ste. 609
Clovis, CA 93611

Client at: City of Adelanto
11600 Air Expressway
Adelanto, CA 92301

Section 15. **Termination:** This Agreement may be terminated by either party for any reason not in violation of federal and/or California State law upon thirty (30) days written notice to the other party. Client shall compensate Consultant for services rendered prior to the date of termination and will be liable for reasonable costs incurred during the thirty (30) days prior to termination. There shall be no liquidated damages in the event of termination under this provision.

IN WITNESS THEREOF, this Agreement is executed on the dates set forth below and effective on the date first set forth above.

"CONSULTANT"
California Consulting, LLC
(A California Limited Liability Company)

"CLIENT"
City of Adelanto

By_____

Steven N. Samuelian, Owner

_____

Cindy Herrera, City Manager

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 8, 2016

TO: Honorable Mayor and City Council Members

FROM: Cindy Herrera, City Manager

SUBJECT: APPROVAL OF GRANT WRITING SERVICES AGREEMENT WITH CALIFORNIA CONSULTING, LLC

RECOMMENDATION:

Staff Recommends approval of Grant Writing Services Agreement with California Consulting LLC.

BACKGROUND:

Founded in 2004, California Consulting, LLC has a solid reputation for hard work and a commitment to success for its clients. California Consulting, LLC is the largest grant writing firm in California. With offices in Southern California, Northern California and Central California, we have almost 80 clients statewide. We have 30 members of our team from Chico in the North, to Los Angeles in the South.

California Consulting has developed an expertise in representing public agencies, private companies, and non-profit organizations. We have secured over $1.5 billion for our clients since inception through grant writing and government advocacy efforts combined.

The California Consulting team boasts nearly 25 grant writers. Through years of experience our grant writers have a proven track record of success and have mastered their skills of identifying, researching, and obtaining funding for significant projects at every level of government. California Consulting grant writers have written over 700 competitive grants that have been funded, generating over $170 million for our clients. Our aggressive, hard-working, and results-oriented style has translated into millions of dollars for our clients. Our professional grant writers are diligent and stay current on every Federal and State grant available on a myriad of different topics and public policy areas. Whether it is recreation, education, parks money, or public safety our grants team knows where to locate grant funds and how to successfully write the applications.

ATTACHMENTS:

1. Grant Writing Services Agreement

GRANT WRITING SERVICES AGREEMENT

DATED: June 2, 2016

PARTIES: California Consulting, LLC, A California Limited Liability Company (hereinafter the "Consultant"); and

City of Adelanto, (hereinafter the "Client")

AGREEMENT:

The undersigned hereby agree to the following terms and conditions:

Section 1. **Duties of Consultant:** During the term of this Agreement, Consultant shall provide the Client as follows:

a. Grant research, targeted grant research on projects specifically identified by the client, and identification of funding opportunities;

b. Grant writing at direction of Client; and

c. Offering Client general advice on matters involving funding mechanisms, grants research, identification, and writing.

Section 2. **Time for Performance of Duties:** Notwithstanding any other term or condition of this Agreement, Client specifically acknowledges that Consultant has other clients and/or outside employment. Consultant shall have control over the time and manner of performing its duties described in Section 1, and shall make available such time as it, in its discretion along with Client input, shall deem appropriate for the performance of its duties under this Agreement.

Section 3. **Term of the Agreement:** The effective date of this Agreement is June 2, 2016, and shall continue on a month to month basis, allowing both parties to discuss potential new contract terms at any time.

Section 4. **Compensation:** Client shall pay Consultant on a per grant basis as compensation for Consultant's grant writing services. Client shall pay Consultant at the rate of $95.00 per hour for all services performed at direction of Client when not related to a specific grant selected by Client. Consultant shall provide client with a written invoice monthly. Client agrees to pay invoice within 30 days of receipt.

The following is a breakdown of cost per grant:

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$100,001 - $250,000	$6,000
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Cost will be determined based on complexity of grant preparation for all grants exceeding $250,000. Consultant will provide Client with cost prior to commencing work on grant selected by Client.

If Client decides to withdraw the application or cease work on the application prior to submission and after work has begun, Client agrees to pay Consultant for work completed at an hourly rate of $95.00, not to exceed the total amount of the per grant rate. Consultant will provide Client with breakdown of time spent along with invoice.

Section 5. **Expenses:** The Client agrees to reimburse the Consultant for reasonable out-of-pocket expenses related to performing services on behalf of the Client. Such expenses typically might include, but are not limited to, mileage, conference calls, copies, binding costs, postage, parking, travel, and lodging expenses. Mileage is generally incurred when Consultant team members attend meetings on behalf of Client. Expenses for copies, binding and postage/overnight courier charges are generally incurred when the granting agency for a grant requires hard copy submittal rather than online submittal. Expenses for conference calls are only incurred if a conference call meeting is required and Client conference account is utilized. Consultant shall provide Client with a receipt and a description of the expense with the invoice. Any expenses related to travel and lodging are rare and Consultant agrees to obtain Client approval prior to incurring.

Section 6. **Relationship:** Consultant shall perform its services hereunder as an independent contractor and not as an employee of the Client or an affiliate thereof. It is expressly understood and agreed to by the parties hereto that Consultant shall have no authority to act for, represent or bind the Client or any affiliate thereof in any manner, except as may be agreed to expressly by the Client in writing from time to time.

Section 7. **Confidentiality:** Except in the course of the performance of its duties hereunder, each party agrees that it shall not disclose any trade secrets, know-how, or other proprietary information not in the public domain learned as a result of this Agreement. Similarly, the parties agree that they shall not disclose or divulge this Agreement, or any of its term or conditions to third parties, except as is necessary to perform the terms and conditions stated herein.

Section 8. **Indemnification:** Each party shall defend any third party claim against the other party arising from the death of or physical injury to any person or damage to the indemnified party's property to the extent proximately caused by the negligence of the indemnifying party or its agents or employees, and indemnify and hold harmless the other party and its respective officers, directors, employees and volunteers from and against damages, liabilities and reasonable costs and expenses, including reasonable legal fees incurred in connection therewith. Consultant maintains liability insurance in the amount of one million dollars.

Section 9. **Assignment:** This Agreement shall not be assignable by either party; provided however, that Consultant shall have the discretion to allocate its duties hereunder to owners, affiliates, or employees of Consultant.

Section 10. **No Guaranteed Result:** Client acknowledges and agrees that Consultant does not have control over third party decision makers, and therefore Consultant makes no representations, warranties or guarantees that it can achieve any particular results. Consultant, however, shall act in good faith toward the performance of its duties described above. By executing this Agreement, Consultant represents that it has demonstrated trustworthiness and

possesses the quality, fitness and capacity to perform work in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances. Consultant represents that its financial resources, surety and insurance experience, service experience, completion ability, personnel, current workload, experience in dealing with private consultants, and experience in dealing with public agencies all suggest that Consultant is capable of performing the proposed contract and has a demonstrated capacity to deal fairly and effectively with and to satisfy a public agency. City acknowledges and agrees that Consultant does not have control over third party decision makers and therefore Consultant makes no representations, warranties or guarantees that it can achieve any particular results. Consultant, however, shall act in good faith toward the performance of its duties described above.

Section 11. **Prior Agreements:** This Agreement shall supersede any prior agreements between the parties, and serves as the sole and only agreement between them. This Agreement may only be modified by a writing signed by both parties.

Section 12. **Governing Law:** This Agreement shall be deemed to be a contract made under the laws of the State of California and for all purposes shall be construed in accordance with the laws of said State.

Section 13. **Attorney's Fees:** The prevailing party in any action filed that arises out of this Agreement shall be entitled to recoup their reasonable attorney's fees and costs from the other party.

Section 14. **Notices:** All notices will be sent via certified mail or overnight courier such as Federal Express, to:

Consultant at: California Consulting, LLC
2491 Alluvial Ave., Ste. 609
Clovis, CA 93611

Client at: City of Adelanto
11600 Air Expressway
Adelanto, CA 92301

Section 15. **Termination:** This Agreement may be terminated by either party for any reason not in violation of federal and/or California State law upon thirty (30) days written notice to the other party. Client shall compensate Consultant for services rendered prior to the date of termination and will be liable for reasonable costs incurred during the thirty (30) days prior to termination. There shall be no liquidated damages in the event of termination under this provision.

IN WITNESS THEREOF, this Agreement is executed on the dates set forth below and effective on the date first set forth above.

"CONSULTANT"
California Consulting, LLC
(A California Limited Liability Company)

By_____

Steven N. Samuelian, Owner

"CLIENT"
City of Adelanto

_____

Cindy Herrera, City Manager

CITY COUNCIL
AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY
| ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and Councilmembers

FROM: Cynthia M. Herrera, MMC, City Manager/City Clerk

BY: Penny Rose, Accounting Supervisor

SUBJECT: CONTRACT FOR FIRE SERVICES WITH SAN BERNARDINO COUNTY FOR FISCAL YEAR 2016-17

STAFF RECOMMENDATION:

Approve the contract for fire services with San Bernardino County for the 2016-17 Fiscal Year.

BACKGROUND:

The City of Adelanto contracts with the County of San Bernardino for Fire Services. The annual cost is $2,235,006 for fire services for the C322 Station during Fiscal Year 2016-17. This annual contract includes savings over last fiscal year in the amount of $72,926.

The approved City contract needs to be submitted for inclusion in the San Bernardino County Fire Protection District Budget prior to the adoption of our City budget before the end of this month.

FISCAL IMPACT:

The contract costs have been included in the proposed FY 2016-17 budget document; impact to the General Fund will be $2,235,006 during the fiscal year.

ATTACHMENTS:

San Bernardino County Fire Department Contract for Fiscal Year 2016-17

City of Adelanto - FY 16/17 Proposed Contract Annual Budget			
Salaries and Benefits	**Number of Positions**	**Average Cost Per Position**	**SBCFPD Proposed Existing Staffing**
Suppression			
Captain	3	196,279	588,837
Engineer	3	179,517	538,551
Fire Fighter/PM	3	129,284	387,853
Suppression Total	**9**		**$ 1,515,241**
Chargebacks for El Mirage			**(15,334)**
Chief Officers (7.68%)			
SBCFPD Assistant Chief	1	292,547	22,468
Battalion Chief	3	225,335	51,917
Chief Officers Total	**4**		**$ 74,385**
Total Salaries and Benefits	**13**		**$ 1,574,292**
Operating Expenses			
Services and Supplies			342,706
Station Expenses			
C322			229,280
Total Operating Expenses			**$ 571,986**
Administrative Overhead Costs			**88,728**
Total Annual Requirements			**$ 2,235,006**

Mark Hartwig, Fire Chief SBCFPD **Date**

Cindy Herrera, City Manager **Date**

CITY COUNCIL
AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY
| ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and Councilmembers

FROM: Cynthia M. Herrera, MMC, City Manager/City Clerk

BY: Penny Rose, Accounting Supervisor

SUBJECT: 20th AMENDMENT TO CONTRACT NO. 01-1251 WITH SAN BERNARDINO COUNTY SHERIFF'S DEPARTMENT FOR FISCAL YEAR 2016-2017

STAFF RECOMMENDATION:

Approve 20th Amendment to Contract No. 01-1251 with San Bernardino County Sheriff's Department for the 2016-17 Fiscal Year.

BACKGROUND:

The City of Adelanto has contracted with the San Bernardino County Sheriff's Department since 2002. Attached is the 2016-17 Fiscal Year contract amendment.

FISCAL IMPACT:

The contract costs have been included in the proposed FY 2016-17 budget document. The Schedule A contract amount is $5,108,124 for the fiscal year paid through the General Fund.

ATTACHMENTS:

2016-17 contract amendment documents provided by the Sheriff's Department.

SAN BERNARDINO COUNTY

F A S

STANDARD CONTRACT

FOR COUNTY USE ONLY

☐ New ☒ Change ☐ Cancel	FAS Vendor Code	SC	Dept. SHC	A	Contract Number 01-1251 A-20
ePro Vendor Number					ePro Contract Number
County Department: Sheriff/Coroner/Public Administrator		Dept. SHC	Orgn. SHC		Contractor's License No.
County Department Contract Representative: Samuel Fisk, Captain		Telephone (909)387-3637			Total Contract Amount $5,108,124

Contract Type: ☒ Revenue ☐ Encumbered ☐ Unencumbered ☐ Other:

If not encumbered or revenue contract type, provide reason:

Commodity Code	Contract Start Date	Contract End Date	Original Amount	Amendment Amount
	07/01/16	06/30/17	$	$5,108,124

Fund	Dept.	Organization	Appr.	Obj/Rev Source	GRC/PROJ/JOB No	Amount
AAA	SHC	SHC		9565	ADELANTO	$5,108,124
						$
						$

Project Name: Contract Law Enforcement 2016-17

Estimated Payment Total by Fiscal Year

FY	Amount	I/D	FY	Amount	I/D

THIS CONTRACT is entered into in the State of California by and between the County of San Bernardino, hereinafter called the County, and

Name: City of Adelanto hereinafter called CITY

Address: P.O. Box 10

Adelanto, CA 92301

Telephone: (760) 246 - 2300 Federal ID No. or Social Security No.:

IT IS HEREBY AGREED AS FOLLOWS:

(Use space below and additional bond sheets. Set forth service to be rendered, amount to be paid, manner of payment, time for performance or completion, determination of satisfactory performance and cause for termination, other terms and conditions, and attach plans, specifications, and addenda, if any.)

AMENDMENT NO. 20

Contract No. 01-1251 to provide law enforcement service to the City of Adelanto is hereby amended, effective July 1, 2016 by replacing Schedule A referred to in Paragraph IV, with the Schedule A attached hereto and incorporated herein by reference.

Except as amended, all other terms and conditions of this contract remain as stated therein.

Auditor-Controller/Treasurer/Tax Collector Use Only	
☐ Contract Database	☐ FAS
Input Date	Keyed By

[With the exception of signatures, this page is intentionally left blank].

COUNTY OF SAN BERNARDINO

►

James Ramos, Chairman, Board of Supervisors

Dated: _____

SIGNED AND CERTIFIED THAT A COPY OF THIS DOCUMENT HAS BEEN DELIVERED TO THE CHAIRMAN OF THE BOARD

Laura H. Welch
Clerk of the Board of Supervisors
of the County of San Bernardino

By _____
Deputy

City of Adelanto
(Print or type name of corporation, company, contractor, etc.)

By ► _____
(Authorized signature - sign in blue ink)

Name _____
(Print or type name of person signing contract)

Title _____
(Print or Type)

Dated: _____

Address P.O. Box 10
Adelanto, CA 92301

Approved as to Legal Form	Reviewed by Contract Compliance	Presented to BOS for Signature
►	►	►
Michelle D. Blakemore, Chief Asst. County Counsel		Samuel Fisk, Captain
Date _____	Date _____	Date _____

SCHEDULE A
Law Enforcement Services Contract
City of Adelanto
2016-17

Additions: 1 Deputy (funded by The GEO Group, Inc.)

LEVEL OF SERVICE			FY 2016-17 COST
0.50	-	Lieutenant	125,063 [1]
3.00	-	Sergeant	644,340 [1]
2.00	-	Detective/Corporal	361,398 [1]
14.61	-	Deputy Sheriff (504 hours per week)	2,399,561 [1]
2.00	-	Deputy Sheriff-GEO (no relief factor) (1-effective 7/1/16)	328,482 [1]
1.00	-	Sheriff's Service Specialist	73,585 [1]
3.00	-	Office Specialist	205,722 [1]
0.42	-	Motor Pool Services Assistant	28,960 [1]
8.00	-	Marked Unit	106,760 [2]
2.50	-	Unmarked Unit	17,838 [2]
1.00	-	Pickup truck	6,452 [2]
2.00	-	Citizen Patrol	2,756 [3]
		Dispatch Services	250,262 [1]
32.00	-	HTs (Amortized over 7-years)	15,424
32.00	-	HTs (Access & Maint Only)	20,352
22.00	-	Taser Replacement (Amortized over 4-years)	7,216
		Administrative Support	20,107
		Office Automation	35,717
		Services & Supplies	33,498
		Vehicle Insurance	57,643
		Personnel Liability & Bonding	121,695
		Workers' Comp Experience Modification	25,544
		County Administrative Cost	212,172
		Startup Costs	7,577
		TOTAL COST:	**$ 5,108,124** [1]

Monthly Payment Schedule

1st payment due July 15, 2016:	$425,677
2nd through 12th payments due the 5th of each month:	$425,677

[1] Personnel costs include salary and benefits and are subject to change by Board of Supervisors' action. Changes in salary and benefit costs will be billed to the City on a quarterly invoice.

[2] Vehicle costs do not include fuel and maintenance. The City is responsible for fuel, repair and maintenance of all contract vehicles, including collision damage . All fuel, repair and maintenance costs incurred by the County will be billed to the City on a quarterly invoice.

[3] No replacement cost is included for grant funded or donated vehicles.

SCHEDULE A
Law Enforcement Services Contract
City of Adelanto
2016-17

Additional Costs Billed Quarterly:

The City will be billed on a quarterly basis for the following items:

- Increases to salaries and benefits resulting from Board of Supervisors-approved changes to Memorandums of Understanding with the County's various employee organizations.
- Actual overtime cost.
- Actual on-call cost (on call pay for safety employees for 2016-17 is $185 per week).
- Actual cost of vehicle fuel, repair and maintenance, including the cost of collision repair.
- Professional services from private vendors and other services, supplies and personnel costs above the contract formula.

LEVEL OF SERVICE SUMMARY

SAFETY:		
Lieutenant	-	0.50
Sergeant	-	3.00
Detective/Corporal	-	2.00
Deputy Sheriff	-	14.61
Deputy Sheriff - Traffic Car	-	2.00
		22.11

GENERAL:		
Sheriff's Service Specialist	-	1.00
Office Specialist	-	3.00
Motor Pool Services Asst	-	0.42
Dispatchers	-	2.76
		7.18

VEHICLES:		
Marked Patrol Units	-	8
Unmarked Units Code 3	-	3
SUV's & Pickup Trucks	-	1
Citizen Patrol	-	2
Donated Vehicles-Ins Only	-	2 *
		16

DONATED VEHICLES:		
Trailers	-	2 *
		2 *

* (Included for insurance costs only)

CITY COUNCIL
AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY
| ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cynthia M. Herrera, MMC, City Manager/ City Clerk

BY: Penny Rose, Accounting Supervisor

SUBJECT: RESOLUTION 16-34 GENERAL FUND – BUDGET AMENDMENT

STAFF RECOMMENDATION:

That City Council adopt Resolution 16-34, a resolution of the City of Adelanto, and approve a budget amendment, appropriating an additional $39,230 to the Fire Department Budget to increase the Contracts & Professional Services Budget for increased costs due to the County Fire MOU increase effective 10/17/15.

BACKGROUND:

The Fire Department Contract Services Budget for the fiscal year 2015-2016 of $2,305,805 did not include the provision for the County Local 935 Union MOU increase effective 10/17/15 in the amount of $42,127. Year to date Contracts & Professional Services Budget expenses have been analyzed to date and a deficit due to this increase is expected to be $39,229.

Since it is important that the City provide Fire Protection Services to the Community, a budget amendment is being recommended.

FISCAL IMPACT:

$39,230

ATTACHMENTS:

Resolution 16-34
Fire Department Budget Analysis
County Fire FY 15/16 Budget Amendment

RESOLUTION NO. 16-34

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA, AMENDING THE BUDGET, ADDING AND APPROPRIATING FUNDS FOR THE MUNICIPAL BUDGET YEAR 2015-2016

WHEREAS, the City Fire Department currently provides Fire Services to the Adelanto Community, and

WHEREAS, the County of San Bernardino has proposed a contract amendment for those services in the amount of $42,127 causing a department budget deficit of $39,230.

NOW, THEREFORE, BE IT IS RESOLVED that the City Council hereby adopt and appropriate additional funds as follows:

Increase Fire Department Contract and Professional Services Budget by $39,230 for the fiscal year 2015-16.

PASSED, APPROVED AND ADOPTED at a regular meeting of the City Council of the City of Adelanto, held on the 22nd day of June, 2016.

By _____
Rich Kerr, Mayor

_____
Brenda Lopez, Deputy City Clerk, CMC

I, Brenda Lopez, Deputy City Clerk of the City of Adelanto, California, do hereby certify that the foregoing Resolution No. 16-34 was duly and regularly adopted at a regular meeting of the Council of the City of Adelanto on this 22nd day of June, 2016, by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

IN WITNESS THEREOF, I hereunto set me hand and affix the official seal of the City of Adelanto, on the 22nd day of June, 2016.

_____

Brenda Lopez, Deputy City Clerk CMC

City of Adelanto - Fire Department Budget Analysis 6-14-16

Total Contracts & Professional Services Budget			$2,305,805.00
Year-to-Date Expenses - Contrancts & Prof Services			1,925,272.80
Add Expenses not yet recorded			
Regular Fire Contract	2 @	188,817.08	377,634.16
Adjusted Year-to-Date Expenses			$2,302,906.96
Remaining Budget - Contracts & Professional Services			2,898.04
Contract Increase due to Local 935 Union MOU increases 10/17/15			42,127.00
Fire Department Budget Deficit - Contract Services			($39,228.96)

City of Adelanto - FY 15/16 Proposed Contract Annual Budget
12-18-15 AMENDMENT

Salaries and Benefits	Number of Positions	Average Cost Per Position	SBCFPD Proposed Existing Staffing
Suppression			
Captain	3	200,925	602,775
Engineer	3	179,281	537,843
Fire Fighter/PM	3	129,063	387,190
Suppression Total	9		$ **1,527,808**
PCF	0		-
Chargebacks for El Mirage			**(15,334)**
Chief Officers (6.77%)			
SBCFPD Division Chief	1	287,700	19,477
Battalion Chief	3	240,838	48,914
Chief Officers Total	4		$ **68,391**
Total Salaries and Benefits	13		$ **1,580,865**
Operating Expenses			
Services and Supplies			293,071
Station Expenses			
C322			306,484
Total Operating Expenses			$ **599,555**
Administrative Overhead Costs			**85,384**
Total S&B and Operating Expenses			**2,265,805**
Contract Increase due to Local 935 Union MOU increases effective 10/17/15			**42,127**
Total Annual Requirements			$ **2,307,932**

Mark Hartwig, Fire Chief SBCFPD Date

Cindy Herrera, Interim City Manager Date

CITY COUNCIL
AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY
| ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cynthia M. Herrera, MMC, City Manager/ City Clerk

BY: Penny Rose, Accounting Supervisor

SUBJECT: INTERLOACAL AGREEMENT CONCERNING DISTRIBUTION OF THE 2016 JUSTICE ASSISTANCE GRANT AWARD

STAFF RECOMMENDATION:

That City Council Review and file the signed Interlocal Agreement for the 2016 Justice Assistance Grant Award in the net amount of $14,851.00 to be used for law enforcement overtime.

BACKGROUND:

The JAG Program assists state, local, and tribal efforts to prevent or reduce crime and violence

FISCAL IMPACT:

None

ATTACHMENTS:

1. Interlocal Agreement between various cities (including Adelanto) and the County of San Bernardino, CA.
2. 2016 Justice Assistance Grant, Appendix 1

INTERLOCAL AGREEMENT
BETWEEN THE TOWN OF APPLE VALLEY, THE CITIES OF ADELANTO, BARSTOW, CHINO, COLTON, FONTANA, HESPERIA, HIGHLAND, MONTCLAIR, ONTARIO, RANCHO CUCAMONGA, REDLANDS, RIALTO, SAN BERNARDINO, UPLAND, VICTORVILLE, AND THE COUNTY OF SAN BERNARDINO, CA

CONCERNING DISTRIBUTION OF THE
2016 JUSTICE ASSISTANCE GRANT AWARD

This Agreement is made and entered into this 28th day of June, 2016, by and between THE COUNTY OF SAN BERNARDINO, acting by and through its governing body, the Board of Supervisors (hereinafter referred to as "COUNTY"), and the aforementioned TOWN (hereinafter referred to as "TOWN") and named CITIES (hereinafter referred to as "CITIES"), acting by and through their respective governing bodies, the Town Council and City Councils, all of whom are situated within the County of San Bernardino, State of California, as follows:

WHEREAS, each governing body, in performing governmental functions or in paying for the performance of governmental functions hereunder, shall make that performance or those payments from current revenues legally available to that party; and

WHEREAS, each governing body finds that the performance of this Agreement is in the best interests of all parties, that the undertaking will benefit the public, and that the division of costs fairly compensates the performing party for the services or functions under this Agreement; and

WHEREAS, the COUNTY agrees to release to TOWN and CITIES their respective grant allocation from the JAG Award within sixty (60) days upon receipt of funds, less five percent (5%) for administrative fees, as reflected on Appendix 1 here attached and hereby incorporated by reference as part of this agreement; and COUNTY agrees to use the five percent (5%) of JAG award funds received from TOWN and CITIES under this agreement for administrative fees toward the administration of TOWN's and CITIES' programs during the entire permissible duration of said programs; and TOWN and CITIES agree to deposit their JAG award funds into a separate trust account in accordance with JAG guidelines; and TOWN and CITIES each agree to the five percent (5%) reduction of their respective grant allocation from the JAG award, as reflected on Appendix 1 for administrative fees toward the administration of this program; and additionally the TOWN and CITIES each agree that it is their responsibility to ensure these funds are expended in accordance with JAG guidelines, and that the interest generated from such funds shall be solely applied and expended in accordance with these same JAG guidelines; and

WHEREAS, the TOWN, CITIES and COUNTY believe it to be in their best interests to reallocate the JAG funds,

NOW THEREFORE, the COUNTY and TOWN and CITIES agree as follows:

Section 1.

COUNTY agrees to release to TOWN and CITIES their respective grant allocation from the JAG Award within sixty (60) days upon receipt of funds, less five percent (5%) for administrative fees, as reflected in Appendix 1 here attached and hereby incorporated by reference as part of this Agreement, and; COUNTY agrees to use the five percent (5%) of JAG award funds received from TOWN and CITIES under this agreement for administrative fees toward the administration of the TOWN's and CITIES' programs during the entire permissible duration of said programs.

Section 2.

TOWN and CITIES agree to deposit their JAG award funds into a separate trust account in accordance with the JAG guidelines; and TOWN and CITIES agree to the five percent (5%) reduction of their respective grant allocation from the JAG award, as reflected in Appendix 1, for administrative fees toward the administration of this program, and; TOWN and CITIES each agree that it is their responsibility to ensure these funds are expended in accordance with JAG guidelines and that all interest generated from such funds shall be solely applied and expended in accordance with these same JAG guidelines.

Section 3.

TOWN and CITIES agree to enter into a sub-award grant agreement with the COUNTY in order to acknowledge receipt of the federal award information and applicable compliance requirements, including special conditions for each sub-award, before receiving grant funds.

Section 4.

TOWN and CITIES agree to provide COUNTY with sufficient timely information as necessary within five business days after receiving written request from COUNTY to meet JAG requirements for quarterly and annual financial and performance reports.

Section 5.

Nothing arising from this Agreement shall impose any liability for claims or actions against COUNTY other than what is authorized by law.

Section 6.

Nothing arising from this Agreement shall impose any liability for claims or actions against TOWN and/or CITIES other than what is authorized by law.

Section 7.

Each party to this Agreement will be responsible for its own actions in providing services under this Agreement and shall not be liable to any other party to this Agreement for any claim or action arising from the services provided under this Agreement.

Section 8.

The parties to this Agreement do not intend for any third party to obtain a right by virtue of this Agreement.

Section 9.

By entering into this Agreement, the parties do not intend to create any obligations, either express or implied, other than those set out herein; further, this Agreement shall not create any rights in any party not a signatory hereto.

WHEREFORE, all parties freely and voluntarily agree to all of the above terms.

TOWN OF APPLE VALLEY, CA

_____
City Manager

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

COUNTY OF SAN BERNARDINO, CA

_____
James Ramos
Chair, County Board of Supervisors

ATTEST:

_____
Clerk of the Board of Supervisors

APPROVED AS TO FORM:

*Jean-Rene Basle
County Counsel

_____
by: Phebe W. Chu, Deputy

*By law, the County Counsel's Office may only advise or approve contracts or legal documents on behalf of its clients. It may not advise or approve a contract or legal document on behalf of other parties. Our view of this document was conducted solely from the legal perspective of our clients. Our approval of this document was offered solely for the benefit of our clients. Other parties should not rely on this approval and should seek review and approval by their own respective attorneys.

WHEREFORE, all parties freely and voluntarily agree to all of the above terms.

CITY OF ADELANTO, CA

City Manager

ATTEST:

City Clerk

APPROVED AS TO FORM:

City Attorney

CITY OF BARSTOW, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF CHINO, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF COLTON, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF FONTANA, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF HESPERIA, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF HIGHLAND, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF MONTCLAIR, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF ONTARIO, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

CITY OF RANCHO CUCAMONGA, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF REDLANDS, CA

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Mayor

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF RIALTO, CA

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City Administrator

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney
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CITY OF SAN BERNARDINO, CA

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Mayor

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF UPLAND, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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CITY OF VICTORVILLE, CA

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City Manager

ATTEST:

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City Clerk

APPROVED AS TO FORM:

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City Attorney

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2016 Justice Assistance Grant
APPENDIX 1

Jurisdiction	Allocation	5% Admin Fee	Award
San Bernardino County	$ 78,433	$ (3,922)	$ 74,511
Adelanto	$ 15,633	$ (782)	$ 14,851
Apple Valley	$ 16,487	$ (824)	$ 15,663
Barstow	$ 17,421	$ (871)	$ 16,550
Chino	$ 19,608	$ (980)	$ 18,628
Colton	$ 12,992	$ (650)	$ 12,342
Fontana	$ 60,959	$ (3,048)	$ 57,911
Hesperia	$ 28,519	$ (1,426)	$ 27,093
Highland	$ 19,822	$ (991)	$ 18,831
Montclair	$ 15,847	$ (792)	$ 15,055
Ontario	$ 37,829	$ (1,891)	$ 35,938
Rancho Cucamonga	$ 24,944	$ (1,247)	$ 23,697
Redlands	$ 15,553	$ (778)	$ 14,775
Rialto	$ 33,908	$ (1,695)	$ 32,213
San Bernardino	$ 162,709	$ (8,135)	$ 154,574
Upland	$ 12,832	$ (642)	$ 12,190
Victorville	$ 52,529	$ (2,626)	$ 49,903
Total	**$ 626,025**	**$ (31,301)**	**$ 594,724**

CITY COUNCIL
AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cynthia M. Herrera, MMC, City Manager/City Clerk

BY: Penny Rose, Accounting Supervisor

SUBJECT: ADOPTION OF RESOLUTION NO 16-35 – A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, CALIFORNIA, AMENDING EMPLOYEE EMERGENCY LOAN FUND, AND REPEALING RESOLUTION 12-47.

STAFF RECOMMENDATION:

The City Council adopts Resolution No. 16-35 – Amending employee Emergency Loan Fund, and repealing Resolution No. 12-47.

BACKGROUND:

Resolution No. 12-47 replaced the prior Resolution No. 02-60 regarding Emergency Loan Program that the City offers to its employees. It updated certain language to include restrictions on the amount of times an employee can receive an emergency loan within a year's time. Over the last few years, there has been an increase in the amount of times employees are obtaining an emergency loan that doesn't seem to be conducive to the purpose of establishing the program for emergency situations. It updated the language to set the limit of allowing employees to receive up to four (4) emergency loans per year, one allowable per quarter.

The language in Resolution No. 12-47 was enabling employees to abuse the program and employees were using it as a revolving loan (interest free) and no language had been included to protect the City from this abuse. Language has been added in the proposed Resolution No. 16-35 to limit the number of emergency loans from four (4) to two (2) per year, and requiring a statement and/or documentation to validate the emergency need.

FISCAL IMPACT:
None at this time.

ATTACHMENTS:
Resolution No. 16-35
Resolution No. 12-47
Emergency Loan Agreement

RESOLUTION NO. 16-35

A RESOLUTION OF THE CITY COUNCIL,
OF THE CITY OF ADELANTO, SAN BERNARDINO COUNTY,
CALIFORNIA, ESTABLISHING AN EMPLOYEE EMERGENCY
LOAN FUND, AND REPEALING RESOLUTION 12-47

WHEREAS, from time to time employees of the City of Adelanto are faced with emergency situations which necessitates the borrowing of money; and

WHEREAS, it is the desire of the City Council of the City of Adelanto to provide emergency assistance for its employees; and

WHEREAS, it is necessary to re-establish certain rules and regulations for the operation of such a program.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ADELANTO AS FOLLOWS:

Section 1. A City of Adelanto Employee Emergency Revolving Loan Fund has been previously established and funds have been appropriated.

Section 2. All Emergency Loans made to employees shall be non-interest bearing.

Section 3. All loans will be repaid through bi-weekly payroll deductions not to exceed 13 pay periods.

Section 4. Loan requests will be made through the Finance department along with statements of emergency need and/or documentation validating emergency, with the City Manager having final authority to grant such loans.

Section 5. Full-time, Regular Employees who have completed their employment probation, will be allowed to borrow an amount up to a maximum of $1,000. Eligible employees are allowed emergency loans not to exceed two (2) per calendar year. Employees are required to maintain vacation accrual balance at a minimum of 50 hours while obtaining and repaying an emergency loan.

Section 6. Any current loan by an employee, will need to be repaid in full prior to being eligible to borrow additional loan funds.

Section 7. At the time of separation from employment with the City of Adelanto, all outstanding amounts owed to the City of Adelanto Employee Emergency Revolving Loan Fund will become due and payable in full.

ADOPTED AND APPROVED this 22nd day of June, 2016.

_____
Rich Kerr, Mayor

Attest:

_____
Brenda Lopez, Deputy City Clerk. CMC

I, Brenda Lopez, Deputy City Clerk of the City of Adelanto, California, do hereby certify that the foregoing Resolution No. 16-35 was duly and regularly adopted at a regular meeting of the City Council, of the City of Adelanto on the 22nd day of June, 2016 by the following vote.

AYES:

NOES:

ABSENT:

ABSTAIN:

IN WITNESS WHEREOF, I hereunto set my hand and affix the official seal of the City of Adelanto, on the 22nd day of June, 2016.

_____

Brenda Lopez, Deputy City Clerk CMC

RESOLUTION NO. 12-47

A RESOLUTION OF THE CITY COUNCIL,
OF THE CITY OF ADELANTO, SAN BERNARDINO COUNTY,
CALIFORNIA, AMENDING EMPLOYEE EMERGENCY
LOAN FUND, AND REPEALING RESOLUTION 02-60

WHEREAS, from time to time employees of the City of Adelanto are faced with emergency situations which necessitates the borrowing of money; and

WHEREAS, it is the desire of the City Council of the City of Adelanto to provide emergency assistance for its employees; and

WHEREAS, it is necessary to re-establish certain rules and regulations for the operation of such a program.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ADELANTO AS FOLLOWS:

Section 1. A City of Adelanto Employee Emergency Revolving Loan Fund has been previously established and funds have been appropriated.

Section 2. All Emergency Loans made to employees shall be non-interest bearing.

Section 3. All loans will be repaid through bi-weekly payroll deductions not to exceed 13 pay periods.

Section 4. Loan requests will be made through the Finance department. City Manager has discretion to grant loans previously denied by Finance department.

Section 5. Full-time, Regular Employees who have completed their employment probation will be allowed to borrow an amount up to a maximum of $1,000. Eligible employees are allowed one (1) emergency loan per calendar quarter not to exceed four (4) emergency loans per calendar year. Employees are required to maintain vacation accrual balance at a minimum of 50 hours while obtaining and repaying an emergency loan.

Section 6. Any current loan by an employee, will need to be repaid in full prior to being eligible to borrow additional loan funds.

Section 7. At the time of separation from employment with the City of Adelanto, all outstanding amounts owed to the City of Adelanto Employee Emergency Revolving Loan Fund will become due and payable in full.

Section 8. If an employee is on any type of unpaid leave of absence, or partially paid leave of absence where the employee is not being paid his/her full salary or wages from City, and the employee has an outstanding loan balance due the City, City is authorized to deduct the full amount of the loan balance from the employee's vacation accrual balance as required by Section 5.

ADOPTED AND APPROVED this 12th day of September, 2012.

Cari Thomas, Mayor

Attest:

Cindy M. Herrera, City Clerk, MMC

I, CINDY M. HERRERA, City Clerk of the City of Adelanto, do hereby certify that the foregoing Resolution No. 12-47 was duly and regularly adopted at a regular meeting of the City Council, of the City of Adelanto on the 12th day of September, 2012 by the following vote.

AYES: Council Members Camargo, Perez, Valvo, Mayor Pro Tem Baisden, and Mayor Thomas

NOES: None

ABSENT: None

ABSTAIN: None

IN WITNESS WHEREOF, I hereunto set my hand affix the official seal of the City of Adelanto, on the 12th day of September, 2012.

Cindy M. Herrera, City Clerk, MMC

City of ADELANTO

Rich Kerr
Mayor

Jermaine Wright Sr.
Mayor Pro-Tem

Ed Camargo
Council Member

Charley B. Glasper
Council Member

John "Bug" Woodard Jr.
Council Member

Thomas W. Thornton
City Manager

LOAN AGREEMENT
CITY OF ADELANTO EMPLOYEES
EMERGENCY LOAN FUND

I, _____ acknowledge the receipt of $_____ as an emergency loan from the City of Adelanto Employees Emergency Loan Fund per Resolution No. 16-35.

I also agree and understand that the City of Adelanto Finance Department shall deduct $_____ from my paychex for _____ pay periods to repay the loan for a total of $_____ and one final payment of $_____.

I further agree and understand that in the event that my employment with the City of Adelanto should cease for whatever reason, I wil repay the remaining balance of my loan immediately.

_____ I understand that I must maintain a minimum of 50 hours while obtaining and repaying
(initials) my emergency loan.

_____ I understand that if I am on any type of unpaid leave or partially paid leave of absence
(initials) where I am not being paid my full salary or wages from City, and I have an outstanding loan balance due the City, City is authorized to deduct the full amount of the loan balance from my vacation accrual balance as provided above in LOAN AGREEMENT.

_____ _____
Borrower Date

_____ _____
Authorized by Date
Finance Department

_____ _____
Authorized by Date
City Manager

Note: Please submit to Grace for hour verification and processing.

RESOLUTION NO. 16-39

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA, CALLING AND GIVING NOTICE OF A GENERAL MUNICIPAL ELECTION TO BE HELD ON TUESDAY, NOVEMBER 8, 2016, FOR THE ELECTION OF CERTAIN OFFICERS AS REQUIRED BY THE PROVISIONS OF THE LAWS OF THE STATE OF CALIFORNIA RELATING TO GENERAL LAW CITIES; AND REQUESTING THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO TO CONSOLIDATE A GENERAL MUNICIPAL ELECTION TO BE HELD ON NOVEMBER 8, 2016, WITH THE STATEWIDE GENERAL ELECTION TO BE HELD ON THE DATE PURSUANT TO SECTION 10403 OF THE ELECTION CODE

WHEREAS, under the provisions of the laws relating to Charter Law Cities in the State of California, a General Municipal Election shall be held on November 8, 2016, for the election of Municipal Officers.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA, DOES RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:

SECTION 1. That pursuant to provisions §10403 of the Elections Code the Board of Supervisors of the County of San Bernardino is hereby requested to consent and agree to the consolidation of a General Municipal Election on Tuesday, November 8, 2016, for the purpose of election two (2) members of the City Council for the term of four (4) years;

SECTION 2. The County Election Department is authorized to canvass the returns of the General Municipal Election. The election shall be held in all respects as if there only one election.

SECTION 3. That the polls for the election shall be open at seven o'clock a.m. of the day of the election and shall remain open continuously from that time until eight o'clock p.m. of the same day when the polls shall be closed, pursuant to Elections Code §10242, except as provided in §14401 of the Elections Code of the State of California.

SECTION 4. That the Board of Supervisors is requested to issue instructions to the County Election Department to take any and all steps necessary for the holding of the consolidation election.

SECTION 5. That the City of Adelanto recognizes that additional costs will be incurred by the County by reason of this consolidation and agrees to reimburse the County for any costs.

SECTION 6. That the City Clerk is hereby directed to file a certified copy of this resolution with the Board of Supervisors and the County Election Department of the County of San Bernardino.

SECTION 7. That the City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

SECTION 8. The Mayor or the Mayor Pro Tempore is hereby authorized to sign this resolution signifying its adoption and the City Clerk is directed to attest thereto.

PASSED, APPROVED, AND ADOPTED by the City Council of the City of Adelanto this 22nd day of June, 2016.

_____
Rich Kerr, Mayor

_____
Cindy M. Herrera, City Clerk, MMC

I, CINDY M. HERRERA, City Clerk of the City of Adelanto, California, do hereby certify that the foregoing Resolution No. 16-39 was duly and regularly adopted at a regular meeting of the City Council of the City of Adelanto on this 22nd day of June, 2016, by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

IN WITNESS THEREOF, I hereunto set my hand affix the official seal of the City of Adelanto, on the 22nd day of June, 2016.

_____
Cindy M. Herrera, City Clerk, MMC

RESOLUTION NO. 16-40

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, SAN BERNARDINO COUNTY, CALIFORNIA, ADOPTING REGULATIONS FOR CANDIDATES FOR ELECTIVE OFFICE PERTAINING TO CANDIDATES STATEMENTS SUBMITTED TO THE VOTERS AT AN ELECTION TO BE HELD ON TUESDAY, NOVEMBER 8, 2016

WHEREAS, §13307 of the Elections Code of the State of California provides that the governing body of any local agency adopt regulations pertaining to materials prepared by any candidate for a municipal election, including costs of the candidates statement;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA, DOES HEREBY RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:

SECTION 1. GENERAL PROVISIONS. That pursuant to §13307 of the Elections Code of the State of California, each candidate for elective office to be voted for at an Election to be held in the City of Adelanto on November 8, 2016, may prepare a candidate's statement on an appropriate form provided by the City Clerk. The statement may include the name, age and occupation of the candidate and a brief description of no more than 200 words of the candidate's education and qualifications expressed by the candidate himself or herself. The statement shall not include party affiliation of the candidate, nor membership of activity in partisan political organizations. The statement shall be filed in the office of the City Clerk at the time the candidate's nomination papers are filed. The statement may be withdrawn, but not changed, during the period for filing nomination papers and until 5:00 p.m. of the next working day after the close of the nomination period.

SECTION 2. FOREIGN LANGAGE POLICY.

a. Pursuant to State law, the candidate's statement must be translated and printed in Spanish at the candidate's request.
b. Pursuant to the Federal Voting Rights Act, the City may be required to translate candidates statements into the following languages in addition to English: Spanish.
c. The City Clerk shall have all candidates statements translated into the languages specified in (b) above.

SECTION 3. PAYMENT.

a. The candidate shall be required to pay for the cost of printing the candidate's statement in English.

b. The candidate shall be required to pay for the cost of translating the candidate's statement into any foreign language as specified in (b) above pursuant to Federal and/or State law.
c. The candidate shall be required to pay for the cost of printing the candidate's statement in a foreign language. The City Clerk shall estimate the total cost of printing, handling, translating, and mailing the candidate's statements filed pursuant to this section, including costs incurred as a result of complying with the Voting Rights Act of 1965 (as amended), and require each candidate filing a statement to pay in advance to the local agency his or her estimated pro rata share as a condition of having his or her statement included in the voter's pamphlet. In the event the estimated payment is required, the estimate is just an approximation of the actual cost that varies from one election to another election and may be significantly more or less than the estimate, depending on the actual number of candidates filing statements. Accordingly, the Clerk is not bound by the estimate and may, on a pro rata basis, bill the candidate for additional actual expense or refund any excess paid depending on the final actual cost. In the event of underpayment, the Clerk may require the candidate to pay the balance of the cost incurred. In the event of overpayment, the Clerk will prorate the excess amount among the candidates and refund the excess amount paid within 30 days of the election.

SECTION 4. ADDITIONAL MATERIALS. No candidate will be permitted to include additional materials in the sample ballot package.

SECTION 5. The City Clerk shall provide each candidate or the candidate's representative a copy of this Resolution at the time nominating petitions are issued.

SECTION 6. All previous resolutions establishing Council policy on payment for candidates' statements are repealed.

SECTION 7. This resolution shall apply only to the election to be held on November 8, 2016, and then shall be repealed.

SECTION 8. Notice of the time and place of holding the election is given and the City Clerk is authorized, instructed and directed to give further or additional notice of the election, in time, form and manner as required by law. Notwithstanding the generality of the foregoing, the City Clerk is hereby instructed to act in conformance with California Elections Code §10403 and to file a certified copy of this Resolution with the Board of Supervisors of San Bernardino County and to transmit a copy of the same to the San Bernardino County elections official.

SECTION 9. The City Clerk shall certify to the passage and adoption of this resolution and enter it into the book of original resolutions.

PASSED, APPROVED, AND ADOPTED by the City Council of the City of Adelanto this 22nd day of June, 2016.

_____
Rich Kerr, Mayor

_____
Cindy M. Herrera, City Clerk, MMC

I, CINDY M. HERRERA, City Clerk of the City of Adelanto, California, do hereby certify that the foregoing Resolution No. 16-40 was duly and regularly adopted at a regular meeting of the City Council of the City of Adelanto on this 22nd day of June, 2016, by the following vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

IN WITNESS THEREOF, I hereunto set my hand affix the official seal of the City of Adelanto, on the 22nd day of June, 2016.

_____
Cindy M. Herrera, City Clerk, MMC

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cynthia M. Herrera, MMC, Interim, City Manager/ City Clerk

BY: Grace Mercado, Accounting Technician

SUBJECT: CONSENT CALENDAR/WARRANT DEMAND SCHEDULE 15/16-12-02

STAFF RECOMMENDATION:

Staff requests Council consider approving Warrant Demand Schedule 15/16-12-02 as presented by the Finance Department.

COUNCIL ACTION REQUESTED:

1. City of Adelanto Warrant Demand Schedule Warrants 134214 through 134304 in the total amount of $1,139,570.31.

2. City of Adelanto Warrant Demand Schedule Warrants, Electronic Fund Transfer 153 through 157 in the total amount of $20,685.14.

City of Adelanto

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
04000013-01 - CITY OF ADELANTO GENERAL CHKG									
Check									
134214	06/02/2016	Open			Utility Management Refund	BRIGHT, JUAN	$215.00		
	Account Type		Account Number	Description	Transaction Date	Transaction Type			
	RESIDENTIAL		50018702-001		05/31/2016	REFUND ADJUSTMENT			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)		$215.00			
134215	06/02/2016	Open			Utility Management Refund	JAMES, GRAYCE	$28.95		
	Account Type		Account Number	Description	Transaction Date	Transaction Type			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)		$28.95			
134216	06/02/2016	Open			Utility Management Refund	LADWP/ACS	$15,483.62		
	Account Type		Account Number	Description	Transaction Date	Transaction Type			
	INDUSTRIAL / COMMERCIAL		00011340-001	meter pulled 2015	05/31/2016	REFUND ADJUSTMENT			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)		$15,483.62			
134217	06/02/2016	Open			Utility Management Refund	MORAN, MANUEL or DENISE	$291.48		
	Account Type		Account Number	Description	Transaction Date	Transaction Type			
	RESIDENTIAL		30016447-001		06/01/2016	REFUND ADJUSTMENT			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)		$108.30			
	360 - APUA_Sewer			360-11004 (Cash in Bank-AWA General Checking)		$183.18			
134218	06/02/2016	Open			Utility Management Refund	TURNER, RICHARD	$17.49		
	Account Type		Account Number	Description	Transaction Date	Transaction Type			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)		$17.29			
	360 - APUA_Sewer			360-11004 (Cash in Bank-AWA General Checking)		$0.20			
134219	06/02/2016	Open			Utility Management Refund	YOO PROPERTY MANAGEMENT, LLC	$380.34		
	Account Type		Account Number	Description	Transaction Date	Transaction Type			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)		$168.67			
	360 - APUA_Sewer			360-11004 (Cash in Bank-AWA General Checking)		$211.67			
134220	06/06/2016	Open			Accounts Payable	ADELANTO COMMUNITY BENEFIT CORPORATION	$7,500.00		
	Invoice		Date	Description		Amount			
	05272016		06/02/2016	DONATION TO THE ADELANTO COMMUNITY BENEFIT CORP		$7,500.00			
	Paying Fund			Cash Account		Amount			
	226 - Police Asset Seizure			226-11001 (Cash in Bank - DCB General Checking)		$7,500.00			
134221	06/06/2016	Open			Accounts Payable	JAMS, INC.	$3,275.00		
	Invoice		Date	Description		Amount			
	0003747914-220		06/01/2016	MAVERICKS MEDIATION		$3,275.00			
	Paying Fund			Cash Account		Amount			

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$3,275.00		
134222	06/07/2016	Open			Utility Management Refund	WAITMAN, NATHAN & JANA	$343.18		
	Account Type		Account Number	Description		Transaction Date	Transaction Type		
	RESIDENTIAL		80014470-001	AUTOPAY DRAFTING ERROR		06/07/2016	REFUND ADJUSTMENT		
	Paying Fund			Cash Account			Amount		
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)			$343.18		
134223	06/09/2016	Open			Utility Management Refund	HONG, CHING, WAH	$20.44		
	Account Type		Account Number	Description		Transaction Date	Transaction Type		
	Paying Fund			Cash Account			Amount		
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)			$20.44		
134224	06/09/2016	Open			Utility Management Refund	QUINTERO, VICTOR	$36.08		
	Account Type		Account Number	Description		Transaction Date	Transaction Type		
	Paying Fund			Cash Account			Amount		
	353 - AWA_Water			353-11004 (Cash in Bank-AWA General Checking)			$30.24		
	360 - APUA_Sewer			360-11004 (Cash in Bank-AWA General Checking)			$5.84		
134225	06/15/2016	Open			Accounts Payable	FLYERS ENERGY LLC.	$993.28		
	Invoice		Date	Description			Amount		
	CFS1233138		05/31/2016	Vehicle Fuel			$550.03		
	CFS1232759		05/31/2016	Vehicle Fuel			$443.25		
	Paying Fund			Cash Account			Amount		
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$993.28		
134226	06/15/2016	Open			Accounts Payable	3G CREATIVE STUDIO	$300.00		
	Invoice		Date	Description			Amount		
	3626		04/07/2016	Annual Web Hosting - Christmas Parade Website			$300.00		
	Paying Fund			Cash Account			Amount		
	471 - Adelanto Community Benefit Corp.			471-11001 (Cash in Bank - DCB General Checking)			$300.00		
134227	06/15/2016	Open			Accounts Payable	AMERICAN CAPITAL ENT, INC.	$142.81		
	Invoice		Date	Description			Amount		
	042830		05/23/2016	COMMISSIONS DUE FROM CK 042830			$142.81		
	Paying Fund			Cash Account			Amount		
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$142.81		
134228	06/15/2016	Open			Accounts Payable	AMERICAN ORGANICS	$85.00		
	Invoice		Date	Description			Amount		
	2206777		05/31/2016	GREEN WASTE REMOVAL			$85.00		
	Paying Fund			Cash Account			Amount		
	360 - APUA_Sewer			360-11001 (Cash in Bank - DCB General Checking)			$85.00		
134229	06/15/2016	Open			Accounts Payable	AUTOMATED WATER TREATMENT	$4,449.25		
	Invoice		Date	Description			Amount		
	229		04/14/2016	3"CALCIUM HYPOCHLORITE TABLETS FOR WELLS			$920.37		
	240		05/09/2016	3"CALCIUM HYPOCHLORITE TABLETS FOR WELLS			$3,528.88		
	Paying Fund			Cash Account			Amount		
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$4,449.25		

City of Adelanto

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
134230	06/15/2016	Open			Accounts Payable	AVCO DISPOSAL, INC.	$9,618.75		
	Invoice		Date	Description		Amount			
	MAY-2016		06/01/2016	MAY 2016 SLUDGE REMOVAL		$9,618.75			
	Paying Fund			Cash Account		Amount			
	360 - APUA_Sewer			360-11001 (Cash in Bank - DCB General Checking)		$9,618.75			
134231	06/15/2016	Open			Accounts Payable	BAVCO	$307.65		
	Invoice		Date	Description		Amount			
	762121		06/08/2016	FEBCO SEATKT & SHIELD		$65.27			
	761173		06/01/2016	RBR REPAIR KIT & TEST HOSE ADAPTER		$242.38			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$307.65			
134232	06/15/2016	Open			Accounts Payable	BEAM CONSTRUCTION	$265.00		
	Invoice		Date	Description		Amount			
	04102016		04/10/2016	Emergency Board Up - 10678 Bonanza		$265.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$265.00			
134233	06/15/2016	Open			Accounts Payable	BLUE DIAMOND MATERIALS	$1,172.90		
	Invoice		Date	Description		Amount			
	714628		06/03/2016	1/2 ASPHALT USED ON CITY STREETS		$304.75			
	713402		06/01/2016	100 GALS OF EMULSION USED ON CITY STREETS		$868.15			
	Paying Fund			Cash Account		Amount			
	235 - Measure I/70% Local 2010-2040			235-11001 (Cash in Bank - DCB General Checking)		$1,172.90			
134234	06/15/2016	Open			Accounts Payable	CAL-STATE AUTO PARTS, INC.	$674.87		
	Invoice		Date	Description		Amount			
	262386		06/02/2016	ELEMENT A/CL		$53.43			
	147026		05/26/2016	REGULATOR FOR WINDOW		$87.77			
	260740		05/31/2016	ELEMENT A/CL		$53.43			
	260196		05/31/2016	ELEMENT A/CL		$71.24			
	260187		05/31/2016	ELEMENT A/CL		$208.11			
	147442		06/08/2016	ELEMENT A/CL		$42.10			
	147476		06/09/2016	SENSOR KIT, FRT WHL SPD		$158.79			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$674.87			
134235	06/15/2016	Open			Accounts Payable	CALPERS-FISCAL SERVICES DIVISION-CASHIER/PAYROLL	$328.00		
	Invoice		Date	Description		Amount			
	100000014766277		06/01/2016	ANNUAL UNFUNDED ACCRUED LIABILITY FOR PLAN 3470		$328.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$328.00			
134236	06/15/2016	Open			Accounts Payable	CARLOS ENCISO	$70.00		
	Invoice		Date	Description		Amount			
	2016-338		05/25/2016	Refund of Permit No. 2016-339		$70.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$70.00			

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Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
134237	06/15/2016	Open			Accounts Payable	CDW GOVERNMENT	$768.54		
	Invoice		Date	Description		Amount			
	DFN7362		05/27/2016	CDWG - Replacement Speakers & LED Screens		$768.54			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$261.30			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$253.62			
	360 - APUA_Sewer			360-11001 (Cash in Bank - DCB General Checking)		$253.62			
134238	06/15/2016	Open			Accounts Payable	CINTAS CORP #150	$154.14		
	Invoice		Date	Description		Amount			
	150686478		06/07/2016	WEEKLY MAT SERVICE FOR CITY HALL		$37.98			
	150686477		06/07/2016	WEEKLY UNIFORM SERVICE FOR V. MAINT.		$7.29			
	150686476		06/07/2016	WEEKLY UNIFORM SERVICE FOR STREETS		$79.71			
	150686475		06/07/2016	WEEKLY UNIFORM SERVICE FOR STREETS		$7.29			
	150686474		06/07/2016	WEEKLY UNIFORM SERVICE FOR FACILITY MAINT.		$7.29			
	150686473		06/07/2016	WEEKLY UNIFORM SERVICE FOR LLMD		$14.58			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$154.14			
134239	06/15/2016	Open			Accounts Payable	COGENT COMMUNICATIONS, INC.	$1,841.69		
	Invoice		Date	Description		Amount			
	AD00001-06/01/16		06/01/2016	Cycle: 06/01/16 - 06/30/16		$1,841.69			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$1,381.27			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$460.42			
134240	06/15/2016	Open			Accounts Payable	COLONIAL LIFE	$1,112.50		
	Invoice		Date	Description		Amount			
	0505979/CITY-AWA		05/24/2016	0505979/CITY-AWA/MAY 2016		$1,112.50			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$1,069.04			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$43.46			
134241	06/15/2016	Open			Accounts Payable	CORELOGIC SOLUTIONS, LLC.	$325.00		
	Invoice		Date	Description		Amount			
	81694027		05/31/2016	Monthly REALQUEST Property Reports		$225.00			
	81694465		05/31/2016	Monthly Metroscan Data/Parcel Maps		$100.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$325.00			
134242	06/15/2016	Open			Accounts Payable	COUNTY OF SAN BERNARDINO-1ST FLR	$246.00		
	Invoice		Date	Description		Amount			
	589062016001		06/01/2016	Document Recording Fees		$246.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$246.00			
134243	06/15/2016	Open			Accounts Payable	de Manincor, Mark	$63.24		
	Invoice		Date	Description		Amount			
	1768657		06/13/2016	Reimbursement of Supplies		$63.24			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$63.24			

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Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
134244	06/15/2016	Open			Accounts Payable	DEWEY PEST CONTROL, INC.	$25.00		
	Invoice		Date	Description		Amount			
	10191756		06/02/2016	JUNE BAIT BOXES FEES		$25.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$25.00			
134245	06/15/2016	Open			Accounts Payable	DOUG PAGE MFG	$2,987.36		
	Invoice		Date	Description		Amount			
	109		05/31/2016	REPAIRS & INSTALLATION OF CITY VEHICLE		$2,987.36			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$2,987.36			
134246	06/15/2016	Open			Accounts Payable	EXECUTIVE ELEVATOR, INC.	$286.00		
	Invoice		Date	Description		Amount			
	74274		05/19/2016	SHERIFFS-MONTHLY MAINTENANCE FEES FY15-16		$143.00			
	73977		04/19/2016	PREVENTATIVE MAIN MAY 2016		$143.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$286.00			
134247	06/15/2016	Open			Accounts Payable	FASTENAL	$485.62		
	Invoice		Date	Description		Amount			
	CAVIC43116		04/28/2016	BRAKETS FOR MOUNTING STREET SIGNS		$441.87			
	CAVIC43517		05/19/2016	STRAPS USED ON LARGE STREETS SIGNS		$43.75			
	Paying Fund			Cash Account		Amount			
	235 - Measure I/70% Local 2010-2040			235-11001 (Cash in Bank - DCB General Checking)		$485.62			
134248	06/15/2016	Open			Accounts Payable	FEDERAL EXPRESS	$50.00		
	Invoice		Date	Description		Amount			
	5-444-78108		06/10/2016	SIP TO WINSTON&STRAWN/T. NEZRAD		$50.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$50.00			
134249	06/15/2016	Open			Accounts Payable	FERGUSON ENTERPRISES, INC.	$99.65		
	Invoice		Date	Description		Amount			
	3349072		05/20/2016	1/2 GALLON URNIAL VAVLE		$99.65			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$99.65			
134250	06/15/2016	Open			Accounts Payable	FRONTIER	$1,452.42		
	Invoice		Date	Description		Amount			
	052692-5-042516		04/25/2016	CYCLE:04/25/16 - 05/24/16 IT		$318.05			
	052692-5-052516		05/25/2016	CYCLE:05/25/16 - 06/24/16 IT		$154.51			
	020989-5-052516		05/25/2016	CYCLE:05/25/16 - 06/24/16 IT		$52.59			
	032812-5-052216		05/22/2016	CYCLE:05/22/16 - 06/21/16 APUA		$211.76			
	040299-5-51616		05/16/2016	CYCLE:05/16/16 - 06/15/16		$49.88			
	070907-5-51316		05/13/2016	CYCLE:05/13/16 - 06/12/16		$49.88			
	051608-5-050716		05/07/2016	Cycle: 05/07/16 - 06/06/16 AWA		$129.87			
	070907-5-041316		04/13/2016	cycle: 04/13/16 - 05/12/16 IT		$49.88			
	040299-5 041616		04/16/2016	CYCLE:04/16/16 - 05/15/16 AWA		$49.88			
	042199-5-060116		06/01/2016	CYCLE: 06/01/16 - 06/30/16 IT		$162.75			
	070112-5-061016		06/10/2016	CYCLE:06/10/16 - 07/09/16 HDO		$223.37			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$1,011.03			

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Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name		Transaction Amount	Reconciled Amount	Difference
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$229.63			
	360 - APUA_Sewer			360-11001 (Cash in Bank - DCB General Checking)			$211.76			
134251	06/15/2016	Open			Accounts Payable	GIBBS, KATHLEEN, LYNN		$255.40		
	Invoice		Date	Description			Amount			
	2389416		06/08/2016	MAINSTAY SHARES REDEEMED			$255.40			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$255.40			
134252	06/15/2016	Open			Accounts Payable	HERRERA , CYNTHIA		$64.70		
	Invoice		Date	Description			Amount			
	06/10/2016		06/14/2016	Reimbursement for raffle gifts for meeting			$64.70			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$64.70			
134253	06/15/2016	Open			Accounts Payable	HERTZ EQUIPMENT RENTAL CORPORATION		$160.65		
	Invoice		Date	Description			Amount			
	28655766-001		05/26/2016	TAMPER FOR CITY HALL PROJECT			$160.65			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$160.65			
134254	06/15/2016	Open			Accounts Payable	HI DESERT ALARM		$60.00		
	Invoice		Date	Description			Amount			
	57397		05/20/2016	SHERIFF'S- MONTHLY FIRE ALRM SYS SERVICE 6/1-8/31/16			$60.00			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$60.00			
134255	06/15/2016	Open			Accounts Payable	HOME DEPOT CREDIT SERVICES		$834.27		
	Invoice		Date	Description			Amount			
	7171630		05/31/2016	HOSE & SHUTOFF COUPLING			$48.32			
	5171648		06/02/2016	COUPLING W/STOP, ADAPTER, FITTINGS			$570.81			
	1171684		06/06/2016	FLOODLIGHT & TIME DELAY CARTRIDGE			$82.63			
	2011538		06/05/2016	EVAPORATIVE COOLER PUMP			$33.22			
	5021193		06/02/2016	PHOTO BATTERY PACK			$38.78			
	7180075		05/31/2016	DUPLEX OUTLET, NIGHT LIGHT, & OTHER ITEMS			$60.51			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$834.27			
134256	06/15/2016	Open			Accounts Payable	INFOSEND		$4,543.92		
	Invoice		Date	Description			Amount			
	105732		05/13/2016	STATEMENT PROCESSING FEES 5/5-5/13/16			$4,543.92			
	Paying Fund			Cash Account			Amount			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$4,543.92			
134257	06/15/2016	Open			Accounts Payable	J & T CONSTRUCTION		$2,290.00		
	Invoice		Date	Description			Amount			
	06316		06/03/2016	BLOCK WALL REPLACEMENT OR REPAIR			$2,290.00			
	Paying Fund			Cash Account			Amount			
	235 - Measure I/70% Local 2010-2040			235-11001 (Cash in Bank - DCB General Checking)			$2,290.00			

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Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
134258	06/15/2016	Open			Accounts Payable	JACKSON LEWIS, P.C.	$1,192.50		
	Invoice		Date	Description			Amount		
	6754480		05/31/2016	ATTORNEY FEES IN MOORE, CORDERO, BORJA CASE			$1,192.50		
	Paying Fund			Cash Account			Amount		
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$1,192.50		
134259	06/15/2016	Open			Accounts Payable	KAISER FOUNDATION HEALTH PLAN	$16,895.35		
	Invoice		Date	Description			Amount		
	342404/JUNE 2016		05/15/2016	JUNE 2016/DHMO LOW-BILLING UNIT 243342404			$3,244.79		
	835204/JUNE 2016		05/15/2016	JUNE 2016/COBRA HIGH BILLING UNIT 691835204			$962.14		
	471600/JUNE 2016		05/15/2016	JUNE 2016/HEALTH HIGH BILLING UNIT 451471600			$12,688.42		
	Paying Fund			Cash Account			Amount		
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$16,895.35		
134260	06/15/2016	Open			Accounts Payable	KELLY GAS	$34.27		
	Invoice		Date	Description			Amount		
	051816		05/18/2016	CREDIT ISSUED			($12.28)		
	173573		05/30/2016	PROPANE USED ON CITY STREETS			$39.20		
	173219		06/06/2016	PROPANE USED ON CITY STREETS			$7.35		
	Paying Fund			Cash Account			Amount		
	235 - Measure I/70% Local 2010-2040			235-11001 (Cash in Bank - DCB General Checking)			$34.27		
134261	06/15/2016	Open			Accounts Payable	LAYNE CHRISTENSEN COMPANY	$84,350.71		
	Invoice		Date	Description			Amount		
	89080080		01/20/2016	Well 5A			$74,122.89		
	89080362		01/28/2016	Upper 3 Mill Tanks STA Booster 3			$10,227.82		
	Paying Fund			Cash Account			Amount		
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$84,350.71		
134262	06/15/2016	Open			Accounts Payable	MAGIC SMOG	$25.00		
	Invoice		Date	Description			Amount		
	13589-		05/09/2016	SMOG TEST EXTRA CHARGE BECAUSE OF GAS CAP			$25.00		
	Paying Fund			Cash Account			Amount		
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$25.00		
134263	06/15/2016	Open			Accounts Payable	MOBILE OCCUPATIONAL SERVICES, INC.	$90.00		
	Invoice		Date	Description			Amount		
	46385		05/31/2016	DOT RANDOM DRUG TESTING D.WAPPLER & D.GIBBS			$90.00		
	Paying Fund			Cash Account			Amount		
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$90.00		
134264	06/15/2016	Open			Accounts Payable	MOJAVE BASIN AREA WATERMASTER	$464.73		
	Invoice		Date	Description			Amount		
	39156		05/27/2016	ANNUAL ADMIN & BIOLOGICAL ASSES 2014-15			$459.89		
	39262		05/31/2016	ANNUAL MAKEUP WATER ASSES 2014-15			$4.84		
	Paying Fund			Cash Account			Amount		
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$464.73		

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Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
134265	06/15/2016	Open			Accounts Payable	MOSS, LEVY & HARTZHEIM	$3,088.00		
	Invoice		Date	Description		Amount			
	6792		05/31/2016	PROF SERV. 4 HARTZ,MOREL,ZENG 5/1-5/31		$3,088.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$3,088.00			
134266	06/15/2016	Open			Accounts Payable	MV CHENG & ASSOCIATES INC.	$9,295.00		
	Invoice		Date	Description		Amount			
	5/31/2016		06/03/2016	PROF. CONSULTING SERVICES FOR MAY 2016		$9,295.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$9,295.00			
134267	06/15/2016	Open			Accounts Payable	NAPA AUTO PARTS, INC.	$833.58		
	Invoice		Date	Description		Amount			
	944677		06/02/2016	FUSES FOR V. MAINT.		$639.24			
	944453		06/01/2016	50LBS NATURAL TIES FOR V. MAINT.		$21.59			
	945353		06/05/2016	LIFT SUPPORT FOR V. MAINT.		$123.08			
	947280		06/12/2016	COMBINATION SWITCH & BOOSTER CABLES		$49.67			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$833.58			
134268	06/15/2016	Open			Accounts Payable	NEW HORIZONS CLC of SOUTHERN CALIFORNIA	$5,360.00		
	Invoice		Date	Description		Amount			
	329307-T0F0Y1		05/26/2016	IT Project/Bus Skills		$5,360.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$5,360.00			
134269	06/15/2016	Open			Accounts Payable	NURSERY PRODUCTS, LLC	$8,410.75		
	Invoice		Date	Description		Amount			
	MAY 2016 ADELANT		05/31/2016	MAY RECYCLING OF BIOSOLIDS		$8,410.75			
	Paying Fund			Cash Account		Amount			
	360 - APUA_Sewer			360-11001 (Cash in Bank - DCB General Checking)		$8,410.75			
134270	06/15/2016	Open			Accounts Payable	PARKHOUSE TIRE, INC.	$174.83		
	Invoice		Date	Description		Amount			
	2020077702		06/07/2016	TIRES & REPAIR FOR TRACTOR USED ON CITY STREETS		$174.83			
	Paying Fund			Cash Account		Amount			
	235 - Measure I/70% Local 2010-2040			235-11001 (Cash in Bank - DCB General Checking)		$174.83			
134271	06/15/2016	Open			Accounts Payable	PCMG, INC.	$5,992.81		
	Invoice		Date	Description		Amount			
	S96417360101		05/23/2016	UBIQUITI - REPLACEMENT FY 15-16		$5,992.81			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$1,998.01			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$1,997.40			
	360 - APUA_Sewer			360-11001 (Cash in Bank - DCB General Checking)		$1,997.40			
134272	06/15/2016	Open			Accounts Payable	PELTIER, STEVEN	$480.61		
	Invoice		Date	Description		Amount			
	184400005		05/18/2016	Trash Bags for DOA's - Reimbursement for Peltier		$38.53			
	113-15-528		05/16/2016	Sheriff Training PC832 for Avalos - Reimbursement for Peltier		$264.00			

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Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name		Transaction Amount	Reconciled Amount	Difference
	4261603091399		06/03/2016	Legal Folders for SFR Inspec - Reimbursement for Peltier			$151.09			
	118883		06/03/2016	Seat Cover for Code Vehicle - Reimbursement for Peltier			$26.99			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$480.61			
134273	06/15/2016	Open			Accounts Payable	PERSONNEL CONCEPTS		$935.65		
	Invoice		Date	Description			Amount			
	9330804100		04/22/2016	MISC POSTERS FOR COMPLIANCE AND RIGHTS			$935.65			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$935.65			
134274	06/15/2016	Open			Accounts Payable	PET SMART		$59.91		
	Invoice		Date	Description			Amount			
	46525156015		05/31/2016	Animal Food/Supplies			$59.91			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$59.91			
134275	06/15/2016	Open			Accounts Payable	POLYDYNE, INC.		$5,216.40		
	Invoice		Date	Description			Amount			
	1050677		05/26/2016	CLARIFLOC WE-1296 CHEMICALS			$2,608.20			
	1053482		06/08/2016	CLARIFLOC WE-1296 CHEMICALS			$2,608.20			
	Paying Fund			Cash Account			Amount			
	360 - APUA_Sewer			360-11001 (Cash in Bank - DCB General Checking)			$5,216.40			
134276	06/15/2016	Open			Accounts Payable	RUTAN & TUCKER, LLP.		$27,507.30		
	Invoice		Date	Description			Amount			
	746215		05/02/2016	CFD No. 2006-2 (2015 Special Tax Bonds)			$1,546.44			
	745888		04/28/2016	General - Professional Fees / Disbursement and Cost			$23,812.66			
	745684		04/27/2016	City as Successor Agency to RDA			$798.20			
	747725		05/26/2016	APRIL 2016/GENERAL/PROF. SVCS.			$90.00			
	747737		05/26/2016	SAN BERNARDINO TAX INCREMENT LAWSUIT			$1,260.00			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$25,162.66			
	240 - CFD			240-11001 (Cash in Bank - DCB General Checking)			$1,546.44			
	580 - Sucessor Agency FY2012 and on			580-11001 (Cash in Bank - DCB General Checking)			$798.20			
134277	06/15/2016	Open			Accounts Payable	SAN BERNARDINO COUNTY FIRE DEPARTMENT		$377,634.16		
	Invoice		Date	Description			Amount			
	ADE2016-May		05/11/2016	May 2016 Fire Protection Service			$188,817.08			
	ADE2016-Jun		06/07/2016	June 2016 Fire Protection Services			$188,817.08			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$377,634.16			
134278	06/15/2016	Open			Accounts Payable	SAN BERNARDINO COUNTY FIRE PROTECTION DISTRICT		$64.00		
	Invoice		Date	Description			Amount			
	IN0111925A		03/16/2016	ADMIN FEE FOR CUPA PERMITS FA0014337			$64.00			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$64.00			

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
134279	06/15/2016	Open			Accounts Payable	SAN BERNARDINO COUNTY SHERIFF'S DEPARTMENT	$78,743.36		
	Invoice		Date	Description		Amount			
	15550		05/02/2016	Overtime Charges - Grand Prix FY 15/16		$5,005.36			
	15509		05/02/2016	Services Jan-Mar 2016 FY 15/16 Qtr 3		$73,738.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$78,743.36			
134280	06/15/2016	Open			Accounts Payable	SAN BERNARDINO COUNTY SHERIFF-CORONER DEPARTMENT	$403,032.00		
	Invoice		Date	Description		Amount			
	15604		05/25/2016	Monthly Law Enforcement Services - FY 15/16		$403,032.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$403,032.00			
134281	06/15/2016	Open			Accounts Payable	SMART & FINAL, INC.	$128.28		
	Invoice		Date	Description		Amount			
	109286		05/25/2016	Supplies for City Hall		$128.28			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$128.28			
134282	06/15/2016	Open			Accounts Payable	SONSRAY MACHINERY LLC.	$70.08		
	Invoice		Date	Description		Amount			
	P11673-02		06/02/2016	O-RING & SCREW FOR TRACTOR USED ON CITY STREETS		$70.08			
	Paying Fund			Cash Account		Amount			
	235 - Measure I/70% Local 2010-2040			235-11001 (Cash in Bank - DCB General Checking)		$70.08			
134283	06/15/2016	Open			Accounts Payable	SOUTHERN CALIFORNIA EDISON	$1,194.97		
	Invoice		Date	Description		Amount			
	3507/5-28-16		05/28/2016	2-21-347-3507/SOUTHERN CALIFORNIA EDISON		$174.14			
	5028/6/15/16		06/09/2016	11237 SENECA RD A 30-040-1131-95		$961.78			
	6043/6/15/16		06/08/2016	PASO BLANCO/SUN VALLEY LS-1		$59.05			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$174.14			
	241 - LLMD Annexation Fund			241-11001 (Cash in Bank - DCB General Checking)		$59.05			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$961.78			
134284	06/15/2016	Open			Accounts Payable	SOUTHWEST GAS CORPORATION	$629.82		
	Invoice		Date	Description		Amount			
	9001/05-27-16		05/27/2016	121-0346992-021/SOUTHWEST GAS		$629.82			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$269.26			
	200 - Maverick Stadium			200-11001 (Cash in Bank - DCB General Checking)		$329.64			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$30.92			
134285	06/15/2016	Open			Accounts Payable	SPRAY DOCTOR	$143.87		
	Invoice		Date	Description		Amount			
	145670		06/02/2016	REPAIR PARTS FOR PAINT MACHINE USED ON CITY STREETS		$143.87			
	Paying Fund			Cash Account		Amount			
	235 - Measure I/70% Local 2010-2040			235-11001 (Cash in Bank - DCB General Checking)		$143.87			

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
134286	06/15/2016	Open			Accounts Payable	STAPLES ADVANTAGE	$264.98		
	Invoice		Date	Description		Amount			
	3304080760		05/28/3016	SUPPLIES		$86.35			
	3304797433		06/04/2016	Office Supplies, toner.		$178.63			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$264.98			
134287	06/15/2016	Open			Accounts Payable	STATE CONTROLLER'S OFFICE	$42.21		
	Invoice		Date	Description		Amount			
	52637		05/27/2016	FTB Rates - Offset Program for Collections		$42.21			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$42.21			
134288	06/15/2016	Open			Accounts Payable	STORMWIND, LLC	$1,400.00		
	Invoice		Date	Description		Amount			
	12580		06/14/2016	STORMWIND - EXCHANGE TRAIN		$1,400.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$1,400.00			
134289	06/15/2016	Open			Accounts Payable	THOMPSON, LYNNE E.	$1,745.42		
	Invoice		Date	Description		Amount			
	MARCH 2016		03/15/2016	MARCH 2016/PROF. SVCS		$995.42			
	APRIL-MAY 2016		04/09/2016	APRIL-MAY 2016/PROF. SVCS		$750.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$1,745.42			
134290	06/15/2016	Open			Accounts Payable	TOPS N BARRICADES,INC.	$317.52		
	Invoice		Date	Description		Amount			
	1054051		05/25/2016	BLUE & WHITE MARKING PAINT		$317.52			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$317.52			
134291	06/15/2016	Open			Accounts Payable	TOWN OF APPLE VALLEY	$12,042.00		
	Invoice		Date	Description		Amount			
	820		06/13/2016	OHD ANNUAL SPON. CONT FY 15-16		$12,042.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$12,042.00			
134292	06/15/2016	Open			Accounts Payable	TYLER TECHNOLOGIES	$9,564.00		
	Invoice		Date	Description		Amount			
	049838		05/12/2016	MOBILITY SOTWARE FOR UB 5/6/16		$4,400.00			
	049836		05/12/2016	NWS Additional Software - Project Accounting		$2,400.00			
	049837		05/12/2016	TRAINING FOR BENEFIT OF ALL CITY FUNDS		$2,440.00			
	050068		06/01/2016	PRO-RATED SSMA 6/1/16-2/28/17		$324.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$5,164.00			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$4,400.00			
134293	06/15/2016	Open			Accounts Payable	TYPE SET GO	$469.80		
	Invoice		Date	Description		Amount			
	14114		06/09/2016	Animal Impound Cards		$469.80			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$469.80			

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
134294	06/15/2016	Open			Accounts Payable	U.C. REGENTS-CPER	$170.19		
	Invoice		Date	Description		Amount			
	05182016		06/06/2016	POCKET GUIDES		$170.19			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$170.19			
134295	06/15/2016	Open			Accounts Payable	UNDERGROUND SERVICE ALERT	$193.50		
	Invoice		Date	Description		Amount			
	520160005		06/01/2016	NEW TICKET CHARGES		$193.50			
	Paying Fund			Cash Account		Amount			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)		$193.50			
134296	06/15/2016	Open			Accounts Payable	UNION BANK-UNION BANK TRUST DEPARTMENT-FEES	$2,588.00		
	Invoice		Date	Description		Amount			
	974054		03/20/2016	TAX ALLOC RFDG BDS 93B 3/1/16-2/28/17		$2,588.00			
	Paying Fund			Cash Account		Amount			
	580 - Sucessor Agency FY2012 and on			580-11001 (Cash in Bank - DCB General Checking)		$2,588.00			
134297	06/15/2016	Open			Accounts Payable	VALLEYWIDE NEWSPAPER	$154.00		
	Invoice		Date	Description		Amount			
	47844		05/26/2016	NOTICE OF PUB HEAR CFD 2006-5		$16.50			
	47845		05/26/2016	NOTICE OF PUB HEAR LAND DIST. FEES		$19.25			
	47846		05/26/2016	NOTICE OF PUB HEAR STREET LIGHT		$19.25			
	47842		05/26/2016	NOTICE OF PUB HEAR SOLID WASTE		$16.50			
	47841		05/26/2016	NOTICE OF PUB HEAR STANDBY FEES		$16.50			
	47843		05/26/2016	NOTICE OF PUB HEAR CFD 2006-2		$22.00			
	47931		06/09/2016	Ordinance 545		$44.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$154.00			
134298	06/15/2016	Open			Accounts Payable	VCA MESA ANIMAL HOSPITAL	$200.75		
	Invoice		Date	Description		Amount			
	156192247		04/06/2016	Routine Vet Care		$15.00			
	156192248		04/20/2016	Routine Vet Care		$49.55			
	156194159		04/28/2016	Routine Vet Care		$22.90			
	156194160		05/03/2016	Routine Vet Care		$22.50			
	156194162		05/09/2016	Routine Vet Care		$45.40			
	156194163		05/10/2016	Routine Vet Care		$45.40			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$200.75			
134299	06/15/2016	Open			Accounts Payable	VCA VICTOR VALLEY ANIMAL HOSPITAL	$40.00		
	Invoice		Date	Description		Amount			
	169712420		04/22/2016	Spay/Neuter Voucher Reimbursement		$40.00			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$40.00			
134300	06/15/2016	Open			Accounts Payable	VERIZON WIRELESS	$6,921.35		
	Invoice		Date	Description		Amount			
	9765291946		05/10/2016	cycle: 04/11/16 - 05/10/16		$321.45			
	9765232847		05/10/2016	CYCLE: 04/11/16 - 05/10/16		$2,781.49			
	9766933867		06/10/2016	CYCLE: 05/11/16 - 06/10/16		$321.45			

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name		Transaction Amount	Reconciled Amount	Difference
	9766875658		06/10/2016	CYCLE: 05/11/16 - 06/10/16			$3,496.96			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$6,167.93			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$753.42			
134301	06/15/2016	Open			Accounts Payable	VICTOR VALLEY ANIMAL PROTECTIVE LEAGUE		$3,399.50		
	Invoice		Date	Description			Amount			
	932		05/31/2016	Animal Sheltering Costs			$3,399.50			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$3,399.50			
134302	06/15/2016	Open			Accounts Payable	VINCE UNG		$184.00		
	Invoice		Date	Description			Amount			
	05252016		05/25/2016	Refund for Apt. Inspection			$184.00			
	Paying Fund			Cash Account			Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)			$184.00			
134303	06/15/2016	Open			Accounts Payable	VULCAN		$1,219.96		
	Invoice		Date	Description			Amount			
	71149696		06/10/2016	SHEET MIX USED IN CITY STREETS			$222.78			
	71149697		06/10/2016	SHEET MIX USED IN CITY STREETS			$161.35			
	71146837		06/08/2016	SHHET MIX USED ON CITY STREETS			$157.68			
	71141597		05/31/2016	SHEET MIX USED ON CITY STREETS			$222.05			
	71143554		06/03/2016	SHHET MIX USED ON CITY STREETS			$224.25			
	71141596		05/31/2016	SHEET MIX USED ON CITY STREETS			$153.01			
	71144729		06/06/2016	SHEET MIX USED ON CITY STREETS			$78.84			
	Paying Fund			Cash Account			Amount			
	235 - Measure I/70% Local 2010-2040			235-11001 (Cash in Bank - DCB General Checking)			$1,219.96			
134304	06/15/2016	Open			Accounts Payable	WILLDAN FINANCIAL SERVICES		$2,500.00		
	Invoice		Date	Description			Amount			
	010-30819		04/12/2016	ARBITRAGE REBATE SERVICES SERIES B BONDS			$2,500.00			
	Paying Fund			Cash Account			Amount			
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$1,250.00			
	360 - APUA_Sewer			360-11001 (Cash in Bank - DCB General Checking)			$1,250.00			
Type Check Totals:					91 Transactions			$1,139,570.31		
04000013-01 - CITY OF ADELANTO GENERAL CHKG Totals										

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	91	$1,139,570.31	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	91	$1,139,570.31	$0.00

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	0	$0.00	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Total	0	$0.00	$0.00

All	Status	Count	Transaction Amount	Reconciled Amount

City of Adelanto

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source		Payee Name	Transaction Amount	Reconciled Amount	Difference
					Open	91	$1,139,570.31		$0.00	
					Reconciled	0	$0.00		$0.00	
					Voided	0	$0.00		$0.00	
					Stopped	0	$0.00		$0.00	
					Total	91	$1,139,570.31		$0.00	

Grand Totals:

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	**91**	**$1,139,570.31**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Stopped	**0**	**$0.00**	**$0.00**
	Total	**91**	**$1,139,570.31**	**$0.00**

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	**0**	**$0.00**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Total	**0**	**$0.00**	**$0.00**

All	Status	Count	Transaction Amount	Reconciled Amount
	Open	**91**	**$1,139,570.31**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Stopped	**0**	**$0.00**	**$0.00**
	Total	**91**	**$1,139,570.31**	**$0.00**

City of Adelanto

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
04000013-01 - CITY OF ADELANTO GENERAL CHKG									
EFT									
153	07/31/2015	Open			Accounts Payable	PAYPRO	$46.87		
	Invoice		Date	Description		Amount			
	PP#16-2015/PAYPR		07/30/2015	PP#16-2015/PAYPRO FLEX SPENDING		$46.87			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$46.87			
154	05/20/2016	Open			Accounts Payable	PAYPRO	$82.63		
	Invoice		Date	Description		Amount			
	PP#10-2016/PAYPR		05/19/2016	PP#10-2016/PAYPRP FLEX SPENDING		$82.63			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$82.63			
155	06/01/2016	Open			Accounts Payable	METLIFE	$4,250.55		
	Invoice		Date	Description		Amount			
	MAY 2016/METLIFE		05/15/2016	MAY 2016/METLIFE-DENTAL-LIFE- DISABILITY		$4,250.55			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$4,250.55			
156	06/02/2016	Open			Accounts Payable	BLUE SHIELD OF CALIFORNIA	$1,305.09		
	Invoice		Date	Description		Amount			
	161370038906		05/16/2016	161370038906/JUNE 2016		$1,305.09			
	Paying Fund			Cash Account		Amount			
	100 - General Fund			100-11001 (Cash in Bank - DCB General Checking)		$1,305.09			
157	03/02/2016	Open			Accounts Payable	PERC WATER CORPORATION	$15,000.00		
	Invoice		Date	Description		Amount			
	3481		02/24/2016	Urban Water Managment Plan Update		$15,000.00			
	Paying Fund			Cash Account		Amount			

Payment Register

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name		Transaction Amount	Reconciled Amount	Difference
	353 - AWA_Water			353-11001 (Cash in Bank - DCB General Checking)			$15,000.00			
Type EFT Totals:					5 Transactions			$20,685.14		
04000013-01 - CITY OF ADELANTO GENERAL CHKG Totals										

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	0	$0.00	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	0	$0.00	$0.00

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	5	$20,685.14	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Total	5	$20,685.14	$0.00

All	Status	Count	Transaction Amount	Reconciled Amount
	Open	5	$20,685.14	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	5	$20,685.14	$0.00

Grand Totals:

Checks	**Status**	**Count**	**Transaction Amount**	**Reconciled Amount**
	Open	**0**	**$0.00**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Stopped	**0**	**$0.00**	**$0.00**
	Total	**0**	**$0.00**	**$0.00**

EFTs	**Status**	**Count**	**Transaction Amount**	**Reconciled Amount**
	Open	**5**	**$20,685.14**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Total	**5**	**$20,685.14**	**$0.00**

All	**Status**	**Count**	**Transaction Amount**	**Reconciled Amount**
	Open	**5**	**$20,685.14**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Stopped	**0**	**$0.00**	**$0.00**
	Total	**5**	**$20,685.14**	**$0.00**

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY
| ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable President and Public Utility Authority Board Members

FROM: Cynthia M. Herrera, MMC, City Manager/City Clerk

BY: Bob Nespeca, PERC Water

SUBJECT: OPEN A PUBLIC HEARING and APPROVE APUA RESOLUTION 16-01 AS PRESENTED TO APPROVE THE 2015 URBAN WATER MANAGEMENT PLAN AND DIRECT STAFF TO FILE THE REPORT TO THE CALIFORNIA DEPARTMENT OF WATER RESOURCES, THE STATE LIBRARY, AND THE COUNTY OF SAN BERNARDINO.

STAFF RECOMMENDATION:

Open a Public Hearing and approve Resolution 16-01 as presented to approve the 2015 Urban Water Management Plan (UWMP) and direct staff to file the report to the California Department of Water Resources (DWR), the State Library, and the County of San Bernardino.

BACKGROUND:

The California Legislature enacted Assembly Bill 797 (Urban Water Management Planning Act) in 1984 which mandates that all water suppliers providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, develop or update its UWMP at least once every five years. For the 2015 UWMP, the California Water Code was amended to include standardized forms and tables, including tables to assess compliance with 20x2020 conservation targets, as well as submission of the 2015 UWMP to DWR by July 1, 2016.

The 2015 UWMP provides a framework for long-term water planning and informs the public of the City's plans for long-term resource planning to ensure adequate water supplies for existing and future demands. The UWMP documents the availability of an appropriate level of reliability of water service sufficient to meet the needs of the City's customers during normal, single dry and multiple dry years.

FISCAL IMPACT:

1. $27,825 for Contracted services provided by PERC Water for preparation of the 2015 UWMP.

ATTACHMENTS:

1. APUA Resolution No. 16-01
2. 2015 Urban Water Management Plan

APUA RESOLUTION NO. 16-01

A RESOLUTION OF THE ADELANTO PUBLIC UTILITY AUTHORITY OF THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, CALIFORNIA, APPROVING THE 2015 URBAN WATER MANAGEMENT PLAN ADOPTION AND ORDERING THE REPORT TO BE FILED WITH THE DEPARTMENT OF WATER RESOURCES

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et Seq., known as the Urban Management Planning Act) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan (Plan), the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the Adelanto Public Utility Authority is an Urban Supplier of water in excess of over 3,000 acre feet annually; and

WHEREAS, the Urban Water Management Plan shall be periodically reviewed at least once every five years, and that the Adelanto Public Utility Authority shall make any amendments or changes to the Plan which are indicated by the review; and

WHEREAS, the Adelanto Public Utility Authority has therefore, prepared and circulated for public review a draft 2015 Urban Water Management Plan and a properly noticed public hearing regarding said plan was held by the Adelanto Public Utility Authority on June 22, 2016; and

WHEREAS, the Adelanto Public Utility Authority did prepare and shall file said plan with the Department of Water Resources by July 1, 2016.

NOW, THEREFORE BE IT RESOLVED, DETERMINED AND ORDERED BY THE ADELANTO PUBLIC UTILITY AUTHORITY, CALIFORNIA, AS FOLLOWS:

Section 1. The Adelanto Public Utility Authority authorizes the adoption of its updated 2015 Urban Water Management Plan and orders the filing of the Plan with the California Department of Water Resources.

Section 2. The Adelanto Public Utility Authority's adoption of the Plan approves the Water Use Baselines and Targets analysis, which demonstrates the City of Adelanto has met its 2015 Interim Target and is on track to meet its 2020 Target.

Section 3. The Adelanto Public Utility Authority is further authorized to implement the Water Conservation Programs as set forth in the 2015 Urban Water Management Plan, which includes a water shortage contingency analysis and recommendations regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation and water recycling programs.

Section 4. The Adelanto Public Utility Authority is further authorized to declare a Water Shortage Emergency according to the Water Shortage Stages and Triggers indicated in the Plan, implement necessary elements of the Plan, and recommend additional regulations to carry out effective and equitable allocation of water resources.

PASSED, APPROVED AND ADOPTED this 22nd day of June, 2016, by the following vote:

Rich Kerr, President

Cindy M. Herrera, Secretary of the
Adelanto Public Utility Authority

APPROVED AS TO FORM:

Curtis R. Wright, City Attorney

I, Cindy M. Herrera, Board Secretary of the Adelanto Public Utility Authority in the City of Adelanto, California, do hereby certify that the foregoing APUA Resolution No. 16-01 was duly and regularly adopted at a regular meeting of the City Council of the City of Adelanto on this 22nd day of June, 2016 be the following vote to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

IN WITNESS THEREOF, I hereunto set my hand and affix the official seal of the City of Adelanto on the 22nd day of June, 2016.

_____
Cindy M. Herrera, Board Secretary

2015 URBAN WATER MANAGEMENT PLAN

Public Review Draft
6/13/16

2015
URBAN WATER MANAGEMENT PLAN

CITY OF ADELANTO

Public Review Draft 6/13/16

June 22, 2016

Rich Kerr
Mayor

Jermaine Wright Sr.
Mayor Pro Tem

Charley B. Glasper
Council Member

John "Bug" Woodard Jr.
Council Member

Ed Camargo
Council Member

Cindy Herrera
Interim City Manager

Adelanto City Hall ~ 11600 Air Expressway, Adelanto, CA 92301 ~ (760) 246-2300

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City of Adelanto
2015 Urban Water Management Plan Update

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ACRONYMS and ABBREVIATIONS

AB	Assembly Bill
AF	Acre Feet
AFY	Acre Feet per Year
APUA	Adelanto Public Utilities Authority
ARRA	American Recovery and Reinvestment Act of 2009
ASCE	American Society of Civil Engineers
AWAC	Alliance for Water Awareness and Conservation
AWWA	American Water Works Association
BAP	Base Annual Production
BDCP	Bay Delta Conservation Plan
BMO	Best Management Objective
BMP	Best Management Practice
CALSIM	California Water Allocation and Reservoir Operations Model
CAWCD	Central Arizona Water Conservation District
CCF	Hundred Cubic Feet
CCR	Consumer Confidence Report
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CFS	Cubic Feet Per Second
CII	Commercial, Industrial, and Institutional
CIMIS	California Irrigation Management Information System
CMP	Conservation Master Plan
CPUC	California Public Utilities Commission
CRA	Colorado River Aqueduct
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CVWD	Coachella Valley Water District
DBP	Disinfection Byproducts
DCR	2015 DWR State Water Project Delivery Capability Report
D/DBP	Disinfectants and Disinfection Byproducts
DMM	Demand Management Measure
DOE	Department of Energy
DOF	Department of Finance
DRR	Delivery Reliability Report

DWR	Department of Water Resources
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ERR	Emergency Response and Recovery
ESA	Endangered Species Act
ET	Evapotranspiration
ETc	Evapotranspiration for a specific crop
ETo	Evapotranspiration for a standardized grass surface
ETr	Evapotranspiration for a standardized alfalfa surface
FPA	Free Production Allowance
FY	Fiscal Year
GAC	Granular Activated Carbon
GAFB	George Air Force Base (Now Southern California Logistics Airport
GIS	Geographic Information System
GPCD	Gallons Per Capita Per Day
GPF	Gallons Per Flush
GPM	Gallons Per Minute
HAA	Haloacetic Acids
HCD	California Department of Housing and Community Development
HELP	High Efficiency Living Program
HET	High Efficiency Toilets
HEWM	High-Efficiency Washing Machines
IRWMP	Integrated Regional Water Management Plan
Kc	Crop Coefficient
MAF	Million Acre Feet
MCL	Maximum Contaminant Level
MG	Million Gallons
MEEC	Mojave Environmental Education Consortium
MGD	Million Gallons per Day
MG/L	Milligrams per liter
MOU	Memorandum of Understanding
MTBE	Methyl Tertiary Butyl Ether
MWA	Mojave Water Agency
NDMA	N-Nitrosodimethylamine
ng/L	Parts per Trillion
NIMS	National Incident Management System

NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council
OEHHA	Office of Environmental Health Hazard Assessment
PAC	Project Advisory Committee
pCi/L	picocuries per liter
PCE	Tetrachloroethylene
PHG	Public Health Goal
PPCPs	Pharmaceutical and Personal Care Products
psi	Pounds per square inch
PSP	Proposal Solicitation Package
PSY	Production Safe Yield
PVID	Palo Verde Irrigation District
QSA	Quantification Settlement Agreement
RHNA	Regional Housing Needs Assessment
RUWMP	Regional Urban Water Management Plan
RWMP	MWA's Regional Water Management Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition System
SCAG	Southern California Association of Government
SCWA	Sonoma County Water Agency
SEMS	State Emergency Management System
SWP	State Water Project
SWRCB	State Water Resources Control Board
TAF	Thousand Acre Feet
TCE	Trichloroethylene
TDML	Total Daily Maximum Loads
TDS	Total Dissolved Solids
THM	Trihalomethane
TOC	Total Organic Carbon
µg/L	Micrograms Per Liter
ULF	Ultra Low Flush
ULFT	Ultra Low Flush Toilet
USBR	United States Bureau of Reclamation
USGS	United States Geological Survey

UWMP	Urban Water Management Plan
VOC	Volatile Organic Compounds
VVWRA	Victor Valley Wastewater Reclamation Authority
VWD	Victorville Water District
WAS	Water Augmentation Study
WQPP	Water Quality Protection Plan
WRCC	Western Regional Climate Center

EXECUTIVE SUMMARY

To be developed

Chapter 1 - Introduction and Overview: Importance and extent of the City's water management planning efforts.

Chapter 2 - Plan Preparation: The City's process for developing this UWMP, including efforts in coordination and outreach.

Chapter 3 - System Description: Description of the City's water service area, the City's history and organizational structure, the Public Water System, climate, and map of the service area

Chapter 4 - System Water Use: Describes and quantifies the current and projected water uses in normal conditions within the City's service area.

Chapter 5 - Baselines and Targets: Describes the City's methodology for calculating its baseline and target water consumption, demonstration of achieving its 2015 interim water use target, and plans for achieving its 2020 water use target.

Chapter 6 - System Supplies: Describes and quantifies the current and projected sources available to the City, including water volumes for average year conditions, origin of water supply, water quality, and issues unique to the supply, and management actions and projects that are anticipated to meet future water demand.

Chapter 7 - Water Supply Reliability: Describes the reliability of the City's water supply and projects reliability for a 25-year planning horizon for normal, single dry years and multiple dry years.

Chapter 8 - Water Shortage Contingency Planning: Describes the City's staged plan for dealing with water shortages, including a catastrophic supply interruption.

Chapter 9 - Demand Management Measures: Demonstrates the City's efforts to promote water conservation and to reduce demand on its water supply, specifically detailing efforts for designated demand management measures.

Chapter 10 - Plan Adoption, Submittal, and Implementation: Describes the City's actions taken to provide notification to agencies, adopt and submit the UWMP, make it available to the public, and plans to implement elements of the UWMP.

1.0 INTRODUCTION AND OVERVIEW

1.1 UWMP IMPORTANCE AND PURPOSE

Water planning is an essential function of water suppliers and is critical as California grapples with ongoing drought and expected long-term climate changes. Prior to the adoption of the Urban Water Management Planning (UWMP) Act[1] (Appendix A), there were no specific requirements that water agencies conduct long-term resource planning. While many water agencies conducted long-term water supply and resource planning prior to the Act, those that did not were left vulnerable to supply disruptions during dry periods or catastrophic events.

The UWMP Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the drought of 2007-2009 and as a result of the Governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as SB X7-7 (Appendix B). This Act required agencies to establish water use targets for 2015 and 2020 that would result in statewide savings of 20 percent by 2020.

This Urban Water Management Plan (UWMP) provides a framework for long-term water planning and informs the public of the City's plans for long-term resource planning to ensure adequate water supplies for existing and future demands. The UWMP documents the availability of an appropriate level of reliability of water service sufficient to meet the needs of the City's customers during normal, single dry and multiple dry years. A long-term reliable supply of water is essential to protect the productivity of the City's and California's businesses and economic climate.

1.2 California Legislature Declarations

In addressing urban water management issues, the California Legislature has made a number of significant declarations including:

- The waters of the state are a limited and renewable resource subject to ever increasing demands.
- Conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.
- A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.
- As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

[1] http://www.water.ca.gov/urbanwatermanagement/docs/water_code-10610-10656.pdf

- Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.
- Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.
- Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.
- Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.
- The quality of source supplies can have a significant impact on water management strategies and supply reliability.

The Legislature also finds and declares that it is the policy of the State as follows:

- The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
- The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
- Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

1.3 UWMP Summary

The UWMP Act requires water agencies to develop an UWMP that provides a framework for long-term water resource planning and informs the public of a supplier's plans to ensure adequate water supplies for existing and future demands. The City's 2015 UWMP has been prepared in compliance with the requirements of the Act, as amended to 2015[2], and included in the California Water Code (CWC). Changes to the CWC since 2010 are shown in Appendix C. The City's UWMP includes discussion of the following:

Chapter 1 - Introduction and Overview: Importance and extent of the City's water management planning efforts.

Chapter 2 - Plan Preparation: The City's process for developing this UWMP, including efforts in coordination and outreach.

Chapter 3 - System Description: Description of the City's water service area, the City's history and organizational structure, the Public Water System, climate, and map of the service area

Chapter 4 - System Water Use: Describes and quantifies the current and projected water uses in normal conditions within the City's service area.

[2] California Water Code, Division 6, Part 2.6; §10610, et. seq. Established by Assembly Bill 797 (1983); can be at: http://www.water.ca.gov/urbanwatermanagement/docs/water_code-10610-10656.pdf

Chapter 5 - Baselines and Targets: Describes the City's methodology for calculating its baseline and target water consumption, demonstration of achieving its 2015 interim water use target, and plans for achieving its 2020 water use target.

Chapter 6 - System Supplies: Describes and quantifies the current and projected sources available to the City, including water volumes for average year conditions, origin of water supply, water quality, and issues unique to the supply, and management actions and projects that are anticipated to meet future water demand.

Chapter 7 - Water Supply Reliability: Describes the reliability of the City's water supply and projects reliability for a 25-year planning horizon for normal, single dry years and multiple dry years.

Chapter 8 - Water Shortage Contingency Planning: Describes the City's staged plan for dealing with water shortages, including a catastrophic supply interruption.

Chapter 9 - Demand Management Measures: Demonstrates the City's efforts to promote water conservation and to reduce demand on its water supply, specifically detailing efforts for designated demand management measures.

Chapter 10 - Plan Adoption, Submittal, and Implementation: Describes the City's actions taken to provide notification to agencies, adopt and submit the UWMP, make it available to the public, and plans to implement elements of the UWMP.

The sections in this UWMP correspond to the outline of the Act and as recommended in the California Department of Water Resources (DWR) 2015 Guidebook for Urban Water Suppliers. Further, the tables included are required by DWR and in the format presented in the 2015 Guidebook. They are both inclusive in the UWMP and submitted to DWR as a separate Excel file. The DWR Urban Water Management Plan Checklist form from the Guidebook has been completed and is included in Appendix D. This document identifies the location in this UWMP where required elements can be found.

The UWMP is intended to serve as a general, flexible, and open-ended document that periodically can be updated to reflect changes in regional water supply trends and water use efficiency policies. This Plan, along with other City planning documents, will be used by City staff to guide water use and management efforts through the year 2020, when the UWMP is required to be updated.

Applicable changes to the CWC since 2010 that the 2015 UWMP addresses include:

- Demand Management Measures CWC Section 10631 (f) (1) and (2) Assembly Bill 2067, 2014 (Guidebook Chapter 9)
- Submittal Date CWC Section 10621 (d) Assembly Bill 2067, 2014 (Guidebook Chapter 10)
- Electronic Submittal CWC Section 10644 (a) (2) Senate Bill 1420, 2014 (Guidebook Chapter 10)
- Standardized Forms CWC Section 10644 (a) (2) Senate Bill 1420, 2014 (Guidebook Chapter 10)
- Water Loss CWC Section 10631 (e) (1) (J) and (e) (3) (A) and (B) Senate Bill 1420, 2014 (Guidebook Appendix L)

- Estimating Future Water Savings CWC Section 10631 (e) (4) Senate Bill 1420, 2014 (Guidebook Appendix K)
- Voluntary Reporting of Energy Intensity CWC Section 10631.2 (a) and (b) Senate Bill 1036, 2014 (Guidebook Appendix O)
- Defining Water Features CWC Section 10632 (b) Assembly Bill 2409, 2010 (Guidebook Chapter 4)

In addition, SBX7-7 (2010), the Water Conservation Act of 2009, requires retail urban water suppliers to report in their UWMPs their Base Daily per Capita Water Use (Baseline GPCD), 2015 Interim Urban Water Use Target, 2020 Urban Water Use Target, and Compliance Daily per Capita Water Use. These terms are defined in Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, DWR 2011 (Methodologies) consistent with SB X7-7 requirements. The Methodologies document can be found online at http://www.water.ca.gov/urbanwatermanagement/uwmp2015.cfm.

Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. Information on the City's compliance with the requirements of SBX7-7 is found in Chapter 5, which shows the City's targets and progress toward decreasing daily per capita urban water use in its service area, which will assist the State in meeting its 20 percent reduction goal by 2020.

The UWMP also incorporates water use efficiency efforts (demand management measures) the City has implemented or Mojave Water Agency has implemented on behalf of the City or is considering implementing pursuant to the requirements of the Act. The City of Adelanto is not currently a signatory of the *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU) with the California Urban Water Conservation Council. Therefore, Demand Management Measures are fully discussed in Chapter 9.

2.0 URBAN WATER MANAGEMENT PLAN PREPARATION

2.1 Basis for Preparing a Plan

An "urban water supplier" is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers, applying to water supplied from Public Water Systems.

California Health and Safety Code 116275 (h) "Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. The City's Public Water System data has been reported to the California Water Resources Control Board, which determines whether or not the City has reached the UWMP reporting threshold of 3,000 or more connections or 3,000 AF of water supplied. Table 2-1 shows the City's water system information that demonstrates it is considered a Public Water System.

Table 2-1: Public Water System

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015 (AF)
CA3610001	City of Adelanto	8,165	4,049
	TOTAL	**8,165**	**4,049**

NOTES: The City of Adelanto serves only one public water system.

The California Water Management Planning Act of 1983 (Act) as amended, requires urban water suppliers with 3,000 or more service connections or supplying 3,000 or more acre-feet of water per year (AFY) to develop or update its UWMP at least once every five years on or before December 31, in the years ending in five and zero. However, the Act provides that each urban water supplier shall update and submit its 2015 plan to the DWR by July 1, 2016.

The City of Adelanto is an urban water supplier since it provides water for municipal purposed to more than 3,000 customers. Therefore, the City is required to update its UWMP and submit it to the DWR by July 1, 2016. This UWMP includes required standardized forms and tables specified by DWR, including a tables to report water use information. Specifically, tables have been developed to provide information sufficient to assess compliance with 20x2020 conservation targets.

To assist City staff in preparation of the City's 2015 UWMP, consultants to the City for preparation of the UWMP attended a workshop on November 20, 2015 facilitated by DWR.

2.2 Individual Compliance

The City has developed this UWMP that reports solely on its service area and the UWMP addresses all requirements of the CWC for urban water management plans. The City has notified and coordinated with all appropriate regional agencies and stakeholders. Table 2-2, as required, designates this Plan as an Individual UWMP.

Table 2-2: Plan Identification		
☑	Individual UWMP	
☐	Regional UWMP (RUWMP)	
	Select One:	
	☐	RUWMP includes a Regional Alliance
	☐	RUWMP does not include a Regional Alliance

2.3 Type of Agency, Calendar Year, and Units of Measure

The City of Adelanto is a retailer water supplier, defined as a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.

DWR prefers that agencies report on a calendar year basis in order to ensure UWMP data is consistent with data submitted in other reports to the State. However, DWR also understands that for some agencies fiscal year reporting ensures consistency with local, regional, and/or financial reports. The City has reported data on a calendar year in this UWMP.

Water agencies use various units of measure when reporting water volumes, such as acre-feet (AF), million gallons (MG), or hundred cubic feet (CCF). The City of Adelanto is reporting its units of measure to report water volume in AF. Table 2-3, as required, shows the type of agency, reporting years, and units of measure for the City.

Table 2-3: Agency Identification	
Type of Agency	
☐	Agency is a wholesaler
☑	Agency is a retailer
Fiscal or Calendar Year	
☑	UWMP Tables Are in Calendar Years
☐	UWMP Tables Are in Fiscal Years
Units of Measure Used in UWMP (select from Drop down)	
Unit	AF

2.4 Coordination and Outreach

2.4.1 Wholesale and Retail Coordination

Retail agencies that receive water supply from one or more wholesalers are required to provide their wholesaler(s) with the retail agency's projected water demand from that source, in five-year increments for 20 years, or as far as data is available. Table 2-4 shows the City has provided information to the Mojave Water Agency (MWA), as its wholesale water supplier, of its projected water demand. Over the past ten years, 100 percent of the City's potable water supply has been pumped from the groundwater aquifer. The groundwater basin is managed by MWA, which has rights to imported water from the DWR State Water Project (SWP).

Table 2-4 Retail: Water Supplier Information Exchange
The City of Adelanto, retail supplier, has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Mojave Water Agency

2.4.2 Coordination with Other Agencies and the Community

Development of the UWMP was led by the Adelanto Water Department through the Adelanto Public Utilities Authority (APUA). The APUA is charged with providing safe, good quality, uninterrupted water at a reasonable pressure, to meet health and fire protection needs of that portion of the city served by the public water system. The APUA staff coordinated with the City Planning Department, the City Clerk, the Mojave Water Agency (MWA) and others in development, distribution and adoption of the plan.[3]

[3] References to the water system in this plan as the City of Adelanto (City) or the APUA shall be considered synonymous.

Over the past 15 years, 100 percent of the City's potable water supply has been pumped from the groundwater aquifer. The groundwater basin is managed by MWA, which has rights to imported water from the DWR State Water Project (SWP). This UWMP incorporates data obtained from these agencies where appropriate.

The intent of this UWMP is to focus on specific issues unique to the City's water service area. While some regional UWMP issues are introduced in this plan, more comprehensive regional information is presented in MWA's 2015 UWMP[4] and the 2014 Mojave Region Integrated Regional Water Management (IRWM) Plan[5].

In preparing the 2015 UWMP, the City also utilized information from the Metropolitan Water District of Southern California Draft 2015 UWMP, March 2016 (a source of information pertaining to the SWP); the California Water Plan Update 2009, and the *"2015 Urban Water Management Plans Guidebook for Urban Water Suppliers", Final March 2016* prepared by DWR.

This UWMP details the specifics as they relate to the City and its service area and will refer to MWA and other agencies throughout. Numerous references were used in the development of this UWMP and are cited in footnotes throughout the Plan.

Table 2-5 lists the entities that Adelanto coordinated with in the development of the City's 2015 UWMP.

Table 2-5: City of Adelanto 2015 UWMP Development Coordination and Public Involvement

Agency	Participated in UWMP Preparation	Used Agency Data as an Information Resource	Sent and/or Available To: Copy of Draft UWMP	Commented on Draft UWMP	Sent Notice of Public Hearing	Attended Public Hearing
APUA	√	√	√	√	√	√
City Planning Department	√	√	√	√	√	√
City Clerk		√	√		√	√
MWA		√	√			
Victorville Water District		√	√		√	
County of San Bernardino		√	√		√	
California Department of Water Resources		√				
General Public			√		√	√

[4] Draft 2015 MWA UWMP, May 9, 2015, available at: https://www.mojavewater.org/uwm-plan.html
[5] 2014 Mojave Region IRWM Plan available at: http://www.mywaterplan.com/irwm-plan-documents.html

2.4.3 Notice to Cities and Counties

As the urban water supplier to the City of Adelanto service area, the City provided notification to the following agencies that it was reviewing the 2010 UWMP and considering amendments or changes to the plan. Notification was provided on April 18, 2016, within the required 60 days before the public hearing on the plan, which was held on June 22, 2016. Copies of the following 60-day notification letters are included in Appendix E.

- City of Victorville
- County of San Bernardino
- Mojave Water Agency

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3.0 SYSTEM DESCRIPTION

3.1 General Description

Water Service Area

Incorporated in 1970, Adelanto is located on U.S. Highway 395, in the western portion of California's Mojave Desert in southwestern San Bernardino County. The City is situated 35 miles north of the City of San Bernardino, via Interstate 15. Elevations within the City range approximately between 2,700 and 3,200 feet above mean sea level and are separated into three (3) pressure zones – Zone 1, Zone 2, and Zone 3. The terrain generally slopes from southwest to northeast. The terrain has allowed the development to occur mostly in Assessment District 1A and towards the northern end of the City.

The City of Adelanto encompasses approximately 34,565 acres (53.8 square miles) and additional 2,306 acres (3.6 square miles) that may be annexed into the City. Its sphere of influence extends that figure to approximately 77 square miles. Section 3.2 identifies and shows the service area maps.

Water Utility and System Facilities

The City's water supply comes solely from groundwater production from 15 potable wells. The City's water system delivers water to three pressure zones and consists of the aforementioned wells, transmission and distribution pipelines, booster stations and reservoirs. These facilities include:[6]

- Approximately 113 miles of transmission and distribution mains ranging in diameter from 6- to 24-inches;
- Nine active potable water wells with a total pumping capacity of 4,728 gallons per minute (gpm). The City also has seven wells, which are currently inactive, but some of which may be returned to service in future years. These totals include two wells rehabilitated since 2007 and two new wells drilled in 2005 and 2008;
- Seven welded steel tanks ranging in size from 0.75 million gallons (MG) to 5 MG with a total capacity of 21.75 MG;
- Four booster stations which pump water from lower to upper pressure zones; and
- Four pressure reducing stations, which transfer water from upper to lower pressure zones.
- Two emergency interties with the Victorville Water District

[6] Water facility information extracted from the City of Adelanto Water Master Plan, December 2007, prepared by So & Associates Engineers, Inc., with some adjustments based on input from City staff

Land Use

Land use within the City's water service area consists of a combination of residential, commercial, manufacturing/industrial, airport park, airport development district, public/semi-public open space, and specific plan area. The majority of the City is manufacturing/industrial and residential development, consisting of single-family housing, with some commercial acreage.

Based on historical growth within the City boundary, it is expected that single family will continue to account for the majority of new growth during the planning horizon, with associated commercial/industrial developments. The City is currently approximately only 15 percent built out.

Organizational Structure

Adelanto was founded in 1915 by E.H. Richardson, the inventor of what became the Hotpoint Electric Iron. He sold his patent and purchased land for $75,000. He had planned to develop one of the first master planned communities in Southern California. Richardson subdivided his land into one-acre plots, which he hoped to sell to veterans with respiratory ailments suffered during World War I. He also hoped to build a respiratory hospital. While Richardson never fully realized his dream, it was his planning that laid the foundation for what is currently the City of Adelanto.

Adelanto continued as a "community services district" until 1970, when the city incorporated, and Adelanto became San Bernardino County's smallest city, later becoming a charter city in November 1992. As described in Chapter 2, the City of Adelanto is a retailer water supplier, providing water and wastewater services through the Adelanto Public Utilities Authority (APUA/Authority), a component unit of the City. The Authority was formed by action of the Adelanto City Council on October 22, 1996. The Authority was formed for the purpose of purchasing and operating the City's wastewater operations. In conjunction with that purchase, the Authority issued bonds to finance the down payment to the City and the construction of a wastewater treatment plant. The Authority also issued a note payable to the City to finance the purchase of the existing wastewater assets.

On February 29, 2000, the APUA entered into a purchase agreement with the Adelanto Water Authority (Water Authority) to purchase the Water Authority's water system (Water Enterprise), including the Water Enterprise's total assets and assumption of its total liabilities and obligations under the original agreement in January 1996, under which the Water Authority was first formed by the City.

The Authority is an integral part of the reporting entity of the City. The funds of the Authority are included within the scope of the basic financial statements of the City because the City Council is the governing board over the operations of the Authority.

Significant Water Use

This fluctuation in average daily water usage may be attributed to the variations in yearly precipitation that occurs in the high desert area and also due to an increase in residential

dwellings in Adelanto. Outdoors water use (landscape irrigation), which can account for as much as 70 percent of a typical residential customers usage, varies with temperature and precipitation. This fluctuation in average daily water usage has occurred throughout the Southern California area, and is not unique to Adelanto service area.

3.2 Service Area Boundary Map

Figure 3-1 shows the Mojave Water Agency location in relation to the State of California, which the City of Adelanto is a water supplier agency of the Mojave Water Agency. Looking closer, Figure 3-2 shows the largest water suppliers of the Mojave Water agency, including the City of Adelanto

Finally, the City's water service area boundaries are depicted in Figure 3-3, which are consistent with the City's boundaries. While water lines shown in areas outside the City boundaries, all lines are strictly transmission lines and not service lines. In small areas of the City that do not currently have water lines, these residents purchase water from a water fill station located at the City's main Water Service yard. Water sales at the fill station are metered and accounted for in Commercial water use.

3.3 Service Area Climate

Climate Characteristics

The City's service area lies within California's High Desert with a climate that differs considerably from other areas of Southern California. A broad range of temperature fluctuations between summer and winter, as well as between day and night, characterize the high desert's climate. Also characteristic of the high desert is an average humidity of 42% and strong winds that blow in a northeasterly direction. It is not unusual to experience winds of 30- 40 mph or higher, although the average wind speed is 10.9 mph.

A regional network of weather stations provides climate data throughout the watershed. Annual variations in evapotranspiration, precipitation and air temperature, for Victorville CA, are shown in Tables 3-1 and 3-2. The Victorville weather station is representative of the City's service area climate.

Average annual rainfall in Adelanto is just 5.52", typically occurring in late fall and winter, although the high desert does experience summer thunderstorms. Some snow also falls during winter months, averaging 1.4" annually. The average maximum and minimum temperatures are 77.5^{o}F and 43.9^{o}F, respectively. Table 3-1 summarizes area temperatures and precipitation data.

Figure 3.1
Mojave Water Agency Area

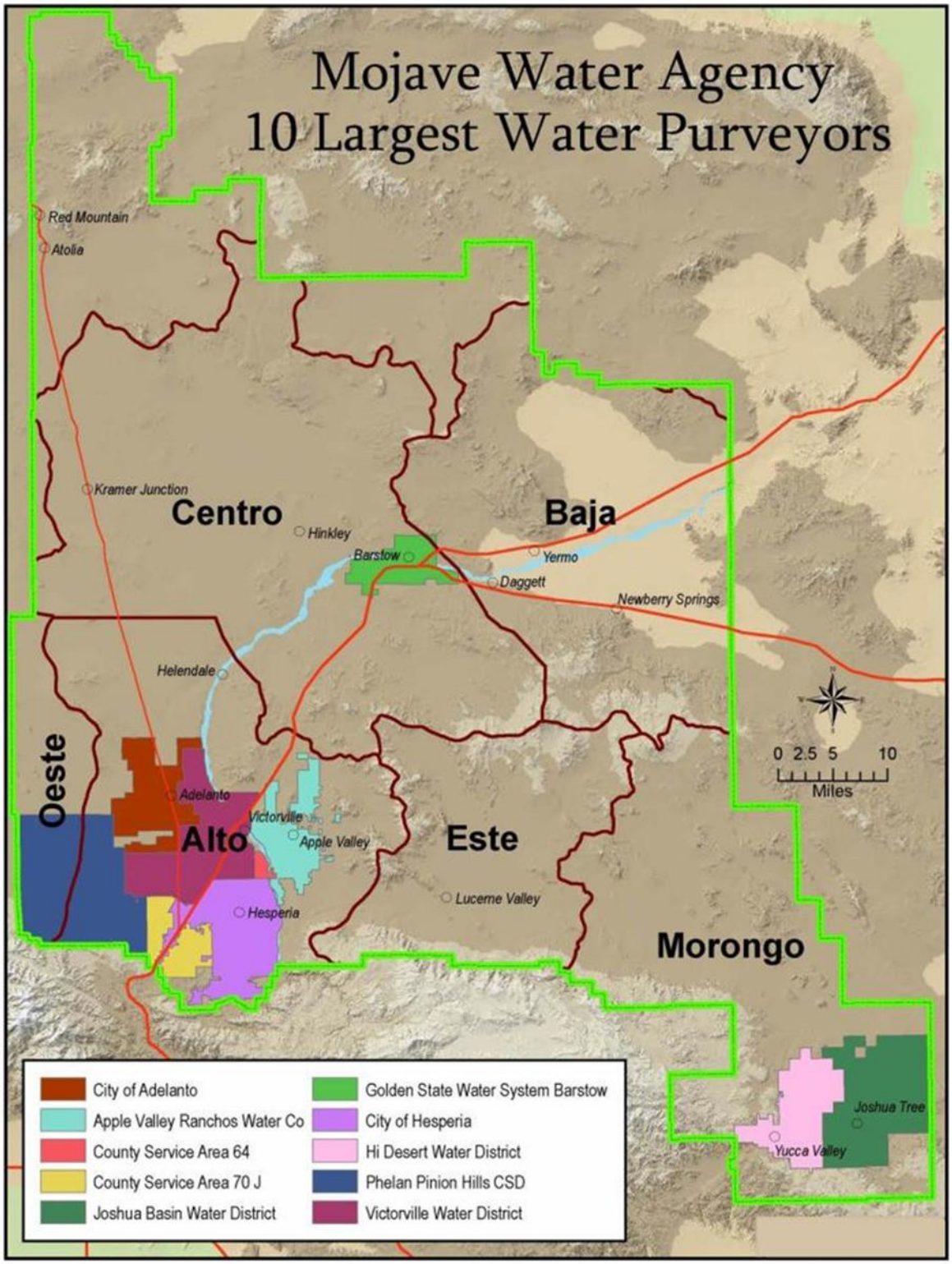

Figure 3.2
Location of City of Adelanto in Mojave Water Agency Area

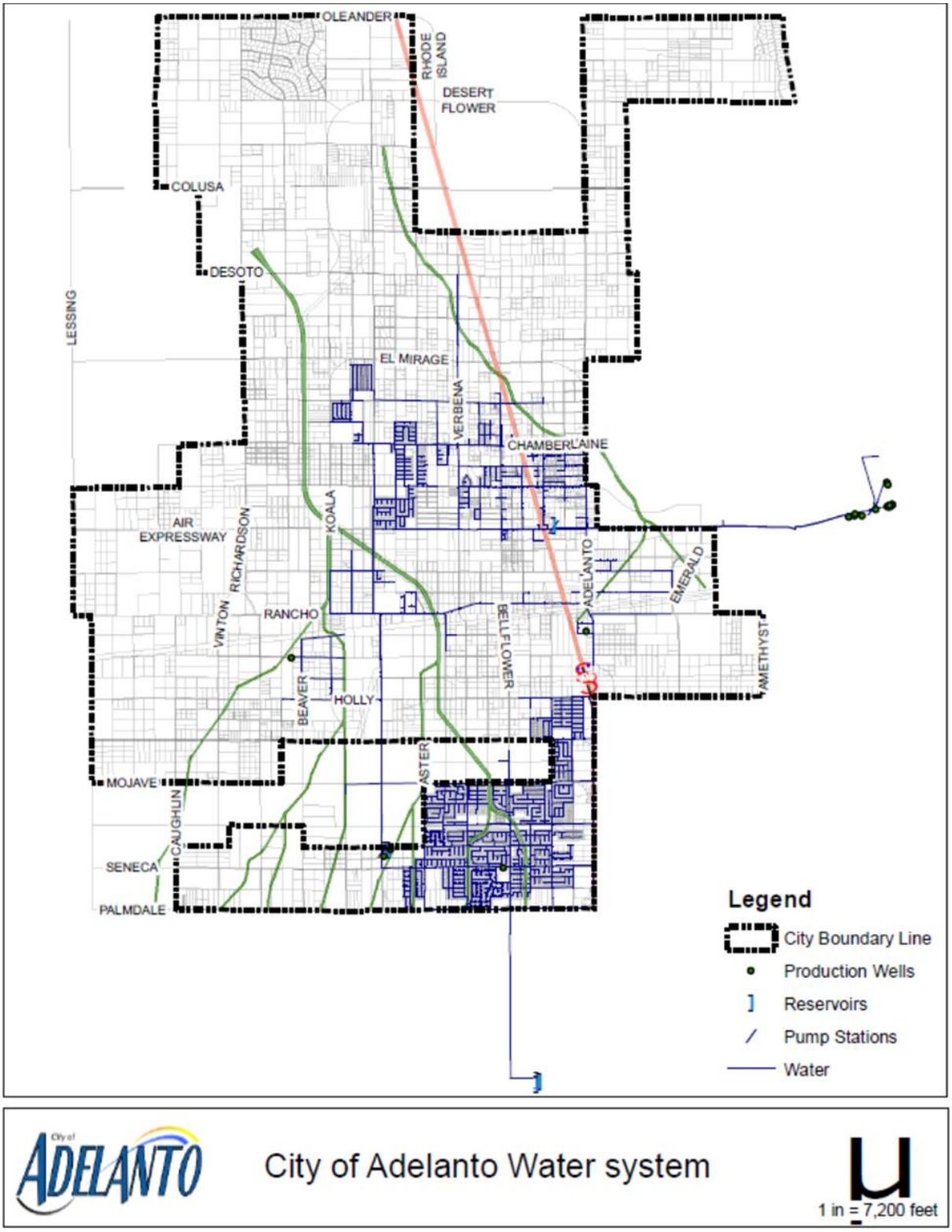

Figure 3.3
City of Adelanto Water Service Area

Table 3-1: City of Adelanto Average Temperatures and Precipitation[7]														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total or Average
Temp (ºF)	Max	58.8	62.1	67.0	74.2	82.7	91.6	98.1	97.2	91.3	80.2	67.3	59.4	77.5
	Min	29.8	33.1	36.6	41.5	47.9	54.3	60.8	60.2	54.1	44.4	34.5	29.2	43.9
Rainfall (inches)		0.95	1.05	0.80	0.36	0.13	0.04	0.14	0.21	0.23	0.32	0.50	0.79	5.52
Snowfall (inches)		0.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.4

Evapotranspiration

Evapotranspiration (ET) is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues). It is an indication of how much water crops, lawn, garden, and trees need for healthy growth and productivity.

For ET to take place, the following conditions have to be met. First, water has to be present at the surface. Second, there must be some form of energy to convert the liquid water into a water vapor. Third, there must be a mechanism to transport the water vapor away from the evaporating surface.

Precipitation and irrigation are the two primary sources of water that plants use. Plant leaves and soil surfaces temporarily retain some part of the water applied to the field. This part is readily available for evaporation. The remaining part infiltrates into the soil. Plants extract the infiltrated water through their roots and transport it up to their leaves for photosynthesis, a process by which plants produce glucose (sugar).

Multiple factors affect ET, including:

- Weather parameters such as solar radiation, air temperature, relative humidity and wind speed;
- Soil factors such as soil texture, structure, density and chemistry; and
- Plant factors such as plant type, root depth, foliar density, height and stage of growth.

Although ET can be measured using such devices as lysimeters, estimating ET using analytical and empirical equations is a common practice because measurement methods are expensive and time consuming. Most ET equations were developed by correlating measured ET to measured weather parameters that directly or indirectly affect ET. Since there are so many factors affecting ET, it is extremely difficult to formulate an equation that can produce

[7] Data obtained from Western Regional Climate Center (WRCC), Desert Research Institute, Reno, Nevada http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9325; WRCC program administered by the National Oceanic and Atmospheric Administration (NOAA); data extracted from monitoring Station 049325 at Victorville, California (closest WRCC station to Adelanto with complete data) covering the period January 1, 1917 through January 15, 2015.

estimates of ET under different sets of conditions. Therefore, the idea of a reference crop evapotranspiration was developed by researchers. Reference ET is the ET rate of a reference crop expressed in inches or millimeters.

Reference crops are either grass or alfalfa surfaces whose biophysical characteristics have been studied extensively. ET from a standardized grass surface is commonly denoted as ETo whereas ET from a standardized alfalfa surface is denoted as ETr. The American Society of Civil Engineers (ASCE) recommends the use of ETos and ETrs, respectively, where "s" stands for standardized surface conditions. The logic behind the evapotranspiration idea is to set up weather stations on standardized reference surfaces for which most of the biophysical properties used in ET equations are known. ET from such surfaces can then be estimated using these known parameters and measured weather parameters. Then a crop factor, commonly known as the "crop coefficient" of "Kc" is used to calculate the actual evapotranspiration (ETc) for a specific crop in the same microclimate as the weather station site. The California Irrigation Management Information System (CIMIS), DWR, Office of Water Efficiency is using well-watered actively growing closely clipped grass that is completely shading the soil as a reference crop at most of its over 130 weather stations. Therefore, reference evapotranspiration is mostly referred to as ETo on the CIMIS website, although there are a few notable exceptions with ETr. There are many theoretical and empirical equations around the world to estimate ETo. The choice of any one method depends on the accuracy of the equation under a given condition and the availability of the required data. For reference surfaces with known biophysical properties, the main factors affecting ETo include solar radiation, relative humidity/vapor pressure, air temperature and wind speed. Therefore ETo can be estimated quite accurately using a model (a series of mathematical equations).

The monthly average ETo data shown in Table 3-2 has been extracted from the CIMIS Victorville station (#117), which is the closest station to Adelanto (located in Victorville near the intersection of Mojave Fish Hatchery Road and Jacaranda Avenue). This station was activated on February 1, 1994.[8]

Table 3-2: Average Evapotranspiration (ETo) Rates for Adelanto Area[9]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
ETo (inches)	2.02	2.61	4.55	6.19	7.30	8.85	9.77	8.99	6.52	4.66	2.68	2.05	66.19

Source: CIIMIS, Victorville – San Bernardino – Station 117

[8] For additional information, refer to the CIMIS website at: http://www.cimis.water.ca.gov/cimis/frontStationDetailInfo.do?stationId=174&src=info

[9] Data based on CIMIS station #117 in Victorville, CA, the closest station to Adelanto (http://www.cimis.water.ca.gov/cimis/monthlyEToReport.do); averages are based on the period this station has been in service, i.e., February 1, 1994 through April 2016.

3.4 Potential Effects of Climate Change

Climate change is driven by increasing concentrations of carbon dioxide and other greenhouse gases that cause an increase in temperature and stress natural systems, such as oceans and the hydrologic cycle.

DWR's California Water Plan Update 2013 (CWP) considers how climate change may affect water availability, water use, water quality, and the ecosystem.[10] Volume 1, Chapter 5 of the California Water Plan, "Managing an Uncertain Future," evaluated how statewide and regional water demands that might change by 2050 in response to uncertainties both gradual and sudden. Gradual or long-term factors include population growth, land use changes, and climate change. Sudden or short-term changes include drought, flooding, earthquakes, the vulnerable condition of the Delta, fire, the economy, accidents, terrorist acts, and changes in policies, regulations, and laws. The uncertainties will play out differently across the regions of California. Each region will need to develop a portfolio of resource management strategies that consider regional water-management challenges and can be implemented to address regional issues.

The effects of climate change may increase the occurrence of droughts and floods. The 2015 Delivery Capability Report[11] was released by the State of California Natural Resources Agency, Department of Water Resources to inform the public about the capabilities and operation of the SWP in the face of such uncertainties. Delta risk management and anticipation of sea level rise are among the policies and planning efforts regarding climate change.

Climate changes that may affect the Mojave Basin water resources include:

- Higher temperatures, lower precipitation, and heat waves that increase demand for water, especially for agricultural and residential irrigation uses.
- Water Uncertainty: A projected overall decrease in precipitation levels coupled with more intense individual storm events may lead to increased flooding. Higher temperatures that may cause more precipitation to fall as rain rather than snow, hasten snowmelt and increase runoff will affect water storage planning. Increased evaporation will create a generally drier climate, with wildfires likely to increase and groundwater basins likely to receive less replenishment.

MWA prepared a Climate Change Assessment as part of the Mojave Integrated Regional Water Management Plan, Final June 2014 Report, which describes the potential effects of climate change, the region's vulnerability to climate change, and potential strategies for adapting to climate change. Much of the assessment was based on the Mojave River Watershed Climate Change Assessment, which was a 2013 report published by the Technical Service Center of the US Bureau of Reclamation (USBR), in partnership with MWA. The analysis consisted of three tasks: 1) assess future surface water supplies, including native

[10] California Water Plan Update 2013 Investing in Innovation & Infrastructure: Bulletin 160-13.
[11] State Water Project Final Delivery Capability Report, 2015 - State of California Natural Resources Agency, Department of Water Resources

flows and imports; 2) project potential changes in flood frequency; and 3) conduct a greenhouse gas (GHG) emissions inventory for the water sector.

The Climate Change Assessment identifies relevant studies of historical trends and future projections of climate variables for the region. The studies cover a range of geographic extents but all are relevant to the USBR Lower Colorado Region, of which the Mojave River Groundwater Basin (Mojave Basin Area) is a part.

In general, scenarios for the Region identify an overall decrease in precipitation levels coupled with more intense individual storm events that may lead to increased flooding. Higher temperatures that may cause more precipitation to fall as rain rather than snow, hasten snowmelt and increase runoff, will affect water storage planning. Increased evaporation will create a generally drier climate, with wildfires likely to increase and groundwater basins likely to receive less replenishment.

The State Water Project Final Delivery Capability Report 2013 (DWR 2014) projects a temperature increase for California of about 1.8° to 5.4 °F by the middle of the 21st century and 3.6° to 9.0° F by the end of the 21st century; an increase in temperature projections from the DWR 2011 report. Climate change is anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing total snowpack.

Using historical data and modeling, DWR projects that by 2050 the Sierra snowpack will be reduced from its historical average by 25% to 40% (DWR 2008:4). Increased precipitation falling as rain instead of snow during winter could result in a larger number of "rain-on-snow" events. This would cause the snow to melt earlier in the year and over fewer days than historically, thus adversely affecting availability of water for pumping by the SWP during summer.

Given these changes, water shortages worse than the 1977 drought could occur one out of every six to eight years by the middle of the 21st century and one out of every three to four years by the end of 21st century. This could preclude the SWP from pumping as much water as it would otherwise.

Climate change is also expected to reduce the SWP's median reservoir carryover storage. Carryover water is like a water savings account for water managers to use during shortage periods. Thus, a climate change–generated reduction in the amount of carryover water available to SWP contractors would reduce the system's flexibility during dry and critical water years.

There has been extensive scientific research on climate change impacts and findings have been published in a vast collection of peer-reviewed technical literature. However, much of the available information lacks specific tools on how to apply impacts in the context of addressing climate change impacts on water resources. In addition, far less information is available on subregional or local geographic areas because the spatial resolution of the existing climate change models is still quite low and precipitation projections cannot be easily converted directly into surface runoff and groundwater recharge to connect changes with local water resources planning activities. The USBR Climate Report begins to explore climate

change impacts on water supplies and flood events in the Mojave Region, providing the foundation for sections in the Mojave IRWM Plan.
A summary of mitigation strategies to vulnerabilities from climate change are included in Section 4.6.

3.5 Service Area Population and Demographics

Population Forecasts

In 2015, MWA led the effort to develop population forecasts for its service area and for each of its water purveyors using the required data and methodology for baselines and targets as required by DWR. MWA hired Beacon Economics[12] out of Los Angeles, California to prepare the population forecasts.

Beacon Economics forecast of the MWA service area and its incorporated cities, sub areas, and water purveyors is based on historic correlations with population trends in their surrounding area. The following provides a summary of their analysis[13] as shown in Appendix F.

A long run driver of future population in the surrounding area was used to forecast population growth out to the year 2060. In the case of the incorporated portions of the MWA service area, historic population trends were correlated with population growth in San Bernardino County overall. In the case of the sub areas and water purveyors in unincorporated regions of the MWA service area, the historical population data was correlated with the nearest incorporated city.

Historical data used in the forecast of the incorporated cities were obtained from the California Department of Finance (DOF), which makes estimates available from 1970 forward on an annual basis. Using this data, an econometric time series model was created to capture the historical correlations with countywide population growth. Future population growth for the incorporated cities of the MWA service area was then estimated using these historic correlations and a long run driver of countywide population growth.

Population projections for San Bernardino County from the DOF were used as the long run drive for the forecasts of incorporated cities. The DOF uses a baseline cohort-component method to produce their population projections out to the calendar year 2060. This method traces people born in a given year throughout their lives. As each year passes, cohorts change due to mortality and migration assumptions. Applying fertility assumptions to women of childbearing age forms new cohorts.

Several sub areas and water purveyors in the MWA service area are closely associated with the boundaries of one or more incorporated cities. In these cases the forecasted population growth rates from the incorporated cities were applied to historical population counts for these areas to produce a forecast of future population. For sub areas or water purveyors in an

[12] www.BeaconEcon.com
[13] Mojave Water Agency Population Forecast, December 2015, Beacon Economics

unincorporated portion of the MWA service area, the historical correlations between the respective area and the nearest incorporated city were used to project future population growth. Due to the long run nature of this forecast, DOF countywide population estimates were the primary driver of the estimates for future population in the MWA service area. Other factors, such as building permits or planned developments, were not used as they represent a very short term outlook and are not a driver of population growth in and of themselves. A forecast of long run population growth carries with it the assumption that there will be sufficient residential development to accommodate future population growth.

It should be noted that long run forecasts of any nature have a greater margin of error the longer the forecast time frame. Forecasts of one to two years can be quite accurate, whereas forecasts of five to ten years into the future are less likely to be as accurate. Several factors, most notably business cycle effects, can have strong impacts on population or other socioeconomic indicators, over the long run. Forecasts are ultimately a "best guess" given current data and assumptions, and forecasts far into the future, such as a ten years plus, can be subject to a very large forecast margin of error.

The MWA service area is anticipated to experience population growth rates over the next several decades that are stronger than those anticipated for San Bernardino County overall. The broader Inland Empire region has seen strong economic and employment growth these last few years, and much of that has been due to its affordability advantage it holds over coastal counties of Southern California.

In similar fashion, the MWA service area is expected to see this kind of growth as well, relative to other parts of the Inland Empire, due to its affordability advantage relative to the broader region. The current data available for the incorporated cities of the MWA service area shows that the region has not yet transitioned to being one of the growth centers for San Bernardino County, but given its clear advantage in terms of home prices, Beacon Economics expects economic and population growth to pick up in the years to come and over the life of this forecast.

Current and projected populations are summarized in Table 3-3, which depicts projections in five-year increments to the year 2040. These population projections refine what was depicted in the City's 2010 UWMP to more closely correlate with population trends in the surrounding area.

Table 3-3: Population - Current and Projected

	2015	2020	2025	2030	2035	2040
Population Served	33,080	35,476	38,453	42,221	46,311	50,182

Source: Beacon Economics, Mojave Water Agency Population Forecast, December 2015
Note: 2000 and 2010 data from US Census Bureau; 2020 and 2035 data from SCAG; Population estimates for 2015, 2025 and 2030 based on linear interpolation between US Census Bureau and SCAG data points.

4.0 SYSTEM WATER USE

System water use addresses the City's water demand, identifying the level of treatment when delivered – potable, raw or recycled. Currently, the City does not use raw or recycled water.

4.1 Water Demand – 2015 Actual

Table 4-1 shows 2015 actual volume of water use. All water demand is for potable water; the City does not utilize raw water or recycled water at this time.

Table 4-1: Demands for Potable and Raw Water - 2015 Actual

Use Type	2015 Actual		
	Additional Description, as needed	Level of Treatment When Delivered	Volume (AFY)
Single Family		Drinking Water	2,491
Multi-Family		Drinking Water	276
Commercial/Institutional		Drinking Water	417
Industrial		Drinking Water	235
Landscape/Irrigation	Includes agricultural and non-agricultural irrigation	Drinking Water	3
Other		Drinking Water	20
Losses		Drinking Water	607
		TOTAL	**4,049**

4.2 Water Demand By Sector – 2020 – 2040 Projections

Table 4-2 presents projected water demand for the years 2020 through 2040. The projections reflect increasing usage based on the population projections in Table 3-3.

Table 4-2: Demands for Potable and Raw Water - Projected

Use Type	Additional Description	Projected Water Use				
		2020	2025	2030	2035	2040
Single Family		2,982	3,174	3,447	3,737	4,036
Multi-Family		330	351	381	414	447
Commercial		500	532	578	626	676
Industrial		281	299	325	353	381
Landscape		3	3	4	4	4
Other		24	25	28	30	32
Losses	Based on 10% loss	458	487	529	574	620
	TOTAL	**4,578**	**4,872**	**5,292**	**5,737**	**6,195**

Water demand projections by 'use type' were estimated using total demand projections consistent with total projections provided to MWA, then applying the percent of use by 'use type' consistent with percentages from 2010 actual use. This water demand projection methodology was used because the City's billing system is currently being improved after implementing a new system and 2015 actual data by water use type was unavailable. No calculations for passive savings (expected savings from codes, standards, and land use planning) were included in future demands. Distribution system losses are fully described below in section 4.3 Distribution System Water Losses. Water use include as "other" includes fire suppression, hydrant meters, line flushing, leaks, damaged fire hydrants, activities for water quality complaints, and accounting for unauthorized users.

In small areas of the City currently without water lines and service connections, these residents purchase water from a water fill station located at the City's main Water Service yard. Water sales at the fill station are not metered, although accounted for in Commercial water use.

Finally, marijuana cultivation is growing in the region, with 27 operations with approved applications by the City. The City, however, has estimated water use projections for only 15 facilities due to the success rate of these cultivation operations.[14] Based on license information, each facility varies from 5,000 square feet to upwards of 300,000 square feet; however, the State of California will only allow a maximum of 22,000 square feet for each facility and the State will limit the number of these facilities. Therefore, it has been estimated that the average facility will be 15,000 square feet. Each 1,000 square feet will grow 120 plants that will use 45 gallons per day; estimate each 1,000 square feet at 50 gallons per day. Therefore, 15 facilities at 15,000 square feet at 50 gallons per 1,000 square feet per day equals 11,250 gallons per day (12.61 AFY). This water use projections has been included in 'Commercial'.

It is anticipated that 6 to 8 marijuana operations will be operational running by end of 2016. During the Conditional Use Permit process, the City will require all cultivators to use the most efficient form of watering plants (hydroponics) with a recirculating system that filters and reuses the filtered water. This methodology will be reevaluated after several cultivators begin operation.

4.3 Water Demand By Water Type – 2015 Actual, 2020 – 2040 Projections

Table 4-3 provides total water demand by water source type for 2015 actual use and for 2020 through 2040 projections.

Table 4-3: Total Water Demand by Water Type

	2015	2020	2025	2030	2035	2040
Potable and Raw Water [a]	4,049	4,578	4,872	5,292	5,737	6,195
Recycled Water Demand	0	0	0	0	0	0
TOTAL WATER DEMAND	**4,049**	**4,578**	**4,872**	**5,292**	**5,737**	**6,195**

[a] Water use projections were provided to MWA, the City's groundwater manager.

[14] Information and water use data and information was researched and provided by Mark de Manincor, Senior Planner, City of Adelanto, March 3, 2016.

4.4 Distribution System Water Losses

Reporting of system losses is required by the CWC for the first time 2015 UWMPs. System water loss is the difference between water production and water consumption and represents "lost" water. Distribution system losses can include both accounted-for and unaccounted-for losses attributed to unmetered water use, leaking pipes, or other events causing water to be withdrawn from the system and not measured, such as hydrant flushing, street cleaning, new construction line draining and/or filling and draining and flushing, and firefighting.

Accounted-for losses within the City include the following activities that are known although not metered or charged for:

- Hydrant Testing and Flushing – Hydrant testing to monitor the level of fire protection available throughout the City is performed by the San Bernardino County Fire Department. The APUA also performs hydrant flushing to eliminate settled sediment and ensure better water quality water. Water used during hydrant testing and flushing is not metered.
- Firefighting – Water used to fight fires is also not metered.

AWWA has formally abandoned the concept of unaccounted-for-water as an effective tool for managing system losses due to its unreliable application and inconsistent definition, citing all volumes of water, including water losses, can be accounted for. However, for the benefit of contrast to accounted-for losses listed above, the following are identified as unaccounted-for losses that may occur, although can be managed:

- Leakage – Water lost from system leakage from pipes, valves, pumps, and other water system appurtenances.
- Customer Meter Inaccuracies – Meters have an inherent accuracy for a specified flow range; however, flow above or below that range is usually registered at a lower rate. Meters also become less accurate with time due to wear.

The City recently transitioned to a new water billing system and is currently unable to obtain water use data by customer type. While the City continues to work on this issue, it is not possible to identify an absolute accurate percentage of water loss for the most recent 12 months representing calendar year 2015. However, the City has completed the AWWA Water Audit WAS v5.0 (Appendix G) based on best available information. Table 4-4 shows the 12-month water loss audit reporting.

Table 4-4: 12-Month Water Loss Audit Reporting

Reporting Period Start Date (01/2015)	Volume of Water Loss (AF)
1/1/15 - 12/31/15	767
NOTES: The 12-month loss percentage is 18.9%, however, the average over last three calendar years is 15%.	

The water loss for the past 12-month period is 18.9 percent; much higher than the previous reporting period. The City intends to conduct performance measures to lower its water losses to at least 10 percent, an acceptable rate as defined by AWWA. Therefore, for the purposes of this Plan, the water loss percentage projected for the planning horizon is 10 percent projected for the years 2020 through 2040, as shown in Table 4-5. The City is confident that this is within the range of acceptable water loss and is within a small margin of error.

Table 4-5: City of Adelanto System Water Loss 2015 – 2040 (AFY)

Agency	2015	2020	2025	2030	2035	2040
Water Production	4,049	4,578	4,872	5,292	5,737	6,195
Water Consumption	3,282	4,120	4,385	4,763	5,163	5,576
Difference (System Loss)	767	458	487	529	574	620
System Loss Percentage	18.9%	10.0%	10.0%	10.0%	10.0%	10.0%

4.5 Estimating Future Water Savings

In September 2014, two legislative bills amending sections of the Act were approved and chaptered: AB 2067 and SB1420. Key among the changes to existing statutes was the addition of CWC Section 10631(e)(4). This specific addition provides the option for urban water suppliers to reflect its and its customer's efficiency efforts as part of its future demand projection.

According to Appendix K of the DWR UWMP Guidebook, CWC Section 10631(e)(4) is voluntary for water suppliers. However, as required in subsection (B)(ii), water projections not accounting for these factors shall note this fact.

Section 10631(e)(4)(A): If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

DWR encourages water suppliers to really understand current and future water demands to enable useful and practical planning. However, DWR recognizes that the variable nature of codes, standards and ordinances will translate to varying interpretations and representations of such in UWMPs. DWR recognizes that an UWMP is a supplier's plan – not DWR's – and will defer to each purveyor's discretion for reflecting the quantitative benefits of applicable codes, standards and ordinances, assuming reasonable citations and basis are provided, as required by CWC 10631(e)(4)(B).

Since limited to no data was available to provide future water savings, water demand projections by 'use type' were estimated using total demand projections consistent with total projections provided to MWA, then applying the percent of use by 'use type' consistent with percentages from 2010 actual use. As mentioned before, this water demand projection methodology was used because the City's billing system is currently being improved after implementing a new system and 2015 actual data by water use type was unavailable. No calculations for passive savings (expected savings from codes, standards, and land use planning) were included in future demands.

4.6 Water Use for Lower Income Households

Low-income households are those that make less than 80 percent of the median income. The median income for a family of four in San Bernardino County is $59,200. As such, households (with four members) making less than $47,350 per year are considered lower income.

In 2010, the City of Adelanto had 7,040 lower income housing units in its service area.[15] The California Department of Housing and Community Development (HCD) determined that the projected housing need for the Southern California region (including the Counties of Los Angeles, Orange, Riverside, San Bernardino, Ventura, and Imperial) was 412,137 new housing units. The Southern California Association of Governments (SCAG) allocated this projected growth to the various cities and unincorporated county areas within the SCAG region, creating the Regional Housing Needs Assessment (RHNA). The RHNA is divided into four categories: very low, low, moderate, and above moderate income. As determined by SCAG, the City of Adelanto's fair share allocation is 2,841 new housing units during this planning cycle, 2013-2021 (see Table 28). To calculate Adelanto's projected housing needs, the City assumed 50 percent of its allocation of housing units for very low-income households should be affordable to extremely low-income households. As a result, from the very low-income need of 633 units and low-Income need of 459 units, the City has a projected a need of 317 units for extremely low-income households and 230 units for low-income households for a total of 547 units. This would result in a total of 7,587 low-income housing.

To meet these needs, the City must ensure that it addresses local constraints that may impede the development, improvement, and conservation of housing for persons of all income levels and for persons with special needs (such as the homeless, disabled, and elderly). Should constraints be identified, the City must demonstrate its efforts in removing or mitigating the constraints, where appropriate and legally possible. Such constraints include: market, development costs, land availability, construction costs, availability of financing, governmental, land use controls, development standards, infrastructure, drainage, wastewater, solid waste,

The City's 1994 General Plan indicates that the City has the capacity to more than accommodate the combined RHNA allocation and in many areas infrastructure either exists or could be extended. It is not anticipated that the provision of water will be a constraint to the development of affordable housing.

Total estimated water use for low-income housing units is shown in Table 4-6, which has been included in the City's total projected Water Demands.

Table 4-6: City of Adelanto Low-Income Water Demands (AFY)

Agency	2010	Additional need	Total Low-Income Housing Need
Low-Income Housing Units	7,040	547	7,587
Water Demands (AFY)[16]	2,520	196	2,716

[15] City of Adelanto 2013-2021 Housing Element 2013-2021, September 25, 2013
[16] Low-income water demand calculation: Utilized the AFY for 2015 residential connections (7,731) applied to 2010 low-income housing units and total housing units needed.

4.7 Mitigation Strategies to Vulnerabilities from Climate Change

As presented in Section 3.4 Potential Effects of Climate Change, according to the USBR Climate Change Report Task 3 – evaluate GHG emissions for the MWA service area from 1990 through 2050, it can be concluded that while reducing local and imported water demands could contribute to reducing GHG emissions, a combination of measures will likely be necessary to achieve GHG emission reduction and water conservation targets mandated by California's legislation. AB 32 requires every major financial sector in California, including water, to reduce GHG emissions to 1990 levels by 2020. Further, it aims to reduce GHG emissions to 80 percent below 1990 levels by 2050. SBX7-7 sets a target of 20 percent per capita reduction in urban water use statewide by 2020.

USBR has developed a GHG Emissions Calculator to help assess GHG emissions in relation to water supply alternatives. The analysis conducted in the USBR Climate Change Report evaluated whether water conservation measures alone would be enough to meet AB 32 GHG emission reduction targets in the MWA service area. Results show that meeting AB 32 emission targets will require water use reductions beyond 20 percent by 2020, as prescribed by SBX7-7. More specifically, meeting AB 32 emission targets with water conservation alone would require reducing water use by 44 percent to meet the 2020 emissions target and significant additional water conservation in subsequent years. These water savings and their relation to emission reductions are described below for the MWA service area.

The 2012 California Climate Adaptation Planning Guide (APG) provides guidance to support regional and local communities in proactively addressing the unavoidable consequences of climate change. The APG provides a step-by-step process for local and regional climate vulnerability assessment and adaptation strategy development (CalEMA and CNRA 2012).

Potential adaptation strategies have been identified for each watershed characteristic, starting with the highest priorities developed in the climate change vulnerability area analysis. This list of strategies will allow the City and other regional stakeholders to incorporate climate change adaptation in projects developed and evaluated as part of the IRWM Plan process, or solely within its own service area.

Adaptation strategies for City consideration related to urban water management to address potential climate change impacts may include the following:

General Mitigation Strategies

- Conduct an Energy and GHG Master Plan to assess energy and carbon footprint, and create an Action Plan of strategies for greater energy efficiency and GHG emission reductions. Fully exploring the Water-Energy-Carbon nexus can identify opportunities for energy savings and GHG emission reductions through water operations, programs, and projects.
- Incorporate climate change adaptation into relevant local plans and projects.
- Help establish and participate in a regional climate change adaptation public outreach and education program.
- Build collaborative relationships between regional entities and neighboring communities to promote complementary adaptation strategy development and regional approaches.

- Establish an ongoing monitoring program to track local climate impacts and adaptation strategy effectiveness.

Water Supply Mitigation Strategies

- Address the State policy goal of reducing reliance on the Delta by promoting and investing in projects and programs that allow the Region to meet water demands with alternative sources of supply and/or demand management actions during times when imported supplies from the Delta are reduced or unavailable due to dry years, droughts, system outages, environmental and regulatory restrictions, or other reasons.
- Enhance use of recycled water for appropriate uses as a drought-proof water supply.
- Enhance opportunity and practices of water exchanges and water banking outside the region to supplement water supply.
- Support development and implementation of an AB 3030 Groundwater Management Plans as a fundamental component of the IRWM Plan.
- Adopt local ordinances that protect the natural functioning of groundwater recharge areas.

Water Demand Mitigation Strategies

- Aggressively increase water use efficiency.
- Encourage agricultural users to adopt efficient water management practices.
- Encourage landscape water users to adopt efficient water management practices.
- Encourage development of more efficient cooling technology.

Water Quality Mitigation Strategies

- Support strategies that protect or enhance imported and groundwater basin water quality.
- Consider water quality improvements associated with water transfers and water banking on regional water supply.
- Consider riparian forest projects that provide cooling for habitat.
- Projects that improve water quality of contaminated groundwater sources.
- Increase implementation of low impact development (LID) techniques to improve stormwater management.
- Comply with National Pollutant Discharge Elimination System permits to ensure water quality protection.

Ecosystem and Habitat

- Promote water resources management strategies that restore and enhance ecosystem services.
- Provide or enhance connected “migration corridors” for animals and plants to promote increased biodiversity and allow the plants and animals to move to more suitable habitats to avoid serious impacts and support increased biodiversity.
- Consider projects that provide seasonal aquatic habitat in streams and support corridors of native riparian forests that create shaded riverine and terrestrial habitat.

Hydropower Mitigation Strategies

- Support potential solar and wind power options within the SWP service area and the Mojave Region.

4.8 Conservation Effects on Water Usage

Conservation is a key strategy for meeting future demand, especially amidst the current prolonged drought conditions in California.

Governor's Emergency Orders. In 2014, the Governor issued an emergency order requiring mandatory conservation actions statewide to reduce overall residential water consumption by 20 percent, reported as R-GPCD (residential gallons per capita per day). Public water agencies throughout the state have responded with action to the Governor's mandate, reporting monthly to the State Water Resources Control Board, with most agencies having met their specific conservation goals. Table 4-7 reflects the City's initial goal of the Governor's mandate, the revised conservation goal for suppliers after the March 2016 extension of the emergency regulations, and the subsequent revised regulation to allow locally developed conservation standards based upon each agency's specific circumstances.

Table 4-7: SWRCB Conservation Goals – Governor's Regulations

	2014 Original Reduction Goal	March 2016 Revised Reduction Goal[1]	May 2016 SWRCB Revised Regulation[2]
City of Adelanto	20%	16%	Ensure at least a 3-year supply

[1]Urban Water Supplier Conservation Standard for Extended Emergency Regulation Rulemaking – 2016 Supplier Conservation Standards - Effective March 1, 2016. Based on revised R-GPCD, Default Climate Adjustment, and supplier-submitted adjustments.

[2]http://www.swrcb.ca.gov/press_room/press_releases/2016/pr051816_waterconsreg.pdf

On May 18, 2016, the State Water Resources Control Board adopted a statewide water conservation approach that replaces the prior percentage reduction-based water conservation standard with a localized "stress test" approach that mandates urban water suppliers act now to ensure at least a three-year supply of water to their customers under drought conditions.[17]

Recognizing persistent yet less severe drought conditions throughout California, the newly adopted emergency regulation will replace the February 2, 2016 emergency water conservation regulation that set specific water conservation benchmarks at the state level for each urban water supplier. The new regulation will be in effect through January 2017, and requires locally developed conservation standards based upon each agency's specific circumstances.

These standards require local water agencies to ensure a three-year supply assuming three more dry years like the ones the state experienced from 2012 to 2015. Water agencies that would face shortages under three additional dry years will be required to meet a conservation standard equal to the amount of shortage. For example, if a water agency projects it would have a 10 percent supply shortfall, their mandatory conservation standard would be 10 percent.

[17] Proposed text of State Water Resource Control Board emergency regulation: http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/factsheet/proposed_emergency_reg060916.pdf

Water Conservation Act of 2009. Moreover, the Water Conservation Act of 2009, or SBX7-7, provides the regulatory framework to support the statewide reduction of 20% urban per capita water use by the year 2020 (20x2020). Each water retailer was to determine and report its existing baseline water consumption and establish an interim target (2015) and its 2020 target in their 2010 UWMP. Each water retailer is now required to identify the status of its 2015 interim target and reaffirm its 2020 target in this 2015 UWMP. Although water wholesalers are not required to meet the targets outlined in SBX7-7, MWA implements conservation programs and policies in partnership with and/or on behalf of its water retail agencies, including the City of Adelanto. This helps both the compliance with SBX7-7 and to ensure long-term water supply reliability goals are met. The 20x2020 baselines and targets are discussed in Chapter 5.

In addition to statewide conservation regulations, water use efficiency goals have been formed for the regional service area by MWA and the Alliance for Water Awareness and Conservation (AWAC). AWAC is a coalition of 25 local water agencies, including the City of Adelanto, and other regional organizations with the goal of reducing consumption by 20 percent by 2020 for the Mojave Basin Area and 5 percent by 2015 for the Morongo Area. AWAC Goals, updated in 2011 are:

- Serve as a network to assist agencies in educating the public on water conservation.
- Provide resources with a consistent message to help agencies meet their respective conservation goals.
- Maintain or lower current GPCD and continue to position agencies for meeting future conservation needs.
- Exchange ideas between agencies, specifically at quarterly meetings

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5.0 BASELINE AND TARGETS

To comply with the SBX7-7 water conservation legislation, the City established a baseline water usage in its 2010 UWMP, which was then used to set targets for 2015 (Interim Target) and 2020 (Target). The SBX7-7 legislation stipulates that targets were to be established by using one of four allowable methods briefly defined as follows:

- Method 1: Per capita daily use equals 80 percent of the water supplier's baseline per capita usage.
- Method 2: Per capita daily use is set based on performance standards applied to indoor residential use; landscape area water use, and commercial, industrial and institutional use.
- Method 3: Per capita daily use is set at 95 percent of the applicable State hydrologic region target based on DWR's April 30, 2011 draft 20x2020 Water Conservation Plan (Adelanto is in the South Lahontan Region 9).
- Method 4: Per capita daily use is set based on standards consistent with CUWCC BMPs.

In 2010, the City applied Method 1 – per capita daily use equals 80 percent of the City's baseline per capita water usage (in gallons per capita per day – GPCD). At the time, the City's per capita usage baseline average, minimum baseline average and SBX7-7 water conservation targets for 2015 and 2020 were established as follows:

- Baseline Average (based on 10-year data from 1996-2005) 321.8 GPCD
- Minimum Baseline Average (based on 5-year data from 2004-2008) 214.6 GPCD
- 2015 Water Conservation Target 262.9 GPCD
- 2020 Water Conservation Target 203.9 GPCD

Details on the calculation of Adelanto's baseline water usage and 2015 and 2020 per capita water conservation targets are included in Appendix H – Technical Memorandum, "*20x2020 GPCD Baseline Calculation & Water Use Target Method Selection*," June 1, 2011.

In the 2015 UWMP, the City must update its population data using 2010 Census data, and as a result, update its baseline and target information, and lastly demonstrate compliance with its established water use target for the year 2015. This also demonstrates whether or not the City is currently on track to achieve its 2020 target.

Compliance is verified by completion and submission of the SB X7-7 Verification Form, a series of Excel tables provided by DWR for the 2015 UWMP. The SB X7-7 Verification Form is shown in Appendix I and summarized in the tables in this chapter.

5.1 Updated Calculations from 2010 UWMP

CWC 10608.20 provides that an urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan, including changing the methodology if the City chooses. Once the 2015 UWMP is submitted, the target method may not be changed

in any amendments to the 2015 Plan or in the 2020 Plan. The City continues to use Method 1, although has updated its targets based on revised population data.

DWR requires population projections to be updated based on the most current 2010 U.S. Census data available. DWR determined that significant discrepancies exist between the Department of Finance (DOF) projected populations for 2010 (based on 2000 U.S. Census data) and actual population for 2010, based on 2010 U.S. Census data. The average difference between projected and actual was approximately 3 percent, but the difference for some cities was as high as 9 percent. Therefore, agencies that did not use 2010 Census data for their baseline population calculations in the 2010 UWMP must recalculate their baseline population for the 2015 UWMPs using 2000 and 2010 Census data (the full census data set was not available until 2012). This may affect the baseline and target GPCD values calculated in the 2010 UWMP, which must be modified accordingly in the 2015 UWMP.

Further, after its review of the City's 2010 UWMP, DWR indicated that the City did not utilize, or at least indicate the use of, the appropriate data to calculate its population projections. DWR indicated that while it appeared the 2010 UWMP shows the public water system only serves a portion of the City, population projections reflect the entire City's population. DWR further indicated that if this is correct, the use of DOF population figures for the entire City of Adelanto would be incorrect and would need to be revised, which may result in a change to the baseline and target calculations.

Since the City's water service area is contiguous with the City's boundaries, the entire City's population for use in its UWMP is appropriate. In addition, for the 2015 UWMP, MWA retained Beacon Economics to calculate population projections for MWA and each water supplier within its water service area, including the City (Appendix F). Therefore, the baselines and targets have been recalculated, as shown in the following sections, based on refined population data from the MWA Population study.

The City, as a retail water agency, has prepared and submitted the required SB X7-7 Verification Form (an Excel file) with its 2015 UWMP, which includes a series of standardized tables as provided by DWR. These standardized tables are new for 2015 to demonstrate compliance with the Water Conservation Act of 2009 (SB x7-7). The following sections provide the information as contained in the SB x7-7 Verification Form.

5.2 Service Area Population

In order to correctly calculate annual GPCD, the City must correctly determine the population it served for each baseline year in both of the baseline periods and for the 2015 compliance year. DWR requires water suppliers to use the 2010 U.S. Census data for its baseline population calculations, and the full census data was not available until 2012.

Therefore, the City must recalculate its baseline population, which will affect the baseline and target GPCD values that were calculated in the 2010 UWMP, and have been modified accordingly in this 2015 UWMP.

In 2015, MWA led the effort to develop population forecasts for its service area and for each of its water purveyors using the required data and methodology for baselines and targets as required by DWR. MWA hired Beacon Economics[18] out of Los Angeles, California to prepare the population forecasts. The population forecasts are more fully described in Section 3.5.

Beacon Economics forecast of the MWA service area and its incorporated cities, sub areas, and water purveyors is based on historic correlations with population trends in their surrounding area. The Mojave Water Agency Population Forecast detailed report in included Appendix F.[19]

Table 5-1 shows population forecasts from the 2010 UWMP compared to the revised population using the Mojave Water Agency Population Forecast. The updated population data is used to revise the City's baseline and target GPCD calculations.

Table 5-1: Population – 2015 UWMP Compared to 2010 UWMP

Population Served	2000	2010	2015	2020	2025	2030	2035	2040
2015 UWMP - Updated	17,895	31,760	33,080	35,476	38,453	42,221	46,311	50,182
2010 UWMP	18,130	31,765	38,866	45,967	53,395	60,824	68,252	n/a

Source: Beacon Economics, Mojave Water Agency Population Forecast, December 2015
Note: 2000 and 2010 data from US Census Bureau; 2020 and 2035 data from SCAG; Population estimates for 2015, 2025 and 2030 based on linear interpolation between US Census Bureau and SCAG data points.

5.3 Gross Water Use

Gross water use is a measure of water that enters the distribution system of the City over a 12-month period with certain allowable exclusions. These exclusions include: recycled water use, indirect recycled water, water placed in long-term storage, water conveyed to another urban water supplier, water delivered for agricultural use, and process water. The City currently does not have any exclusions.

Gross water use must be reported for each year in the baseline periods as well as 2015, the compliance year. Table 5-2 shows the Gross Water Use for the City as required.

Table 5-2: Gross Water Use

Baseline Year	Volume Into Distribution System	Exclusions	Annual Gross Water Use
10 Year Baseline – Gross Water Use			
1996	4,475	0	4,475

[18] www.BeaconEcon.com
[19] Mojave Water Agency Population Forecast, December 2015, Beacon Economics

Table 5-2: Gross Water Use			
Baseline Year	**Volume Into Distribution System**	**Exclusions**	**Annual Gross Water Use**
1997	4,396	0	4,396
1998	4,015	0	4,015
1999	4,366	0	4,366
2000	4,871	0	4,871
2001	5,402	0	5,402
2002	5,710	0	5,710
2003	5,714	0	5,714
2004	6,062	0	6,062
2005	6,795	0	6,795
10 Year Baseline Average Gross Water Use			**5,178**
5 Year Baseline – Gross Water Use			
2004	6,062	0	6,062
2005	6,795	0	6,795
2006	6,538	0	6,538
2007	4,653	0	4,653
2008	5,326	0	5,326
5 Year Baseline Average Gross Water Use			**5,875**
2015 Compliance Year – Gross Water Use			
2015	4,049	0	**4,049**

5.4 Baseline and Compliance Daily Per Capita Water Use

Baseline daily per capita water use is measured in gallons per capita per day (GPCD) for baseline years. The Compliance GPCD is for the year 2015.

The City has chosen the 10-year period of 1996 to 2005 as its 10-year baseline period to establish its baseline GPCD. Since the City did not and currently does not supply recycled water, particularly in the year 2008, it must use a 10-year baseline period rather than an alternative period up to 15 years.

For the 5-year baseline period, the City has chosen the years 2004 to 2008. This baseline period is used to confirm that the selected 2020 GPCD target meets the minimum water use reduction requirements. This 5-year baseline period must be a continuous 5-year period that ends no earlier than December 31, 2007 and no later than December 31, 2010.

Table 5-3 presents the baseline GPCD as presented in the 2010 UWMP and updated based on revised population, as well as the Compliance GPCD for 2015.

Table 5-3: Baseline and Compliance GPCD					
Baseline Year	2010 UWMP Population	2015 UWMP Population[a]	Volume Into Distribution System	2010 UWMP GPCD	2015 UWMP Revised GPCD
10 Year Baseline GPCD					
1996	7,123	7,123	4,475	561	561
1997	8,433	8,433	4,396	465	465
1998	10,676	10,676	4,015	336	336
1999	12,708	12,708	4,366	305	305
2000	18,130	17,895	4,871	240	243
2001	18,284	19,282	5,402	264	250
2002	18,777	20,668	5,710	271	247
2003	19,477	22,055	5,714	262	231
2004	21,313	23,441	6,062	254	231
2005	23,338	24,828	6,795	260	244
2010 UWMP 10 Year Average Baseline GPCD				**322**	
Revised 10 Year Average Baseline GPCD					**311**
5 Year Baseline GPCD					
2004	21,313	23,441	6,062	254	231
2005	23,338	24,828	6,795	260	244
2006	24,796	26,214	6,538	235	223
2007	27,007	27,601	4,653	154	150
2008	28,000	28,987	5,326	170	164
2010 UWMP 5 Year Average Baseline GPCD				**215**	
Revised 5 Year Average Baseline GPCD					**202**
2015 Compliance Year GPCD					
2015	n/a	33,080	4,049		**109**

[a] 2000 and 2015 population are actual; 1996 to 1999 remained the same; 2001 to 2008 were extrapolation from 2000 (17,895) to 2010 (31,760) actuals.

5.5 2020 Target and 2015 Interim Target

2020 Target

The City's GPCD must demonstrate that the 2020 water use target that has been calculated will reduce the agency's 2020 water use by a minimum of 5 percent from the 5-year baseline. Table 5-4 summarizes the GPCD for each baseline and the 2015 compliance year.

Table 5-4: Summary of Baselines and Compliance Year GPCD	
Baselines and Compliance Year	GPCD
10 Year Baseline GPCD	**311**
5 Year Baseline GPCD	**202**
2015 Compliance Year Actual GPCD	**109**

Using the baseline information, the Calculated 2020 Target GPCD is 249, calculated as 20% of the 10 year baseline, as shown in Table 5-5.

Table 5-5: Target Method 1 - 20% Reduction – Calculated 2020 Target

10 Year Baseline GPCD	Calculated 2020 Target GPCD
311	**249**

However, as noted above, the City must demonstrate that the Calculated 2020 Target GPCD will reduce the City's 2020 water use by a minimum of 5 percent from the 5 Year Baseline (Maximum 2020 Target).

Using the 5 Year Baseline, Table 5-6 shows that the Calculated 2020 Target is more than the Maximum 2020 Target. Therefore, the Confirmed 2020 Target is 192 GPCD.

Table 5-6: Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD	Maximum 2020 Target[1]	Calculated 2020 Target[2]	Confirmed 2020 Target
202	192	249	**192**

[1]Maximum 2020 Target is 95% of the 5 Year Baseline GPCD
[2]2020 Target is calculated based on Target Method 1 – 20% of 10 Year Baseline

2015 Interim Target

The 2015 Interim Target is the value halfway between the 10 Year Baseline GPCD and the Confirmed 2020 Target. The 2015 Interim Target is shown in Table 5-7

Table 5-7: 2015 Interim Target

10 Year Baseline GPCD	Confirmed 2020 Target GPCD	2015 Interim Target GPCD[1]
311	192	**252**

[1]Calculated as the midpoint between 311 and 192 ((311-192)/2+192).

Baselines and Targets Summary

Table 5-8 provides a summary of the baselines and targets for the City.

Table 5-8: Baselines and Targets Summary (GPCD)					
Baseline Period	**Start Year**	**End Year**	**Average Baseline GPCD**	**2015 Interim Target GPCD**	**Confirmed 2020 Target GPCD**
10 Year	1996	2005	311	**252**	**192**
5 Year	2004	2009	202		

5.6 2015 Compliance GPCD (Daily per Capita Water Use)

The term commonly used when referring to "daily per capita water use is "gallons per capita per day" or "GPCD". It is important to distinguish GPCD as used in the UWMP from the R-GPCD (Residential-GPCD) that has been used in drought reporting to the State Water Resources Control Board (SWRCB) in recent years.

GPCD is the total water use within a service area minus allowable exclusions, divided by population. This is used in the UWMP for purposes of the Water Conservation Act of 2009 (SB x7-7). R-GPCD is solely the estimated residential water use in a service area divided by population. R-GPCD has been used in drought reporting to the SWRCB for purposes of complying with the Governor's drought declarations and executive orders in 2014 and 2015.

Meeting the 2015 Interim Target

The City has calculated its actual 2015 water use to determine whether or not it has met its per capita 2015 target water use. Further, this assist the City in assessing its progress toward meeting its 2020 target water use.

Table 5-9 verifies 2015 compliance. In 2015 and again in 2020, there are several allowable adjustments that can be made to the City's gross water use, if appropriate. Allowable adjustments include: extraordinary events, weather normalization, and economic adjustment. All adjustments are optional and methodologies to use are detailed in Methodology 8: Criteria for Adjustment to Compliance Daily Per capita Water Use, and Methodology 4: Compliance Daily Per Capita Water Use of DWR's Methodologies document.[20] The City did not apply any adjustments to the Gross Water Use for 2015.

[20] Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use, February 2016, DWR: http://www.water.ca.gov/urbanwatermanagement/docs/2015/Methodologies%20-%20February%202016%20FINAL.pdf

Table 5-9: 2015 Compliance

Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments				Actual 2015 GPCD	**Did City Achieve Targeted Reduction for 2015?**
		Extraordinary Events	Weather Normalization	Economic Adjustment	Adjusted 2015 GPCD		
109	252	0	0	0	109	109	**YES**

The City's actual 2015 Interim GPCD is significantly below the 2015 target GPCD. Further, it is also significantly below the Confirmed 2020 Target GPCD of 192. This demonstrates the City is not only making excellent progress toward meeting its 2020 water use target, but is using substantially less water than projected.

5.7 Water Use Reduction Plan

To continue water conservation and water use efficiency to meet its 2020 Target GPCD, the City will continue to implement its Water Use Reduction Plan as first identified in its 2010 UWMP. To ensure continued long-term adequate reliability, the City plans on meeting or exceeding its 2020 Target while matching or staying below its water demand projections.

As demonstrated, the City of Adelanto surpassed its 2015 Interim Target and should not have any problem meeting its 2020 Target. The City will continue to encourage water conservation and water use efficiency through the following:

- Enforce the Water Waste Ordinance.
- Maintain and strengthen the tiered rate structure.
- Continue public education and outreach on water use efficiency and conservation in collaboration with MWA and Alliance for Water Awareness and Conservation (AWAC) through public communication, community events, and school education programs.
- Encourage or require new developments to install water conservation fixtures and landscape with low water use plant materials (xeriscape).
- Continue to operate and maintain the City's water distribution system with a goal of reducing water losses by repairing or eliminating any leaks that may develop as soon as practical and enhanced tracking.
- Continue planning toward the construction of a recycled water system.

6.0 SYSTEM WATER SUPPLIES

6.1 WATER SOURCES

Chapter 6 provides a description and quantification of sources of water available to the City of Adelanto. Water volumes reflect expectations for average year conditions. A discussion of sources includes the origin of the water supply, water quality, and issues unique to the supply. Management actions and projects that are anticipated to meet future water demands are also discussed. Supply reliability is discussed in Chapter 7 and water shortage contingency planning is discussed in Chapter 8.

Overview

The City obtains all of its water supply from local groundwater in the Mojave River Groundwater Basin.[21] The Mojave Basin Area was the subject of a court ordered adjudication in 1993 due to the rapid growth within the area, increased withdrawals, and lowered groundwater levels. The court's Judgment appointed Mojave Water Agency as Watermaster of the Mojave Basin Area. Additional detail on the Judgment is provided later in this section.

The City of Adelanto is one of ten major retail purveyors that provide the majority of water in the Mojave Basin Area under MWA's management. For management purposes under the Mojave Basin Judgment, MWA subdivided the Mojave River watershed and associated groundwater basins into five subareas: Alto, Baja, Centro, Este, and Oeste. The City of Adelanto lies within MWA's Alto Subarea. Adelanto and the other purveyors in the area supply water to their customers from local groundwater. MWA replenishes the groundwater supply, primarily with imported water purchased from the SWP.

The court ordered adjudication of the Mojave Basin Area allocates a variable free production allowance (FPA) to each purveyor that supplies more than 10 AFY, including Adelanto. Each allocated FPA represents the purveyor's share of the water supply available from the MWA Subarea. FPAs are determined as a percentage of the purveyor's highest verified annual use from 1986 to 1990.

The FPA, which is currently set at 80 percent of BAP for agriculture and 60 percent of BAP for municipal and industrial (M&I), can vary from year to year depending on the Watermaster's safe yield projections for the Basin. If Adelanto, or another purveyor, pumps more than its allotted FPA in any year, they are required to purchase replacement water equal to the amount of production in excess of the FPA. Replacement obligations are satisfied by paying MWA and then purchasing unused FPA within the subarea. The replacement charge in 2014-15 was $484/AF (Invoice Date 6/1/2016) with anticipated increases projected by the Watermaster on March 23, 2016 are: $531/AF for 2015-16 (invoice date 6/1/2017), and $558/AF for 2016-17 (invoice date 6/1/2018). Table 6-1 shows the City's (BAP) and current allotted FPA from the Alto Subarea.

[21] The Mojave Groundwater Basin is all or a portion of 36 groundwater basins and subbasins as defined by DWR Bulletin 118-03. Collectively, these basins and subbasins are grouped into two larger hydrogeologically distinct areas. Basins along the Mojave River and adjacent areas are referred to as the Mojave River Groundwater Basin; the area is referred to as the Mojave Basin Area. Source: MWA 2015 UWMP, Section 3.4.

Table 6-1: Groundwater - Alto Subarea and City of Adelanto BAP and FPA – 2014-2015[1]						
MWA Subarea	Base Annual Production (BAP)	Base Free Production Allowance (FPA)	Carryover	2014-15 Verified Production	Production Safe Yield	Percent Difference
Alto Subarea	114,308	70,530	18,079	68,002	69,862	2.6%
City of Adelanto	4,366	2,620	854	3,773	n/a	n/a

[1] 22nd Annual Report of the Mojave Basin Area Watermaster, Water Year 2014-15, May 1, 2016.

At one time, the City of Adelanto had access to an additional 3,433 AFY in BAP rights (with access to 2,060 AFY in FPA rights) in the Alto Subarea for water rights previously assigned to George AFB; however, 80 percent of those rights have since been transferred to the Victorville Water District (VWD) in settlement of recent litigation filed by VWD. Adelanto received 20 percent or 686 AFY of the former George AFB rights, all of which is now incorporated into the 4,366 AFY BAP and the 2,620 AFY FPA allocation shown in Table 6-1.

Mojave Water Agency (MWA)

The Mojave Water Agency was founded July 21, 1960. It was created to address concerns over declining regional groundwater levels and to ensure that sufficient water may be available to the people and land within its jurisdiction. MWA is one of 29 SWP contractors that provide Californian's with drinking and irrigation water. MWA serves an area of approximately 4,900 square miles in San Bernardino County. MWA separates its service area into six management areas, including the five previously referenced subareas of the adjudicated Mojave Basin Area (Alto, Baja, Centro, Este, and Oeste) and the Morongo Basin/Johnson Valley Area. Mojave Water Agency's service area, its subareas, and its ten major water purveyors are shown in Figure 6.1.[22]

MWA has five sources of water supply, which include:

1. Natural surface water flows;
2. Wastewater imports from outside the MWA service area;
3. SWP imports;
4. Agricultural depletion from storage; and
5. Return flow from pumped groundwater not consumptively used.

MWA considers agricultural depletion from storage as a supply derived from storage depletion to avoid showing demand from agriculture on imported water supplies. Return water includes water pumped from the ground that is returned to the groundwater aquifer, such as water used indoors that returns to the basin either by percolation from septic tanks or treated wastewater effluent.

[22] Draft MWA 2015 UWMP, May 8, 2016, Figure 1-3.

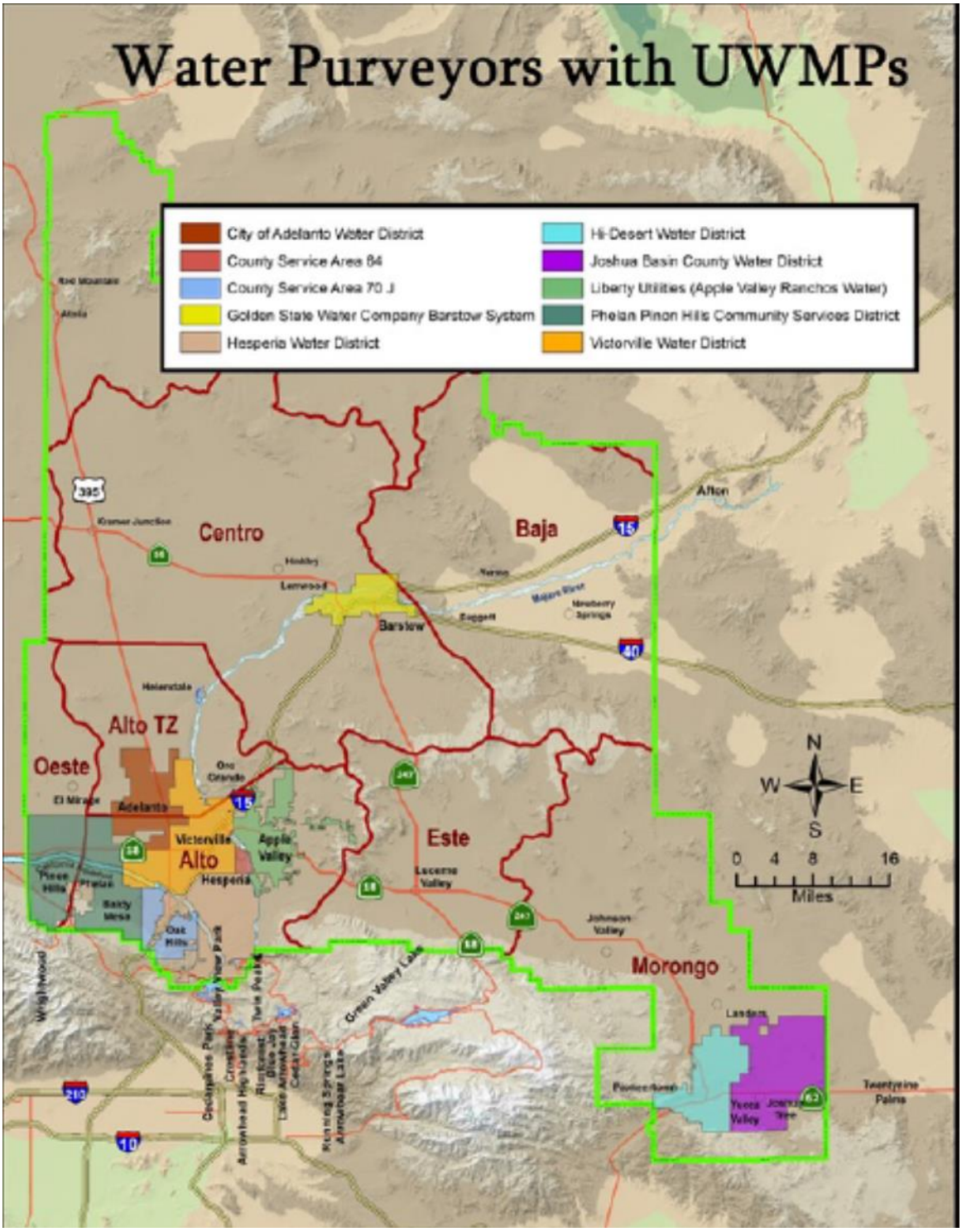


Figure 6.1
Mojave Water Agency Service Area
Large Water Purveyors

6.2 WATER SUPPLY

In the 2015 water year, the City pumped 94 percent of its water supply from groundwater wells accessing the Mojave River Groundwater Basin. The balance of supply was purchased from VWD through its intertie, which is also sourced from groundwater. Current and projected water supplies are shown in Table 6-2 and described in subsequent sections.

Table 6-2[1]: City of Adelanto Current and Planned Water Supplies (AFY)

Water Supply Source	Actual	Projected				
	2015	2020	2025	2030	2035	2040
Groundwater Production[2]	3,787	9,300	10,444	11,581	12,640	13,750
Groundwater Transfer - Intertie with VWD[3]	262	0	0	0	0	0
Groundwater Demand	4,049	4,578	4,872	5,292	5,737	6,195

[1] 2015 UWMP Guidebook Excel Table 6-8 Water Supplies – Actual and Table 6-9 Water Supplies – Projected.
[2] Mojave Groundwater Basin (see footnote 22); consistent with Table 6-5.
[3] Transfers between VWD and the City is also from groundwater; future year projections are determined annually and cannot be projected.

During normal years, the City obtains all of its water supply from the local groundwater aquifer through its wells. The City does not have any surface water or stormwater diversion facilities or desalination facilities, and is working to improve its recycled water facilities. Since the City is not located near the ocean, desalination is not a practical or economically feasible source of water.

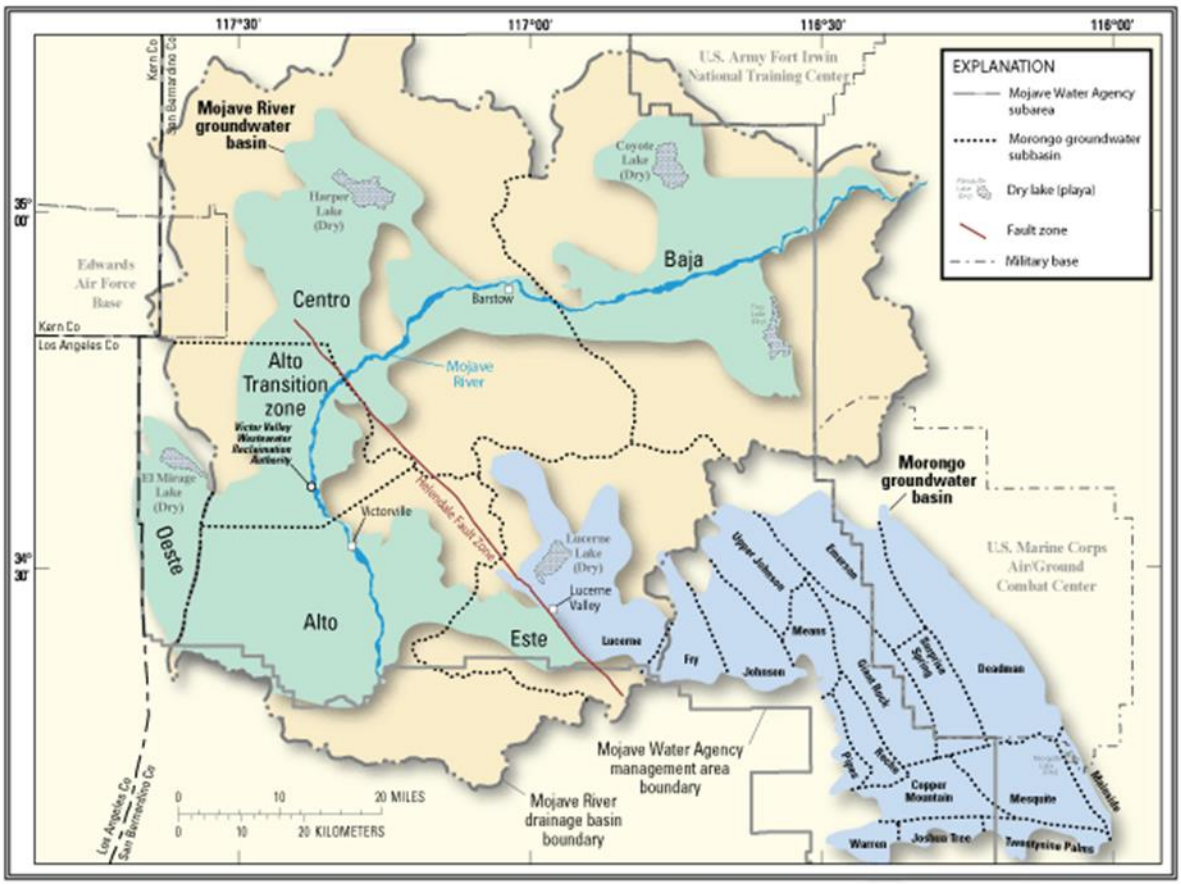
During normal water system operation, there are no transfer or exchanges of water within the City's service area. However, the City has two available emergency interties, both with the Victorville Water District (VWD). One is located on Air Expressway Boulevard just east of Highway 395. That intertie is a two-way connection from which Adelanto and VWD can both obtain and provide water. The second intertie is located near the intersection of Bellflower Street and Olivine Road. That intertie only allows one way flow from VWD to Adelanto. Adelanto only uses these interties on rare occasions with significant use in 2008 when it was used to fill the City's new 5 MG reservoir, and some additional use in 2014 (147 AF) and 2015 (262 AF).

6.2.1 Groundwater

Mojave River Groundwater Basin

The MWA service area overlies all or a portion of 36 groundwater basins and subbasins as defined by DWR Bulletin 118-03. Collectively, these basins and subbasins are grouped into two larger hydrogeologically distinct areas – Mojave River Groundwater Basin and Morongo Groundwater Basin. Basins along the Mojave River and adjacent areas are referred to as the Mojave River Groundwater Basin (also referred to as the Mojave Basin Area). The Mojave River Groundwater Basin is the larger and more developed of the two areas within the 36 basins that overlie two broad hydrologic regions. Figure 6-1 shows the two hydrologic regions.

Most of the Mojave River Groundwater Basin lies within the South Lahontan Hydrologic Region. The Mojave Region also overlaps a small portion of a DWR basin in the South Coast Hydrologic Region (Region 8); however, because this is such a small overlap, the Mojave Region is not involved with any jurisdictional issues with the South Coast Hydrologic Region.[23]



Source: USGS http://ca.water.usgs.gov/mojave/detail_location.html

Figure 6.2
Mojave Basin Area

Adelanto obtains all of its water from the Mojave River Groundwater Basin. The basin covers an area of approximately 1,400 square miles and has an estimated total water storage capacity of nearly 5 million acre-feet (MAF). The Mojave Basin Area is essentially a closed basin – limited groundwater enters or exits the basin; however, groundwater movement occurs between the different Subareas, as well as groundwater-surface water and groundwater-atmosphere interchanges. Groundwater is recharged into the basin predominantly by infiltration from the Mojave River, which accounts for approximately 80 percent of the total basin natural recharge. Other sources of recharge include infiltration of storm runoff from mountains, desert washes and recharge from human activities such as irrigation return flows, wastewater discharge, and enhanced recharge with imported water. Over 90 percent of the basin groundwater recharge originates in the San Gabriel and San Bernardino Mountains. Groundwater is discharged from the basin primarily by well pumping, evaporation through

[23] Draft 2015 MWA UWMP, May 9, 2016 - https://www.mojavewater.org/files/UWMP_PublicDraft_v1.pdf

soil, transpiration by plants, seepage into dry lakes where accumulated water evaporates, and seepage into the Mojave River. Recent investigations by MWA, USGS, and others have resulted in an improved understanding of the geology and hydrogeology of the Mojave Basin Area. Specifically, a more refined examination of the hydrostratigraphy has allowed for differentiation between the more permeable Floodplain Aquifer that has a limited extent along the Mojave River and the more extensive but less permeable Regional Aquifer.

The Mojave River provides an estimated average of 54,000 AFY per year of recharge to the Mojave River Groundwater Basin.[24] Other sources of recharge include recharge from human activities such as irrigation return flows, wastewater discharge, and enhanced recharge with imported water. Groundwater is primarily discharged from the basin through well pumping, evaporation, transpiration, and seepage into lakes and the Mojave River. During the water year July 2014 to June 2015, total basin production from MWA purveyors was 131,500 AF, with 71,300 from the Alto Subarea.[25]

According to the Draft MWA 2015 UWMP[26], the Mojave Basin provides a net natural annual water supply of 55,241 AFY, while the Alto Subarea provides 25,900 AFY during normal water years, and remain consistent during single-dry water years and multiple dry water year.

Basin Management – Adjudication

The Adjudication of the Mojave Basin Area was the legal process that allocated the right to produce water from the available natural water supply. Until adjudication proceedings were initiated and an independent Court issued the Mojave Basin Area Judgment, water production rights and obligations had never been defined in the Mojave Basin. Triggered by the rapid growth within the Mojave Water Agency service area, particularly in the Victor Valley area (the cities of Adelanto, Apple Valley, Hesperia, Victorville and surrounding communities), the City of Barstow and the Southern California Water Company (now Golden State Water Company) filed a complaint on May 30, 1990 against upstream water users claiming that the increased withdrawals and lowering of groundwater levels reduced the amount of natural water available to downstream users to the central part of the Mojave Basin where the City of Barstow is located. The complaint requested that 30,000 AF of water be made available to the Barstow area annually and that MWA obtain supplemental water for use in other areas of MWA's service area.

The Mojave Basin Area was the subject of a court ordered adjudication in an interim judgment in 1993. In January of 1996 the Riverside County Superior Court issued a final ruling on the adjudication for the basin in the Mojave Basin Judgment (Appendix J). The Judgment allocated water rights to purveyors with groundwater usage higher than 10 AFY from the Mojave River Groundwater Basin and appointed MWA as Watermaster of the Mojave Basin Area. The Judgment was triggered by the rapid growth within the Mojave Water Agency

[24] The California Water Plan Update 2013, Volume 2, Regional Update, South Lahonton Hydrologic Region, Page SL-15; the plan is available at:
http://www.water.ca.gov/waterplan/docs/cwpu2013/Final/Vol2_SouthLahontanRR.pdf
[25] Draft 2015 MWA UWMP, May 9, 2016, Section 3.4.3.2-
https://www.mojavewater.org/files/UWMP_PublicDraft_v1.pdf
[26] Ibid

service area in the early 1990's that led to increased withdrawals and lowered groundwater levels. Text of the Judgment is included in the 2014 Mojave Region Integrated Regional Water Management Plan[27], as well as Appendix E in MWA's 2015 UWMP.

A cross-complaint was filed by the MWA approximately one year after the initial lawsuit. The cross-complaint requested that the Court declare the native natural water supply of the Mojave Basin inadequate to meet the demands of cumulative water production within the basin, as well as to determine individual water production rights of producers of whatever nature throughout the entire Mojave Basin Area. This action included both water producers upstream and downstream of the City of Barstow.

During the following two years, negotiations resulted in a proposed Stipulated Judgment that: 1) formed a minimal class of producers using 10 acre-feet or less per year who were dismissed from the litigation, and 2) offered a physical solution (an equitable remedy designed to alleviate overdrafts in a basin, consistent with the constitutional mandate to prevent waste and unreasonable water use and to maximize the beneficial use of the limited resource) for water production by the remaining producers. The Riverside Superior Court bound the stipulating parties to the Stipulated Judgment in September 1993, and further bound the non-stipulating parties to the terms of the Stipulated Judgment in January 1996 following trial. The Court appointed MWA as Watermaster of the Mojave Basin Area.

A cross-complaint was also filed by Arc Las Flores Limited Partnership which requested that their appropriative, overlying and riparian rights be determined to be prior and paramount to any rights of the plaintiffs and any other water producers within the Basin.

Due to the magnitude and complexity of the case, the numerous water producers named as parties to the lawsuit agreed to conduct good faith negotiations. Discussion proceeded beginning in early 1992, with the objective of devising an equitable solution to the Basin Area's water supply problems and avoiding extensive and expensive litigation. During the next 18 months a committee of attorneys, engineers, and other individuals that were generally representative of all types of producers and all Subareas of the Basin Area conducted intense negotiations that resulted in a proposed settlement in the form of a Stipulated Judgment. The Stipulated Judgment set forth a proposed physical solution to the overdraft occurring in the Mojave Basin Area. The proposed Stipulated Judgment also created a class of minimal producers (that is, water producers using 10 AF of water per year or less) who were dismissed from the case. It directed that MWA create and administrate a procedure, acceptable to the Court, by which minimal producers could participate fairly in the physical solution.

Over 75 percent of the parties agreed to the Stipulated Judgment which was entered by the Court on September 22, 1993, binding all stipulating parties. After entry of the Stipulated Judgment, additional parties agreed to its terms. These parties represented over 80 percent of the verified water production in the Basin. A trial of the claims of the non-stipulating parties began on February 6, 1995 and was completed on March 21, 1995. Final Judgment was entered on January 10, 1996 adopting the physical solution set forth in the Stipulated Judgment.

[27] 2014 Mojave Regional Integrated Regional Water Management Plan, Appendix B.1, http://www.mywaterplan.com/irwm-plan-documents.html or https://www.mojavewater.org/planning.html

Nine non-stipulating parties referred to as the "Cardozo Group" appealed the Judgment entered by the Superior Court and the Appellate Court issued its final opinion on June 1, 1998. The final opinion of the Appellate Court held the stipulating parties to the terms of the Stipulated Judgment, but excluded the appealing parties, with the exception of one appellant who sought a revised water production right under the Judgment. MWA requested the California Supreme Court to review the Appellate Court's decision in July 1998. The Supreme Court affirmed the Appellate Court's decision in August 2000, regarding the Stipulated Judgment and the exclusion of the appealing parties from the Judgment, but overturned the decision of the Appeals Court as to the one party seeking additional production rights. Since 1996, most of the appealing parties have stipulated to the Judgment.

The MWA board voted in June 1998 to seek California Supreme Court Review of the Appellate Court's decision. A petition for review was filed with the Supreme Court in July 1998 and the Supreme Court granted review of the case on August 26, 1998. Oral arguments were heard by the Supreme Court on June 5, 2000 and its opinion was issued on August 21, 2000.

The Supreme Court's opinion affirmed in part and reversed in part the June 1, 1998 opinion of the Fourth District Court of Appeal. The Supreme Court affirmed the Court of Appeal's decision "in all respects," except it reversed the Court of Appeal decision as to the Jess Ranch Water Company. The Court of Appeal had affirmed the Judgment as to the stipulating parties but had reversed it as to the Cardozo Appellants and as to Jess Ranch Water Company. The Court of Appeal opinion essentially excluded the Cardozo Appellants from the Stipulated Judgment, including the Judgment's assessment provisions. Further, the Court of Appeal granted Judgment to the Cardozo Appellants in the form of injunctive relief to protect their riparian and overlying water rights to the current and prospective reasonable and beneficial need for water on their respective properties.

Effective August 6, 2002 the Cardozo appellants and MWA, on behalf of the stipulating parties, reached agreement regarding the Cardozo appellants' water rights. Consistent with the ruling from the California Supreme Court in this case, Cardozo Group's right to pump water from the ground underneath their respective lands for the current and prospective reasonable and beneficial need for water on their respective properties was recognized by the Stipulating parties. Further, to settle all outstanding issues in connection with the Cardozo Group water rights, MWA and Cardozo agreed that "if the parties who stipulated to the Judgment are in full compliance with the Judgment there shall be a rebuttable presumption that the Cardozo Appellants' water rights are not being interfered with."

In addition, all remaining water rights issues related to Jess Ranch Water Company and the Stipulating Parties were settled on August 16, 2002. Stipulation for Intervention and Entry of Judgment for Jess Ranch Water Company was filed in Riverside County Superior Court on August 23, 2002.

Summary of the Judgment after Trial

For purposes of defining and implementing a physical solution for management of the Basin, the Mojave Basin Area consists of five distinct but hydrologically interrelated "Subareas". The locations of the five Subareas; 1) Oeste, 2) Este, 3) Alto, 4) Centro and 5) Baja are shown

on Figure 1-2. The Subarea boundaries are generally based on hydrologic divisions defined in previous studies (DWR, 1967), evolving over time based on a combination of hydrologic, geologic, engineering and political considerations. Also for the purposes of implementing the Judgment, the northern part of the Alto Subarea was defined as a sub-management unit – the Alto Transition Zone; this zone was created to acknowledge local geology and to better understand the water flow from Alto to Centro.

Each Subarea was found to be in overdraft to some extent due to the use of water by all of the producers in that Subarea. In addition, some Subareas were found to historically have received at least a part of their natural water supply as water flowing to them from upstream Subareas either on the surface or as subsurface flow. To maintain that historical relationship, the average annual obligation of any Subarea to another is set equal to the estimated average annual natural flow (excluding storm flow) between the Subareas over the 60-year period 1930-31 through 1989-90. If the Subarea obligation is not met, producers of water in the upstream Subarea must provide Makeup Water to the downstream Subarea.

The Mojave Basin Judgment assigned Base Annual Production (BAP) rights to each producer using 10 AF or more, based on historical production during the period 1986-1990. Parties to the Judgment are assigned a variable Free Production Allowance (FPA), which is a percentage of the BAP set for each Subarea each year by the Watermaster. The BAP is reduced or "ramped-down" over time until FPA comes within 5 percent of the Production Safe Yield (PSY) as defined by the Judgment.

The FPA is set as follows for each Subarea for water year 2015-2016:

- Alto Subarea - 80 percent of BAP for agriculture and 60 percent of BAP for municipal and industrial
- Oeste Subarea - 80 percent of BAP for agriculture and 60 percent of BAP for municipal and industrial (currently held in abeyance at 80 percent)
- Este Subarea - 80 percent of BAP
- Centro Subarea - 80 percent of BAP
- Baja Subarea – 50 percent of BAP

The Watermaster's 22nd Annual Report, Water Year 2014-15 (May 1, 2016) has recommended that the FPA in the Alto Subarea remains unchanged. The FPA is within 5 percent of the PSY, water levels within the Alto Subarea are relatively stable, and the Transition Zone water levels are also stable. It is noted that local water level declines in the Alto Subarea are most likely the result of drier than average water supply conditions in the past several years and not the result of over-pumping. Water production was 78,000 AF in 2013-14 and 68,000 AF in 2014-15. Conservation, importation of SWP water, MWA's Regional Recharge and Recovery Project (R3 or R-Cubed), and implementation of the Judgment have resulted in hydrologic balance in the Alto Subarea. Under existing basin conditions, rampdown is unnecessary. The water supply conditions in the Alto Subarea are sustainable. However, should drier than average water supply conditions persist, or if localized water level declines result in degraded water quality, poor well performance or well failure or harm to riparian habitat, the Watermaster will re-visit rampdown recommendations in the Alto Subbasin.

Any Producer that pumps more than their FPA must purchase Replacement Water from the Watermaster equal to the amount of production in excess of their total available FPA, or transfer unused FPA from another party within their Subarea. Funds collected for Replacement Water are then used by the MWA for purchase of SWP supplies and recharged into the Subarea they were produced from.

All Producers in each Subarea are allowed to produce as much water as they need annually to meet their requirements, subject to compliance with the Physical Solution set forth in the Judgment. An underlying assumption of the Judgment is that sufficient water will be made available to meet the needs of the Basin in the future from a combination of natural supply, imported water, water conservation, water reuse and transfers of FPA among Producers.

Special provisions for environmental protection are included in the Judgment, including the creation of a Biological Resources Trust Fund. The funds are provided to secure a water supply in the event that groundwater levels within specific areas are not maintained sufficient to support existing riparian vegetation.

Basin Overdraft Conditions

The Mojave River Groundwater Basin combines 31 smaller groundwater basins and sub basins along the Mojave River. DWR's California Groundwater Bulletin 118 Updated 2003 and Bulletin 160, and The California Water Plan Update 2009, state that the Mojave Groundwater Basin has experienced overdraft since the early 1950s.[28] In an effort to eliminate long-term overdraft conditions, the Mojave Basin Judgment directed MWA to manage conservation and recharge the basin with supplemental water. MWA has reduced allotments to purveyors each year and has recharged the Mojave River Basin in an effort to eliminate overdraft.

As generally described in the Water Year 2014/15 Mojave Watermaster Report[29], water levels within the Alto Subarea in which Adelanto lies, are segregated for reference purposes, into three geographic areas as follows: 1) Western portion, which is generally west of the Mojave River (the river is included in the western portion); 2) Eastern portion, which is generally east of the Mojave River; and 3) the Alto Transition Zone. Alto water levels near the river are relatively stable exhibiting seasonal variation, rising in winter and falling in summer. Wells near the river also indicate rising and falling water levels, which is consistent with available recharge from storms. Under current pumping conditions and long term precipitation, it is expected that wells near the river will remain stable. Water levels in the western portion of Alto have exhibited declines consistent with locally heavy pumping and limited local recharge. Water levels in the eastern portion of Alto indicate similar trends although to a lesser extent; most likely due to limited pumping in the regional aquifer east of the river. Continued pumping in depleted areas of the regional system may result in long local negative impacts such as declining yields and water quality problems. However, the Watermaster is not aware of any widespread problems in the regional system due to the falling water table. The relative

[28] The California Water Plan Update 2009 is available on DWR's website at: http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v3_southlahontan_cwp2009.pdf; references to groundwater challenges can be found in the Volume 3 Regional Update for the South Lahonton Region

[29] 22nd Annual Report of the Mojave Basin Area Water Master, Water Year 2014/15, Appendix B; report available at: http://www.mojavewater.org/annual_report.html

stability of near river water levels and water levels in the Transition Zone indicate hydrologic stability in the relationship between Alto and the downstream Subareas.

Basin Management Strategies

Since the Mojave Basin Judgment, MWA has invested in groundwater banking, groundwater replenishment system (recharge) facilities, and groundwater monitoring to effectively manage the basin.

- Groundwater Storage and Banking Programs: With recent developments in conjunctive use and groundwater banking, significant opportunities exist to improve water supply reliability for MWA. Conjunctive use is the coordinated operation of multiple water supplies to achieve improved supply reliability. Most conjunctive use concepts are based on storing surface water supplies in a local groundwater basin during times of surplus for use during dry periods when surface water supplies would likely be reduced.

  Groundwater banking programs involve storing available SWP surface water supplies during wet years in groundwater basins. Water would be stored either directly by surface spreading or injection, or indirectly by supplying surface water to farmers for use in lieu of their intended groundwater pumping. During water shortages, the stored water could be extracted and conveyed through the California Aqueduct to MWA as the banking partner, or used by the farmers in exchange for their surface water allocations. Several conjunctive use and groundwater banking opportunities are available to MWA.

  MWA has its own conjunctive use program to take advantage of the fact that the available MWA SWP supply on average is still greater than the demand in the service area. MWA is able to store this water for future use when SWP supplies are not available. This activity also allows MWA to take advantage of wet year supplies because of the abundant groundwater storage available in the Basins.

  Table 6-3 shows the storage available in MWA's existing banked accounts for the Alto Subarea as of December 31, 2015. Unless otherwise noted, the water was all excess SWP water that MWA has purchased over the past years and stored in various groundwater basins for use when SWP is limited or there are groundwater shortages. MWA continues to make such purchases when available to ensure the supply of water to their retailers.

Table 6-3: Status of MWA Groundwater Storage Account in the Alto Subarea

	MWA-Owned Stored Water[1] (AF)	Retailer-Owned Stored Water[2] (AF)	Total Stored Water (AF)
Alto Subarea	85,185	15,113	100,298

[1] MWA's banked groundwater storage accounts as of December 31, 2015.
[2]Retailer-owned water is owned by one of MWA's retailer agencies and consists of excess SWP purchased by MWA and then bought by the retailer.

  In July 2011, MWA entered into an agreement to amend and extend the 2003 water storage program with the Metropolitan Water District of Southern California (MWDSC). The amended agreement allows up to 390,000 AF of MWDSC entitlement water from the State Water Project (SWP) to be stored in the Mojave Basin. MWDSC has until December

31, 2035 to take return delivery of the water, through exchange of MWA entitlement from the SWP for delivery to MWDSC. Roughly 60,000 AF was delivered and stored within the Mojave Basin under the amended storage agreement and will be eventually returned via entitlement exchange to MWDSC. MWA has returned 29,000 AF to MWDSC. This program provides a benefit to the region by recharging groundwater basins at a relatively low cost to MWA using SWP water from MWDSC's entitlement, and allowing the water to be returned to MWDSC via MWA's unused SWP entitlement at no cost to MWA.[30]

- Groundwater Replenishment System: Since 2006, MWA has used the Mojave River Pipeline to recharge water to the Mojave River Basin. The pipeline can deliver up to 45,000 AFY to the Mojave Basin to offset growing depletion of natural supplies. The pipeline runs approximately 76 miles from the California Aqueduct to MWA's recharge sites. MWA currently operates four recharge sites located at Hodge, Lenwood, Daggett/Yermo, and Newberry Springs. They provide the ability to recharge SWP water into subareas where replacement water is purchased, directly into the higher percolation area of the river floodplain. They also provide MWA with the ability to bank excess SWP Water.[31]

  The Oro Grande Wash Recharge Project will recharge up to 8,000 AF per year to support groundwater pumping in the western part of the Alto Subarea. Construction of the project included connecting to an existing turnout on the California Aqueduct, moss screen and metering facilities at the turnout, and a conveyance pipeline and outlet in the wash. The recharge basins will be constructed by the County of San Bernardino as part of a dual-purpose recharge and flood control detention basin. Design and construction of the recharge/flood control basin began in late 2012 and is expected to be completed by July 2016. MWA is nearing completion on the preliminary design phase for similar dual purpose recharge/flood control basins in Antelope Wash and Bandicoot Wash in the southern Alto region. MWA also initiated geotechnical and geohydrology work in the eastern Alto and Oeste Subareas that will provide better information and data to use in determining the best locations for future off-river recharge basins.[32]

- Regional Recharge and Recovery Project (R^3 Project): The R^3 Project is a conjunctive use project that imports and recharges SWP water to be stored underground in the local aquifer and later recovers and distributes water to local retail water purveyors in lieu of pumping water from production wells. R^3 is part of a comprehensive solution developed by MWA and the region's stakeholders to manage a sustainable water supply for the region. MWA-owned production wells on either side of the Mojave River located immediately downstream of the recharge area recover and deliver the water through pipelines directly to retail water agencies in lieu of retail agencies utilizing some of their own production wells, which allows the pumping depressions some recovery. Water pumped is billed through the Watermaster and any water pumped in excess of the retailers FPA is billed as Replacement Obligation and met through MWA's groundwater storage account. This

[30] 22nd Annual Report of the Mojave Basin Area Water Master, Water Year 2014/15; report available at: http://www.mojavewater.org/annual_report.html
[31] Draft MWA 2015 UWMP, May 9, 2015, Section 3.2.4
[32] 22nd Annual Report of the Mojave Basin Area Water Master, Water Year 2014/15; report available at: http://www.mojavewater.org/annual_report.html

method of water basin management targets the specific local well pumping depressions for the wells the retail agencies would normally use so they can reduce or eliminate pumping from them while taking R^3 water.

The R^3 Project provides access to an alternative delivery system for the major water providers in the Mojave Basin and partially offsets their need to continue pumping within the local regional aquifer system. Water providers that benefit from the R^3 Project include Liberty Utilities (Apple Valley Ranchos Water) Corp., City of Adelanto, City of Hesperia, Golden State Water Company, San Bernardino County Service Area 64 and the Victorville Water District. Phase 1 of the project was constructed to allow delivery of 15,000 AFY of imported SWP supply previously recharged. The Phase 1 facilities were completed and began operating in 2013. Phase 2 is planned to be completed once the capacity of the Phase 1 facilities is reached.[33]

- Treated Wastewater Recharging – Treated wastewater imports from outside MWA are also recharged into the Mojave River Groundwater Basin. Wastewater imports from the Crestline Sanitation District and Lake Arrowhead Community Services District are imported to the Alto Subarea, and effluent from the Big Bear Area Regional Wastewater Agency is imported to the Este Subarea. These wastewater imports comprise a relatively small volume in comparison to the total water used within the MWA service area.

- Groundwater Monitoring – MWA maintains a comprehensive groundwater monitoring program to track dynamic conditions including groundwater production, storage, elevations, and quality. The program consists of over 900 monitoring wells and tracks water production within each of its five subareas. As previously noted, Adelanto lies within the Alto subarea, is relatively stable and, as a whole, appears to be in regional balance, although portions of the subarea have shown declining yields.

  According to MWA[34], Alto Subarea water levels near the Mojave River are relatively stable exhibiting seasonal fluctuations with rising levels in winter and declining levels in summer. It is expected that under current pumping conditions and long-term average flows in the river, water levels in the Floodplain Aquifer will generally remain stable. Water levels in the western portion of Alto in the Regional Aquifer have historically exhibited declines consistent with heavy pumping and limited local recharge. Currently, water levels in the western Alto area show stability or slight recovery. Water levels in the eastern portion of Alto indicate similar trends although to a lesser extent; most likely due to limited pumping in the regional aquifer east of the river and possibly higher localized septic return flow due to the lack of sewers in some areas. Continued pumping in depleted areas of the Regional Aquifer may result in long-term local negative impacts such as declining yields and water quality problems. As a whole, the Alto Subarea presently appears to be in relative regional balance.

  Localized declines in water levels may be ameliorated by a redistribution of groundwater production and return flows (e.g. construction of local wastewater treatment plants).

[33] Draft MWA 2015 UWMP, May 9, 2015, Section 3.5.3.1
[34] Draft MWA 2015 UWMP, May 9, 2016, Section 3.4.3.1

MWA Groundwater Management Plan [35]

Assembly Bill 3030 (AB 3030) passed by the California legislature in 1992 allows local agencies to develop Groundwater Management Plans (GWMPs). AB 3030 declares groundwater to be a valuable resource that should be carefully managed to ensure its safe production and quality. The legislation also encourages local agencies to work cooperatively to manage groundwater resources within their jurisdiction. Senate Bill 1938 (SB 1938) was passed by the Legislature September 16, 2002 and made changes and additions to sections of the Water Code created by AB 3030.

MWA's 2004 Regional Water Management Plan (RWMP), adopted on February 24, 2005 by Resolution 798-05, also serves as MWA's GWMP as it contains all the relevant components related to Groundwater Management Plans in California Water Code Sections 10750-10753.10., as well as the components recommended by DWR in California's Groundwater, Bulletin 118 (DWR, 2003).[36] The 2004 RWMP Update both complements and formalizes a number of existing water supply and water resource planning and management activities in the MWA service area that overlies several groundwater basins, as defined by DWR in Bulletin 118.

A draft update of the MWA GWMP was published in 2014, as part of the Mojave Region Integrated Regional Water Management Plan[37]. The draft update included revisions to Section 1 – Introduction of the GWMP. A full update was deferred given that the Sustainable Groundwater Management Act (SGMA) was not finalized yet. Deferring the full update would ensure that the GWMP is in full compliance with the SGMA. An update of the entire GWMP is currently being prepared and is expected to be completed by the end of 2016.

As part of the 2004 RWMP Update, the following Basin Management Objectives (BMO) were established to plan water supplies through 2020:

- Balance future water demands with available supplies recognizing the need to:
  - Stabilize the groundwater basin storage balance over long-term hydrologic cycles;
  - Protect and restore riparian habitat areas as identified in the Mojave Basin Area Judgment and the Department of Fish & Game Habitat Water Supply Management Plan;
  - Limit the potential for well dewatering, land subsidence, and migration of poor quality water;
  - Maintain a sustainable water supply through extended drought periods; and
  - Select projects with the highest likelihood of being implemented.

[35] Draft MWA 2015 UWMP, May 9, 2016, Section 3.4.2
[36] Bulletin 118 can be found on DWR's website at: http://www.water.ca.gov/groundwater/bulletin118/update2003.cfm
[37] MWA Draft 2014 Groundwater Management Plan - http://www.mywaterplan.com/files/mwa_gmp_draft_toc_sect1.pdf

- Maximize the overall beneficial use of water throughout MWA by:
  - Supplying water in quantity and of quality suitable to the various beneficial uses;
  - Addressing issues throughout the MWA service area recognizing the interconnection and interaction between different areas;
  - Distributing benefits that can be provided by MWA in an equitable and fair manner;
  - Ensuring that costs incurred to meet beneficial uses provide the greatest potential return to beneficiaries of the project(s);
  - Avoiding redirected impacts; and
  - Identifying sustainable funding sources including consideration of affordability.

Balancing future water demands with available supplies will increase water supply reliability by preventing continued overdraft of the groundwater. With groundwater storage stabilized, there will be groundwater available during surface water supply shortages and delivery interruptions. With a balanced basin, groundwater elevations will be relatively stable. This will reduce the potential for land subsidence and associated aquifer compaction.

The adopted 2004 RWMP and GWMP also identified several water supply projects and management actions to provide a means to achieve the BMOs. Management actions can be grouped into the following seven major elements:

1. Monitoring regional groundwater quantity and quality;
2. Improve characterization of the basin;
3. Continue long-term planning;
4. Groundwater protection;
5. Construction and implementation;
6. Financing; and
7. Public participation

In addition to conducting regional groundwater management, in 1990 MWA entered into a joint agreement with the U.S. Geological Survey (USGS) to develop and fund the Cooperative Water Resources Program (CWRP). The CWRP provides funding for a) groundwater level measurement and groundwater quality sampling activities across the Mojave River and Morongo groundwater basins; b) stream gage maintenance and continuous flow monitoring of the Mojave River; c) continuous and discrete sampling of Mojave River water quality; and d) review and uploading of data collected under the CWRP and other MWA groundwater monitoring programs to the publicly available USGS National Water Information System (NWIS) website. Using these data, MWA tracks water level trends and fluctuations throughout the service area. Groundwater production in the Mojave Basin is monitored and managed by the Watermaster.

As part of basin characterization activities, six groundwater models have been developed in the MWA service area to aid in management of groundwater. MWA continues to apply and refine these models in key management areas to better manage water quantity and quality.

City of Adelanto Groundwater Wells

The City has nine currently active potable groundwater wells, one non-potable well and seven inactive wells, as shown in Table 6-4. The City's active wells vary in depth from 39 feet to 569 feet, with production of the potable water wells varying from 181 gallons per minute (gpm) to 1,074 gpm. The total estimated potable water system production capacity is approximately 4,728 gpm. Some of the current inactive wells may be returned to service in future years. All wells are located within the City of Adelanto accessing the Mojave River Groundwater Basin (the precise locations of the wells have not been identified for security purposes).

Table 6-4: City of Adelanto Wells - All in Alto Subarea of Mojave River Groundwater Basin

Well Number	Date Drilled	Well Depth (feet)	Capacity (gpm)	Status
1G	1961	355	181	Active
2	1981	665	212	Inactive
2G	1977	75	783	Inactive
3G2	1982	74	287	Active
4	1985	569	684	Active
4G	1969	39	1,074	Active
5A	2001	352	325	Active
5G	1979	74	NA	Inactive
6	1988	461	274	Active
6G	Pre-1950	74	227	Inactive
7	1989	510	300	Active
8A	1991	658	518	Active Non-Potable
8G2	2003	180	754	Active
14	1995	64	250	Inactive
14A	2004	360	849	Active
15	2005	905	250	Inactive
16	2008	890	800	Active Non-Potable
TOTAL			**4,728**	

Source: 2007 Adelanto Water Master Plan and Monthly Production Sheet; Well 15 & 16 information provided by City Staff. Total capacity includes only active potable water capacity.

Table 6-5 presents the groundwater produced (pumped) from each well for the past five years.

Table 6-5: Groundwater Production from Active Potable Wells (AF)

Well Number	2011	2012	2013	2014	2015
1G	265	305	310	322	344
3G2	288	259	244	116	344

Table 6-5: Groundwater Production from Active Potable Wells (AF)					
Well Number	**2011**	**2012**	**2013**	**2014**	**2015**
4	157	39	91	87	0
4G	1,369	1,421	1,369	1,358	1,217
5A	350	102	105	0	0
6	284	236	407	229	33
7	357	293	352	432	465
8A*	18	0	0	0	0
8G2	1,020	1,075	732	862	91
14A	289	651	765	663	683
15	0	53	53	53	53
Emergency Interties	0	0	0	147	257
TOTAL	**4,398**	**4,434**	**4,429**	**4,569**	**4,049**

*Well 8A became inactive after January 2011.
Source: 2011 to 2016 Monthly Production Sheet.

Table 6.6 provides actual groundwater production for 2015 and estimated overall groundwater production projections for the years 2020 through 2040. Projections were estimated based on supply projections provided by MWA, anticipated area growth in population and historical production records from the City's wells.[38]

Table 6-6: Total Active Well Production – Actual 2015, Projections to 2040 (AFY)						
Groundwater	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Alto Subarea	71,300	80,346	84,767	90,163	95,747	100,823
City of Adelanto	4,049	4,578	4,872	5,292	5,737	6,195

Projections by individual well have not been provided for the following reasons:

1. Well Service Life – As noted in Table 6-4, several of the City's existing wells have been in service for over 25. The typical service life of a potable water production well is about 50 years. That being the case, it is likely some of these wells may be removed from service prior to the year 2035 and replaced with new wells constructed in future years; and

2. Not All Wells are Used Every Year – As is evident from Table 6-5, not all wells are utilized for production purposes in all years. Some of the currently inactive wells may be returned to service in future years while other currently active wells may be removed from service.

6.3 Wastewater and Recycled Water

The Southern California region generates large quantities of treated wastewater on a daily basis. This treated wastewater is considered a reliable and drought-proof water source and could greatly reduce the region's and the City's reliance on the use of limited groundwater

[38] Draft MWA 2015 UWMP, May 9, 2016, Section 2.4

supplies. As technological improvements continue to reduce treatment costs, and as public perception and acceptance continue to improve, numerous reuse opportunities should develop. Recycled water is a critical part of the California water picture because of the region's high likelihood of drought. As treatment technology continues to improve, demand for recycled water will also increase.

Municipal recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again for a beneficial purpose. The term "recycled water" is defined in the CWC more broadly than "municipal recycled water." For purposes of the UWMP, "recycled water" means only municipal recycled water, that is, water that has been treated and discharged from a municipal wastewater facility.

6.3.1 Wastewater and Recycled Water Coordination

The Adelanto Public Utilities Authority is the sole agency for collecting, treating and discharging wastewater within its service area through the Adelanto Wastewater Treatment Facility.

The City of Adelanto does not currently use recycled water. In 2008, the City contracted with a firm to upgrade its wastewater treatment facility. The upgrade included an increase of treatment capacity from 1.5 million gallons per day (MGD) to 4.0 MGD. The upgraded facility was to produce treated effluent suitable for landscape irrigation and other beneficial uses. Upon completion, the upgraded facility did not successfully treat the City's wastewater to a quality suitable for reuse and could not reliably treat the increased capacity of 4.0 MGD. Subsequently, the City terminated the existing contract, solicited for a firm to provide the needed improvements, and entered into an agreement with a second firm to upgrade the facility. The second firm designed an upgrade to the facility that included the increased capacity of 4.0 MGD, as well as the capability to utilize the existing sand filters and chlorine disinfection system to produce effluent suitable for landscape irrigation and other beneficial uses. While the system now has the capability of producing treated water for irrigation, to date the City has not been able to identify an opportunity to utilize the recycled water. Consequently, the City has not built a recycled water storage tank or distribution lines.

Ultimately, the upgraded plant will produce treated water meeting California's Title 22 requirements, which can be used for irrigation of lawns, public parks and other greenbelt areas, as well as for construction and dust control and other beneficial uses. Ultimately, according to the City's 2007 Sewer Master Plan, the wastewater treatment plant will be upgraded to a capacity of 8.0 MGD when the City nears build-out. Additionally, two sub-regional wastewater treatment plants (6.0 MGD and 3.0 MGD) are proposed to be constructed in incremental capacities. However, construction plans are not included in the foreseeable capital improvements plans of the City and no recycled water projections are available in the planning horizon of the UWMP.

Since Adelanto relies on groundwater for 100 percent of its water supply and is not currently using recycled water, the City supports the efforts of the regional water management agencies to utilize recycled water in the High Desert region of San Bernardino County. The Victor Valley Wastewater Reclamation Authority (VVWRA) generates approximately 14.5 MGD of tertiary treated water at its treatment plant and, along with Victorville Water District, uses

recycled water regionally for composting, dust control and fire protection and additionally serves a local golf course. In 2010, use of recycled water began at the VVWRA for the High Desert Power Plant cooling system and for irrigation at the Green Tree Golf Course. VVWRA is planning to utilize the recycled water produced at its two new water reclamation facilities for irrigation water. However, since the Mojave Basin is a closed basin, the remaining wastewater effluent is percolated to the groundwater basin, where it is eventually reused as groundwater, benefiting water supply for all regional water agencies.[39]

6.3.2 Wastewater Collection, Treatment, and Disposal within the City's Service Area

The City of Adelanto provides water and wastewater services to over 30,000 people within its 53-square mile service area. Wastewater from Adelanto's water service area is collected and treated at the City-owned 4.0 MGD activated sludge wastewater treatment facility through an operations and maintenance contract with the PERC Water Corporation.

The City also operates and maintains the localized sewer collection pipelines that feed into the wastewater treatment plant. The City's sewer system includes over 87 miles of gravity sewer lines, one lift station, associated force mains and an existing 4.0 MGD wastewater treatment plant.[40] The wastewater treatment facility effluent, secondary treated wastewater, is discharged to four operable evaporation ponds in northern Adelanto. The beneficial reuse of treated wastewater is groundwater recharge.

There are also approximately 775 septic tank systems in the northern end of the City's service area. These septic systems could be connected to the City sewer system in the future.

Municipal wastewater is generated in Adelanto's service area from a combination of residential, commercial, and industrial sources. The quantities of wastewater generated are generally proportional to the population and water usage in the service area. It is estimated that Adelanto's customers generate wastewater roughly proportional to 60 to 70 percent of the City's water demand. Table 6-7 shows the total metered wastewater volume (2.297 MGD shown in AF) collected and treated for Adelanto in 2015.[41]

Table 6-7: Wastewater Collected Within Service Area in 2015						
100%	Percentage of 2015 service area covered by wastewater collection system					
90%	Percentage of 2015 service area population covered by wastewater collection system					
Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated?	Volume of Wastewater Collected in 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area?	Is WWTP Operation Contracted to a Third Party?

[39] Draft MWA 2015 UWMP, May 9, 2016, Sections 4.3 and 4.4
[40] City of Adelanto Sewer Master Plan, December 2007, Wilson So and Associates, Chapter 3, page 3-1.
[41] PERC Water Corporation, May 2, 2016.

Table 6-7: Wastewater Collected Within Service Area in 2015						
Adelanto Public Utilities Authority	Metered	2,573	City of Adelanto	Adelanto Wastewater Treatment Facility	Yes	Yes
NOTES: WWTP third party contractor is PERC Water Corporation.						

Table 6-8 identifies the volume (2.297 MGD shown in AF [2,573]) of treated wastewater discharged within the service area, which is consistent with Table 6-7.

Table 6-8: Wastewater Treatment and Discharge Within Service Area in 2015										
							2015 volumes (AF)			
Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number	Method of Disposal	Does This Plant Treat Wastewater Generated Outside the Service Area?	Treatment Level	Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Adelanto Wastewater Treatment Facility	Adelanto Wastewater Treatment Facility	North end of City, cross streets Jonathan and Auburn	6B369805001	Other	No	Secondary, Undisinfected	2,573	2,573	0	0

Table 6-9 shows projected wastewater flows generated within the City's service area through 2040. The estimates included in Table 6-9 compare favorably with similar estimates in the City of Adelanto Sewer Master Plan (December 2007).

Table 6-9: City of Adelanto Historic and Projected Wastewater Collection (AFY)						
	2015	2020	2025	2030	2035	2040
Potable Water Demand	4,049	4,578	4,872	5,292	5,737	6,195
Est. Volume of Wastewater Collected	2,573	2,976	3,167	3,440	3,729	4,027

Note: 2015 is actual demand from Table 4-1; wastewater collected is assumed equal to approximately 65% of potable water demand based on the City's Sewer Master Plan (December 2007).

6.3.3 Recycled Water Beneficial Uses

The planned recycled water infrastructure improvements – recycled water storage tanks and transmission lines to provide non-potable water for irrigation, construction and other beneficial uses throughout the City was not completed during the 2010-2015 planning period. While a portion of the recycled water system has been constructed, it is not fully complete to treat wastewater to tertiary levels and no transmission lines have been constructed. Further, capital improvement plans do not currently include projections of completion of the recycled water infrastructure improvements in the planning horizon of the 2015 UWMP; however, there is a proposed Bond Measure that includes completing recycled water Title 22 water and transmission lines. The UWMP will be updated when this information is confirmed.

Therefore, Current and Projected Recycled Water Direct Beneficial Uses within the Service Area is not included in this UWMP.

Table 6-10 shows the planned versus actual use of recycled water in AF from the 2010 UWMP for the year 2015.

Table 6-10: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual (AFY)

Use Type	2010 Projection for 2015	2015 actual use
Landscape irrigation (excludes golf courses)	1	0
NOTES: The planned recycled water infrastructure improvements, such as recycled water storage tanks and transmission lines, to provide non-potable water for irrigation was not completed as anticipated.		

6.3.4 Actions to Encourage and Optimize Future Recycled Water Use

In addition to the City of Adelanto's on-going efforts, other regional studies of water recycling opportunities throughout Southern California provide a context for promoting the development of water recycling plans. It is recognized that broad public acceptance of recycled water requires continued education and public involvement.

Public Education

The City continues to participate in MWA's public education and school education programs, which include learning programs on water recycling. MWA staff reaches out to area residents including those in the City, through a variety of public information programs. These programs include information on present and future water supplies, demands for a suitable quantity and quality of water, including recycled water, and the importance of implementing water efficient techniques and behaviors. Through MWA, water education programs have reached area students with grade-specific programs including information on recycled water.

Financial Incentives

The implementation of recycled water projects involves a substantial upfront capital investment for planning studies, environmental impact reports, engineering design and construction before there is any recycled water to market. For some water agencies, these capital costs exceed the short-term expense of purchasing additional water supplies.

The establishment of new supplemental funding sources through federal and state programs can provide significant financial incentives for local agencies to develop and make use of recycled water. Potential sources of funding include federal and state funding opportunities. These funding sources include the United States Bureau of Reclamation, California's Proposition 13 Water Bond and the State Revolving Fund. These funding opportunities may be sought by the City or possibly more appropriately by regional agencies. The City will continue to support seeking funding for regional water recycling projects and programs.

Potential Uses

As previously noted, the majority of recycled water in the High Desert is used for recharging the Basin, with some landscape and golf course irrigation. However, future recycled water use can increase by requiring dual piping in new developments, retrofitting existing landscaped areas and constructing recycled water pumping stations and transmission mains

to reach areas far from the treatment plants, pending the availability of funding. The City is planning for reuse predominantly in landscape irrigation in schools and parks, with further consideration of commercial use, golf courses and cemeteries, and highways and medians. Many agencies in the High Desert region, including the City, are in the beginning planning stages and plan to produce recycled water, but not yet at the planning level to actually have a developed customer list. Based on known land and water consumption data, it is assumed potential recycled water customers are ample once the recycled water is available.

Current constraints, as discussed previously, involves the upgraded wastewater facility in 2008 unable to successfully treat the City's wastewater to a quality suitable for reuse and could not reliably treat the increased capacity of 4.0 MGD. Subsequently, the City contracted with a second firm to upgrade the facility - designed an upgrade that included the increased capacity of 4.0 MGD, as well as the capability to utilize the existing sand filters and chlorine disinfection system to produce effluent suitable for landscape irrigation and other beneficial uses. Additional rehabilitation, safety, and electrical work is needed to treat to a Title 22 level. While the system now has the capability of producing treated wastewater for irrigation, the City is working to identify opportunities to utilize the recycled water. When users are identified and enter into contracts for recycled water use, the City will build the necessary recycled water storage tank and distribution lines. Table 6-11 shows the potential methods or actions to expand future recycled water use.

Table 6-11: Methods to Expand Future Recycled Water Use

Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Incentives	Schools and Parks	TBD	TBD
Incentives	Golf Courses and Cemeteries	TBD	TBD
Building Code Modification	Commercial	TBD	TBD
Ordinances	Highways and Medians	TBD	TBD
		Total	**TBD**

6.4 Desalinated Water Opportunities

The California UWMP Act requires a discussion of potential opportunities for use of desalinated water (Water Code Section 10631[i]). Adelanto's service area is not located near the ocean, so ocean desalination is not a practical or economically feasible source of water for the City. In addition, MWA has evaluated potential options for developing desalination projects and has determined none of the opportunities are practical or economically feasible at this time for MWA, and MWA has no current plans to pursue them.[42]

However, should a future opportunity emerge for MWA and/or the City to consider development of desalination, these potential future supply opportunities are described below, including opportunities for desalination of brackish water, groundwater, and seawater.

[42] Draft MWA 2015 UWMP, May 9, 2016

Brackish Water / Groundwater Desalination. As discussed in Section 6.9, the groundwater supplies in the Mojave Basin are not considered brackish in nature, and desalination is not required. There are brackish supplies near the dry lakes but it is not practical to pump, treat and potentially induce migration of better quality water to the dry lake areas and potentially cause subsidence. However, an option to consider is for MWA and its retail water purveyors could partner with other SWP contractors and provide financial assistance in construction of other regional groundwater desalination facilities in exchange for SWP supplies. The desalinated water would be supplied to users in communities near the desalination plant, and a similar amount of SWP supplies would be exchanged and allocated to MWA from the SWP contractor. A list summarizing the groundwater desalination plans of other SWP contractors is not available; however, MWA would begin this planning effort should the need arise.[43]

In addition, should an opportunity emerge with a local agency other than an SWP contractor, an exchange of SWP deliveries would most likely involve a third party, such as Metropolitan Water District of Southern California. In this case, local groundwater desalination facilities would be projects implemented by retailers of SWP contractors and, if an exchange program was implemented, would involve coordination and wheeling of water through the contractor's facilities to MWA.

Seawater Desalination. Since the City's service area is not in a coastal area, it is neither practical nor economically feasible to implement a seawater desalination program. However, similar to the brackish water and groundwater desalination opportunities described above, MWA has indicated it could provide financial assistance to other SWP contractors in the construction of their seawater desalination facilities in exchange for SWP supplies. The City would support this effort as economically feasible for the benefit of the regional water supply.

6.5 Exchanges or Transfers

During normal operation of the water system, there are no transfers or exchanges of water within the Adelanto's service area. However, as described in Section 6.2, the City's water system has two available interties with VWD, which are used on rare occasion. The last significant use of the intertie was in 2008 to fill the City's new 5 MG reservoir, followed by some additional use in 2014 (147 AF) and 2015 (262 AF), both due to well maintenance on two wells to ensure the ability to meet demands. The temporary transfer amounts are shown in Table 6-2.

One intertie is located on Air Expressway Boulevard just east of Highway 395. That intertie is a two-way connection from which Adelanto and VWD can both obtain and provide water. The second intertie is located near the intersection of Bellflower Street and Olivine Road. That intertie only allows one way flow from VWD to Adelanto. These two interties provide a potential additional source of water in case of a shortage or emergency. However, the City of Victorville also obtains all of its water from the local groundwater supply, and thus its reliability is also tied directly to the reliability of the groundwater supply.

[43] Ibid

Because Adelanto is entirely dependent on the local groundwater supply, to improve future reliability, the City is considering future projects that would allow direct purchase of wholesale imported water, such as from the Barstow Pipeline Treatment Plant, described in Section 6.7.

6.6 Future Water Projects

City of Adelanto Projects

The City continually reviews practices that will provide its customers with adequate and reliable supplies. Trained staff provide safe reliable water, which meets present and future needs in an environmentally and economically responsible manner. The City also works closely with MWA in regional water supply issues as well as water shortage contingency planning.

The City anticipates water demands within its service area will increase over the next 25 years mainly due to population increases within the Adelanto's service area. Water use efficiency measures (demand management measures) described in Section 9 and recycled water use described in Section 6.3 of this plan have the potential to reduce overall demand on potable water thereby reducing overall per capita usage.

The City has identified a number of capital projects aimed at improving the City's water supply reliability and enhancing the operations of the City's facilities. These projects, which are referenced in the City's Capital Improvement Program, include:

1. Water Well 14A Upgrade – Well 14A would be redirected through the water treatment plant to provide treatment for high Manganese. Total design and construction cost for this project have been estimated at $20,000. *Status:* Piping and pump design are under review.

2. Upgrade Electrical Switch Gear Booster and Booster 1200 B1Motor Replacement – The electrical switch gear booster 1200 and the B1 motor have surpassed their useful life. Upon failure of this equipment, the City could lose up to 65 percent of its water delivery. Total design and construction cost for this project have been estimated at $425,000. *Status:* Reviewing feasibility and cost estimates for electrical design.

3. Well 5A Rehabilitation – Well 5A was vandalized in 2013 and is currently inactive as shown in Table 6-5. A new motor and variable frequency drive system are needed. Activating this well will allow the City to access additional local groundwater and maintain a reliable supply of water into the future. Total design and construction cost for this project have been estimated at $215,000. *Status:* Reviewing feasibility and cost estimates for well design and rehabilitation.

4. Well 6 Rehabilitation – Well 6 pump and motor are at the end of their useful life and are inoperable. The well pumped only 33 AF in 2015 as shown in Table 6-5 and is currently inactive. Activating this well will allow the City to access additional local groundwater and maintain a reliable supply of water into the future. Total design and construction cost for this project have been estimated at $269,000. *Status:* Completed.

5. Reservoir Mixers – The installation of reservoir mixers at five reservoirs will eliminate stratification and help maintain water quality, as well as more consistent CL2 (chlorine) residual. Total design and construction cost for this project have been estimated at $192,500. *Status:* Feasibility is complete and obtaining approval.

6. Water Treatment Plant Project – The City has access to the State Project Water via the Barstow Pipeline, but before the surface water can be utilized, it must first be treated. The utilization of the State Project Water in future years will be important in meeting the City's future development needs. To assist in meeting that need, this project envisions design and development of a water treatment facility to treat SWP to meet safe drinking water standards as well as the extension of transmission lines to connect that source to the City's distribution grid. Total design and construction costs for this project have been estimated at $11.75 million. *Status:* Studying feasibility.

7. Water Reclamation Pipeline and Storage Project – As discussed in further detail in Section 6.3, the City has been exploring construction of a recycled water system as an alternative source of water for irrigation and other non-potable uses. This project would involve the design and development a waste water effluent reclamation facility capable of storing and distributing recycled water as well as construction of a recycled water distribution system with connections to parks and streetscape irrigation. Total design and construction costs for this project have been estimated at $4.5 million. *Status:* A portion of the recycled water system has been constructed; however, further construction is needed to treat wastewater to tertiary levels for recycled use and transmission pipelines must be constructed.

8. Water Storage Reservoir Zone 3 Tank Site Project - The City has identified the need to expand existing storage capacity to meet future peak demands relating to the potential development of a new prison facility. The City has additional space at the existing storage facilities in pressure zone three. This project will include design and construction of one to two additional storage reservoirs. Total design and construction costs for this project have been estimated at $4.5 million. *Status:* Reviewing feasibility.

9. Supervisory Control and Data Acquisition System (SCADA) – A SCADA system is envisioned to automatically operate the City's water treatment plant, wells, and storage reservoirs. SCADA controls the on-off operation of the wells and booster pumps, alerts staff to malfunctions and their location, generates reports, provides storage reservoir water levels, and other data, which will contribute to the increased reliability of the overall water system. The proposed system will replace an existing system, which is over 15 years old, obsolete, and inefficient, suffers from frequently malfunctions and requires semi-automatic or manual operation. Total design and construction costs for this project have been estimated at $400,000. *Status:* The City released a Request for Proposals for a SCADA system and proposal received are currently under review.

10. Valve Operator & GIS Software – Valve operators have been identified as a means to more efficiently exercise the City's water valves. The Geographic Information System (GIS) software, in conjunction with handheld Geographic Positioning (GPS) devices will be used to identify the locations of these valves. Total implementation costs for this

project has been estimated at $30,000. *Status:* Valve operators remain under consideration; the GIS software has been purchased and is in place; and the GPS handheld devices remain in the budget to be purchased.

11. Utility Vacuum – A 500-gallon utility vacuum would be used during water line breakages and valve box clean-outs. This vacuum would facilitate water system repairs and enable the system to be returned to operation quickly. The vacuum would also be used to pothole or locate water lines on an as-needed basis. Purchase of this equipment is estimated to cost $60,000. *Status:* Studying feasibility.

Regional Agency Projects and Programs

The planned projects and programs implemented by MWA to secure water supplies and effectively recharge the groundwater supply in the Mojave River Basin directly affect the reliability of the City's water supply.

To account for the variability of available SWP water and to prevent shortages during dry years, MWA banks SWP storage water when possible. Although there can be a large variability in available SWP supplies, MWA's available SWP supply on average is greater than the demand within their service area. MWA takes advantage of this by storing the excess water in various groundwater basins for future use when SWP supplies are not available.

To enhance the long-term reliability of the water supply, MWA is currently exploring opportunities to purchase water supplies from other water agencies and sources, in addition to SWP water supplies. MWA has made short term transfers with the Metropolitan Water District of Southern California and the Sonoma County Water Agency. Although these exchange programs were short-term, they represent the types of exchange opportunities that MWA and other SWP contractors have to maximize utilization of available water supplies from the SWP.

MWA has supply enhancement projects planned to prevent groundwater overdraft in the future and improve supply reliability. The MWA 2015 UWMP includes a list of basin management strategy projects that will improve water reliability within the Mojave Basin Area. Details of the following basin management strategies are included in section 6.2.1 Groundwater, Basin Management Strategies on page 6-11.

1. Groundwater storage and banking programs
2. Groundwater replenishment system, including Oro Grande Wash Recharge Project
3. Regional Rehabilitation and Recovery Project (R3 Project)
4. Treated wastewater recharging
5. Groundwater monitoring

6.7 Summary of Existing and Planned Sources of Water

Table 6-12 shows the City's existing and planned sources of reasonably available water through 2040.

Table 6-12: City of Adelanto – Existing and Planned Sources of Water (AFY)						
Water Supply Source	Existing	Planned/Projected				
	2015	2020	2025	2030	2035	2040
Groundwater Production[2]	3,787	9,300	10,444	11,581	12,640	13,750
Groundwater Transfer - Intertie with VWD[3]	262	0	0	0	0	0
Total	**4,049**	**9,300**	**10,444**	**11,581**	**12,640**	**13,750**

[1] 2015 UWMP Guidebook Excel Table 6-8 Water Supplies – Actual and Table 6-9 Water Supplies – Projected.
[2] Mojave Groundwater Basin (see footnote 22); consistent with Tables 6-2 and 6-5.
[3] Transfers between VWD and the City is also from groundwater; future year projections are determined annually and cannot be projected.

6.8 Climate Change Impacts to Supply

Climate change is driven by increasing concentrations of carbon dioxide and other greenhouse gases that cause an increase in temperature and stress natural systems, such as oceans and the hydrologic cycle.

DWR's California Water Plan Update 2013 (CWP) considers how climate change may affect water availability, water use, water quality, and the ecosystem.[44] Volume 1, Chapter 5 of the California Water Plan, "Managing an Uncertain Future," evaluated how statewide and regional water demands that might change by 2050 in response to uncertainties both gradual and sudden. The uncertainties will play out differently across the regions of California. Each region will need to develop a portfolio of resource management strategies that consider regional water-management challenges and can be implemented to address regional issues.

The effects of climate change may increase the occurrence of droughts and floods. The 2015 Delivery Capability Report[45] was released by the State of California Natural Resources Agency, Department of Water Resources to inform the public about the capabilities and operation of the SWP in the face of such uncertainties. Delta risk management and anticipation of sea level rise are among the policies and planning efforts regarding climate change.

Climate changes that may affect the Mojave Basin water resources include:

- Higher temperatures, lower precipitation, and heat waves that increase demand for water, especially for agricultural and residential irrigation uses.
- Water Uncertainty: A projected overall decrease in precipitation levels coupled with more intense individual storm events may lead to increased flooding. Higher temperatures that may cause more precipitation to fall as rain rather than snow, hasten snowmelt and increase runoff will affect water storage planning. Increased evaporation will create a generally drier climate, with wildfires likely to increase and groundwater basins likely to receive less replenishment.

[44] California Water Plan Update 2013 Investing in Innovation & Infrastructure: Bulletin 160-13.
[45] State Water Project Final Delivery Capability Report, 2015 - State of California Natural Resources Agency, Department of Water Resources

MWA prepared a Climate Change Assessment as part of the Mojave Integrated Regional Water Management Plan, Final June 2014 Report, which describes the potential effects of climate change, the region's vulnerability to climate change, and potential strategies for adapting to climate change.

A thorough discussion of climate change impacts to the City's water supply is presented in Section 3.4 Potential Effect of Climate Change, page 3-9.

6.9 WATER QUALITY OF EXISTING SOURCES

As required by the Safe Drinking Water Act, which was reauthorized in 1996, the City provides annual Water Quality Reports to its customers; also known as Consumer Confidence Reports (CCR) (Appendix K). This mandate is governed by the Environmental Protection Agency (EPA) and the California Department of Public Health (CDPH) to inform customers of their drinking water quality. In accordance with the Safe Drinking Water Act, the City monitors a number of regulated and unregulated compounds in its water supply. As noted in the City's most recent (2014) CCR.

6.9.1 Imported Water

As previously noted, during normal operation of the water system, there are no transfer exchanges of imported water within the City's service area. The City does not typically import water from either of its two emergency interties with VWD; however, it recently received receive water through interties in 2013 and 2015.

Although Adelanto does not supply imported water to its customers, if the City exceeds its FPA and purchases replacement water from MWA, then MWA will recharge the basin with imported SWP water and recycled wastewater. The City's usage therefore has a direct effect on the volume of water that MWA recharges into the basin. The imported SWP water and wastewater are significant factors in the water quality of the Mojave River Groundwater Basin. Since the Mojave River Basin is essentially a closed basin, many contaminants from imported water will remain in the basin.

6.9.2 Groundwater

MWA maintains a comprehensive groundwater monitoring program consisting of over 900 monitoring wells in their service area. The impairment of groundwater for the beneficial use of drinking water is determined by comparing concentrations of constituents of concern in the groundwater against drinking water maximum contaminant levels (MCLs) and agricultural water quality parameters needed for specific crops. MCLs consist of primary and secondary MCLs. Primary MCLs are assigned to constituents for which a health-based risk is associated with consumption of water that exceeds a particular concentration. Secondary MCLs are assigned to constituents for which there is no considered health risk, but for which there may be aesthetic concerns such as taste, odor, color, etc. above a particular concentration.

There are numerous groundwater quality issues within the MWA service area. Key groundwater constituents of concern include arsenic, nitrates, iron, manganese, Cr-VI, fluoride, and total dissolved solids (TDS). Some of these constituents are naturally occurring

in desert environments while others are associated with human (anthropogenic) activities. Measurements in excess of drinking water standards have been found for some of these constituents within the Mojave River Basin and the Morongo Basin. Groundwater in these areas may have to be treated prior to consumption. Contaminant constituents of concern are addressed in further detail below.

Salinity

Because the Mojave River Basin is essentially a closed basin, salinity is a concern because salt contained in imported recycled wastewater and SWP supplies remain in the basin. Water from the SWP generally is low in salinity, with Total Dissolved Solids (TDS) averaging 250 mg/L over the long term in water supplied through the East Branch and 325 mg/L in water supplied through the West Branch. However, salinity in wastewater imports can be high.

Because SWP water and wastewater imports to the Mojave River Basin will be long term and persistent, MWA and the Lahontan regional Water Quality Control Board completed a cooperative study in 2007 to address salt balance within the MWA service area. The report basically showed that importation of SWP water mitigated the long-term effects of increased TDS primarily caused by population increases and the associated larger volumes of wastewater entering into the basins.

In December 2015, MWA completed a Salt and Nutrient Management Plan (SNMP), which provides an evaluation of potential groundwater quality issues that may result from sources of salts and nutrients and determine if these constituents would unreasonably degrade groundwater quality and potentially decrease the beneficial uses of groundwater within the basin. For the MWA SNMP, TDS and nitrate were analyzed as appropriate indicator constituents of salts and nutrients (S/Ns). These two constituents are the focus of the characterization of existing S/N groundwater quality.

Total salinity is commonly expressed in terms of TDS as milligrams per liter (mg/L). TDS concentrations in the groundwater are influenced by the chemistry of the aquifer and quality of water recharging the aquifer. TDS is not a health hazard at typical groundwater concentrations but can be an aesthetic issue and can shorten the useful life of pipes and water-based appliances in homes and businesses. TDS monitoring data are widely available for source waters (both inflows and outflows) in the service area, and because TDS is a general indicator of total salinity, TDS is an appropriate indicator of salt loading. TDS can be an indicator of anthropogenic impacts, but there are also naturally occurring background TDS concentrations in groundwater. The background TDS concentrations in groundwater can vary considerably based on purity and crystal size of the minerals, rock texture and porosity, the regional structure, origin of sediments, the age of the groundwater, and other factors.

TDS concentrations generally increase in downgradient portions of the Mojave River Basin and along groundwater flowpaths away from the primary recharge source in the basin, the Mojave River. Elevated TDS concentrations (greater than 1,000 mg/L) are generally associated with natural processes including mineralization and evaporation beneath dry lake beds.

The recommended Secondary MCL for TDS is 500 mg/L with an upper limit of 1,000 mg/L and a short-term limit of 1,500 mg/L. MWA monitoring indicates TDS levels of 421 mg/L in the Alto Subarea.[46] According to the City's 20014 CCR, TDS levels in Adelanto varied from 94 to 350 mg/L and averaged 176 mg/L.

Arsenic

Arsenic, which has been linked to certain cancers and skin conditions, is a naturally occurring element found in rocks, soil, water, and air. Arsenic from these sources can enter the water supply through the natural erosion of rocks, as well as the dissolution of ores and minerals. Arsenic can also be found in wood preservatives, alloying agents, certain agricultural applications, semi-conductors, paints, dyes, and soaps. Agriculture and industrial discharges from these sources can contribute to elevated levels of arsenic in drinking water supplies.

The federal MCL for arsenic in domestic water supplies of 10 µg/L has been in effect since January 2006 and California's revised arsenic MCL of 10 µg/L became effective on November 28, 2008 for both groundwater and surface water supplies. Previous California and federal MCLs for arsenic were 50 µg/L.

In April 2004, based on reported lung and urinary bladder cancer risk data, California's Office of Environmental Health Hazard Assessment (OEHHA) set a public health goal (PHG) for arsenic of 0.004 µg/L, to correspond to a *de minimis* cancer risk level. Arsenic can also result in a number of non-cancer effects at higher levels of exposure (e.g., vascular effects or skin effects), but the cancer risk is the most sensitive endpoint, and the basis for the PHG.

Monitoring results reported on CDPH's website for the period 2002-2005 showed arsenic is ubiquitous in drinking water sources, reflecting its natural occurrence. Those results also show many sources have arsenic levels above the 10 µg/L MCL (e.g., Southern California drinking water sources containing arsenic concentrations over 10 µg/L include San Bernardino (64 sources), Los Angeles (48 sources), Riverside (26 sources), Orange (4 sources), and San Diego (5 sources)).[47]

According to the City's 2014 CCR, arsenic levels in Adelanto varied from non-detect to 10 µg/L and averaged .48 µg/L, all of which are below the MCL.

In 2010, arsenic was detected in Well 8A with a concentration of 39 µg/L. That well was removed from service at that time and remains out of service until appropriate mitigation measures can be taken or the contaminant level drops below the MCL. In addition, the City's 2014 CCR reports that arsenic levels in Well 4 were found to exceed the MCL of 10 ppb (10 µg/L). Well 4 water is being blended with well waters with low levels of Arsenic to produce finished water below the MCL for Arsenic. A blending plan for Arsenic was submitted to CDPH in 2013.

[46] Draft MWA 2015 UWMP, May 9, 2016
[47] CDPH: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Arsenic.shtml - note the numbers reported on this site can change as the site is updated.

Chromium

Like arsenic, chromium is a naturally occurring element found in rocks, soil, plants, and animals. Chromium III is typically the form found in soils and is an essential nutrient that helps the body use sugar, protein, and fat. Chromium VI is used in a number of industrial applications including electroplating, stainless steel production, leather tanning, textile manufacturing, dyes and pigments, wood preservation and as an anti-corrosion agent. Chromium occurs naturally in deep aquifers and can also enter drinking water through industrial discharges. In drinking water, chromium VI is very stable and soluble, whereas chromium III is not very soluble. Chromium VI is the more toxic form and is known to cause lung cancer in humans when inhaled, but the human health effects from ingestion are still a subject of conjecture.

The MCL for chromium VI is 10 ug/L became effective on July 1, 2014. According to the City's 2014 CCR, chromium levels in Adelanto were non-detectable to 12 ug/L with an average of 3.94 ug/L, which is below the MCL.

Nitrates

Nitrate is a widespread contaminant in California groundwater. In drinking water, high nitrate levels can have acute health problems in infants less than six months old, causing a condition called methemoglobinemia, commonly known as "blue baby syndrome". Long-term health impacts in adults are not well-known, although some experts believe that long-term ingestion of water high in nitrate may increase the risk of certain types of cancer. High levels of nitrate in groundwater are associated with agricultural activities, septic systems, confined animal facilities, landscape fertilization, and wastewater treatment facilities. Nitrate does occur naturally in groundwater; however, natural nitrate levels in groundwater are generally very low (typically less than about 10 mg/L as nitrate (NO3)).

The MCL for nitrate in domestic water supplies are:[48]

- 45 (mg/L) for nitrate as NO3 (equivalent to 10 mg/L for nitrate as nitrogen (N))
- 10 mg/L for nitrate plus nitrite as N
- 1 mg/L for nitrite as N

Monitoring data sent to CDPH from 2002 to 2005 showed that many sources in California have high nitrate levels above MCLs. Nitrate as NO3 was detected at least once above its MCL in 731 sources (San Bernardino with 82 sources), nitrate + nitrite as N was detected at least once above its MCL in 169 sources (San Bernardino with 38 sources), and nitrite as N was detected at least once above its MCL in 21 sources. However, MWA sampling data indicates an average NO3 level of 2.5 mg/L, which is well below the MCL.[49]

According to the City's 2014 CCR, Nitrate levels in Adelanto varied from non-detect to 12

[48] CDPH: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Nitrate.shtml - note the numbers reported on this site can change as the site is updated.
[49] Draft MWA 2015 UWMP, May 9, 2016 and MWA 2014 Consumer Confidence Report: https://www.mojavewater.org/files/CCR2014.pdf

mg/L and averaged 3.94 mg/L, which is below the MCL.

As presented in the City's 2014 CCR, the City failed to monitor as required for drinking water standards for Nitrate during 2014 and, therefore, was in violation of the regulations. Even though this failure was not an emergency, the City's customers have a right to know what they should do, what happened, and what the City did to correct this situation.

The City is required to monitor drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not its drinking water meets health standards. During 2014, the City not complete all monitoring for Nitrate and therefore, cannot be sure of the quality of its drinking water during that time.

Nitrate samples are required to be taken annually from source water wells used for potable water consumption. During 2014, five of the ten wells were sampled for Nitrate and five were not. The latter five wells are utilized intermittently during the year on an as-needed basis; one well was out of service for maintenance issues and samples were not taken from that well. The remaining four wells were not sampled in accordance with the required sampling frequency.

Currently, one well remains out of service for maintenance and will be sampled when the well is returned to service. The remaining four wells were sampled on June 2, 2015. The results from Nitrate sampling was "non-detect" respectively for these wells. Nitrate sampling met water quality standards.

Methyl Tertiary-Butyl Ether (MTBE)

MTBE was the primary oxygenate in virtually all the gasoline used in California, prior to discovering it contaminated groundwater supplies and was found in surface water supplies. Following that discovery, MTBE was banned in California as of December 31, 2003 and was subsequently replaced by ethanol, which is now the primary oxygenate in use. In 2000, CDPH adopted a primary MCL of 13 µg/L for MTBE based on carcinogenicity studies in animals. MTBE has a California secondary MCL of 5 µg/L, which was established based on taste and odor concerns.[50]

MTBE is a serious threat to groundwater because it is very soluble in water and has low affinity for soil particles, so it moves quickly into the groundwater. Unfortunately, MTBE is also resistant to chemical and microbial degradation in water, thereby making treatment more difficult than that employed to remove other gasoline components. However, a combination of an advanced oxidation process (typically ozone and hydrogen peroxide) followed by granular activated carbon has been found to be effective in reducing the levels of these contaminants.

MWA's 2004 Regional Management Plan indicates that MTBE is not a concern in the Alto Subarea. Improved underground storage tank requirements and monitoring procedures, as well as the phase-out of MTBE as a fuel additive decreased the likelihood of MTBE groundwater problems. As a result, both the MWA 2015 UWMP and the Mojave Region

[50] CDPH: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/MTBE.shtml - note the numbers reported on this site can change as the site is updated periodically.

IRWM Plan (June 2014) do not include a discussion on MTBE.

Manganese and Iron

Iron and manganese are both naturally occurring elements in groundwater and often occur together. High levels of these contaminants in drinking water are not known to pose direct adverse neurotoxic health risks. Children are considered to be particularly susceptible to possible effects of high levels of manganese exposure because they absorb and/or retain more manganese than adults.

However, high levels of iron and manganese in drinking and irrigation water can be associated with aesthetic issues and can cause damage and reduced effectiveness of water distribution and treatment systems. Within the region, iron and manganese levels have been detected above the MCL in the Centro Subarea along the Mojave River in the vicinity of Barstow, in the Alto TZ subbasin, and in localized areas of the Morongo Subarea. Localized elevated concentrations of manganese were also identified in Lucerne Valley in the Este Subarea.

Manganese is regulated by a 50 µg/L (.05 mg/L) secondary MCL. Monitoring data sent to CDPH showed that about 20 percent of drinking water sources monitoring for manganese have reported detections greater than the 0.05- mg/L secondary MCL.[51] According to the City's 2014 CCR, all Manganese samples taken in Adelanto were non- detect to 1.0 ug/L.

Iron in drinking water is typically not considered hazardous to health and is considered a secondary or aesthetic contaminant. The MCL for iron in water is currently 300 µg/L and is based on taste and appearance, rather than detrimental health effects. According to the City's 2014 CCR, Iron levels in Adelanto varied from non-detect to 20 µg/L, all of which were below the MCL. Filtration treatment is required for Iron and Manganese for wells 1G, 3G2, 4G, and 8G2.

Groundwater Quality Protection

In recognition of the serious threat posed by groundwater contamination, MWA implements groundwater protection activities to maintain the groundwater and the aquifer and ensure a reliable high quality supply. These activities include water quality monitoring, managing recharge site activities, hazardous materials response, and education and coordination with local agencies.

6.10 WATER QUALITY EFFECT ON WATER MANAGEMENT STRATEGIES AND SUPPLY RELIABILITY

The previous section summarized the general water quality issues that may be associated with water extracted from the Alto Subarea. As noted in MWA's 2015 UWMP,[52] water quality does not materially affect water supply reliability in the region. The City has not experienced any significant water quality problems in the past and does not anticipate any

[51] CDPH: http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Manganese.shtml
[52] Draft MWA 2015 UWMP, May 9, 2016, and MWA 2014 Consumer Confidence Report: https://www.mojavewater.org/files/CCR2014.pdf

significant changes in the future, due in large part to the mitigation actions undertaken by MWA.

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7.0 WATER SUPPLY RELIABILITY

Assessment of water supply reliability is complex and dependent upon a number of factors, such as the number of water sources, regulatory and legal constraints, climate change, and expected growth, among others. Reliability of water supplies is based upon known information by the City and its water supplier at the time this 2015 UWMP was prepared.

Water supply reliability describes the long-term reliability of the City's water supplies. Shorter term reliability planning that may require immediate action, such as drought or a catastrophic supply interruption, is addressed in Chapter 8, Water Shortage Contingency Planning.

The Southern California region faces a challenge in satisfying demands and securing firm water supplies. Increased environmental regulations and the competition for water from outside the region have exacerbated these challenges. Continued population and economic growth has also led to increased regional water demands, which results in larger demands on local supplies.

Reliability is a measure of a water system's expected success in meeting the demands both in normal years and in years of water shortages. This section provides a description of the City's efforts in maintaining an adequate and reliable water supply and MWA's efforts in maintaining the region's groundwater supply in the Mojave Basin Area. In normal years, the City obtains all of its water supply from local groundwater aquifer. Given the City's total reliance on groundwater, the reliability of the City's water supply is thus entirely dependent on the reliability of the groundwater in the Mojave River Basin managed by MWA. Based on MWA's analysis, MWA has adequate supplies to meet demands during average, single-dry, and multiple-dry years throughout the 25-year planning period.[53]

Almost all of the water used within MWA's service area is supplied by pumped groundwater. To supplement the local groundwater supplies, MWA recharges the groundwater basins with SWP imported water, natural surface water flows, wastewater imports from outside MWA's service area, agricultural depletion from storage, and return flow from pumped groundwater not consumptively used. MWA's sources are only used to recharge the groundwater basins and are not supplied directly to any retailers, with the exception of two power plants, the High Desert Power Project and the LUZ Solar Plant.

MWA is actively operating recharge sites along their Mojave River Pipeline and Morongo Basin Pipelines. Their current recharge sites include Hodge, Lenwood, Daggett, Newberry Springs, and Rock Springs Outlet. These recharge sites provide MWA with the ability to recharge SWP water into subareas where replacement water is purchased, as well as the ability to bank excess SWP water, when available.

State funding has been made available, through California voters' approval, to increase reliability of state water supplies. In March 2000, California voters approved Proposition 13, which authorized the State to issue $1.97 billion of its general obligation bonds for water

[53] Draft MWA 2015 UWMP, Section 6 Reliability Planning, May 9, 2016

projects. Additionally, California voters approved Proposition 50 in November 2002, Proposition 84 in November 2006, and Proposition 1 in November 2014, which authorized the issuance by the State of $3.4 billion, $5.4 billion, and $7.545 billion, respectively, of general obligation bonds for water projects. Types of water projects eligible for funding under the Propositions include, but not limited to, water conservation, surface and groundwater storage, water treatment, water quality, ecosystem and watershed protection and restoration, drinking water protection, and Colorado River water management projects.

7.1 Constraints and Strategies on Water Sources

Each water supply source has its own reliability characteristics. In any given year, the variability in weather patterns around the state may affect the availability of supplies to the region differently. The City's service area is typical in terms of water management in southern California: local groundwater supplies are used almost exclusively in the region; imported water is recharged when available to sustain the local groundwater production; and local groundwater production is fairly consistent but availability of imported supplies are tied to annual climate conditions in northern California. This pattern of "conjunctive use" has been in effect since SWP supplies first came to the MWA's service area in 1978. SWP supplies have supplemented the overall supply of the MWA service area, which previously depended solely on local groundwater supplies.

7.1.1 Imported Water Source

MWA was formed to manage water resources within its service area, which encompasses the City of Adelanto. In this capacity, MWA has been planning and implementing projects to increase water supply reliability and prevent future water shortages.

To supplement the local groundwater supplies, MWA contracts with DWR for delivery of SWP water, providing an imported water supply to the groundwater basins. The SWP is owned and operated by DWR. The reliability of the SWP impacts MWA member agencies' ability to plan for future growth and supply, meeting the overall water supply needs for the region. On an annual basis, each of the 29 SWP contractors, including MWA, request an amount of SWP water based on their anticipated yearly demand. While the groundwater basin's available supply sources has some variability, the variability in SWP supplies has the largest effect on overall annual supply reliability. This annual variability is mitigated through the use of the groundwater aquifer by pre-storing SWP water when it is available.[54]

Each SWP contractor's Water Supply Contract contains a "Table A" amount that identifies the maximum amount of water that the contractor may request as specified in the contract between the DWR and the contractor. However, the amount of SWP water actually allocated to contractors each year is dependent on a number of factors that can vary significantly from year to year. The primary factors affecting SWP supply availability include hydrologic conditions in northern California, the amount of water in SWP storage reservoirs at the beginning of the year, regulatory, environmental and operational constraints, and the total amount of water requested by the contractors. The availability of SWP supplies to MWA and the other SWP contractors is generally less than their full Table A amounts in many

[54] SWP reliability discussion is based on information in the Draft MWA UWMP, May 9, 2016.

years and can be significantly less in very dry years, as shown in the last few years. Table 7-1 lists the historical SWP deliveries to MWA.[55]

Table 7-1: SWP Historical Deliveries to MWA

Year	Full MWA Table A Amount (AF)	Actual SWP Delivery to MWA (AF)	MWA Percent of Full Table A Amount	Final Statewide SWP Allocation
1981	22,843	0	0%	100%
1982	34,300	0	0%	100%
1983	36,700	24,489	67%	100%
1984	39,000	0	0%	100%
1985	41,400	0	0%	100%
1986	43,700	0	0%	100%
1987	46,000	0	0%	100%
1988	48,500	0	0%	100%
1989	50,800	0	0%	100%
1990	50,800	0	0%	100%
1991	50,800	3,423	7%	35%
1992	50,800	10,674	21%	45%
1993	50,800	11,487	23%	100%
1994	50,800	17,652	35%	50%
1995	50,800	8,740	17%	100%
1996	50,800	7,427	15%	100%
1997	50,800	14,040	28%	100%
1998	75,800	5,892	78%	100%
1999	75,800	8,071	11%	100%
2000	75,800	11,362	15%	90%
2001	75,800	4,320	6%	39%
2002	75,800	4,218	6%	70%
2003	75,800	39,242	52%	90%
2004	75,800	12,840	17%	65%
2005	75,800	33,323	44%	90%
2006	75,800	33,927	45%	100%
2007	75,800	20,064	26%	60%
2008	75,800	17,007	22%	35%
2009	75,800	21,528	28%	40%
2010	82,800	22,364	27%	55%
2011	82,800	*undetermined*	*undetermined*	80%
2012	82,800	*undetermined*	*undetermined*	65%
2013	82,800	*undetermined*	*undetermined*	20%
2014	82,800	*undetermined*	*undetermined*	35%
2015	85,800	8,909	10%	20%

MWA's current full Table A amount is 85,800 AFY in 2015 and will increase to 89,800 AFY between 2020 and 2040. Increases in MWA's Table A amount between 2009 and 2035 are

[55] Full Table A data extracted from DWR/MWA contract with Amendments through 10/12/2009 at: http://water.ca.gov/swpao/docs/wsc/MWA_O_C.pdf. SWP Delivery data extracted from MWA's Draft 2015 UWMP, May 9, 2016; 2015 water delivery data: http://www.mojavewater.org/water-deliveries.html;

from a 14,000 AFY purchase from Dudley Ridge Water District.
DWR prepares a biennial report to assist SWP contractors and local planners in assessing the near and long-term availability of supplies from the SWP. DWR issued its most recent update, the 2015 DWR State Water Project Delivery Capability Report (DCR), in July 2015. In the 2015 update, DWR provides SWP supply estimates for SWP contractors to use in their planning efforts, including for use in their 2015 UWMPs. The 2015 DCR includes DWR's estimates of SWP water supply availability under both current and future conditions.

DWR's estimates of SWP deliveries are based on a computer model (CalSim II) that simulates monthly operations of the SWP and Central Valley Project (CVP) systems. Key assumptions and inputs to the model include the facilities included in the system, hydrologic inflows to the system, regulatory and operational constraints on system operations, and projected contractor demands for SWP water. For example, the 2015 DCR uses the following assumptions to model current conditions: existing facilities, hydrologic inflows to the model based on 82 years of historical inflows (1922 through 2003), current regulatory and operational constraints, and contractor demands at maximum Table A amounts.

To evaluate SWP supply availability under future conditions, the 2015 DCR included four model studies. The first of the future-conditions studies, the Early Long Term (ELT) scenario, used all of the same model assumptions for current conditions, but reflected changes expected to occur from climate change, specifically, a 2025 emission level and a 15 cm sea level rise. The other three future conditions include varying model assumptions related to the Bay Delta Conservation Plan/California Water Fix (BDCP), such as changes to facilities and/or regulatory and operational constraints.

In spring 2015, DWR announced that BDCP would move from a Section 10 permit to a Section 7 permit process under the Federal Endangered Species Act. As a practical matter, this split the project into two distinct parts known as Cal WaterFix (Alternative 4A), the conveyance portion, and Cal EcoRestore, the restoration portion. Cal WaterFix is Alternative 4A in the recirculated environmental document, and the preferred alternative. Alternative 4A is different than any of the future scenarios modeled by DWR in the DCR. While there is widespread support for the BDCP/Cal WaterFix project, it would be speculative at this time to assume they will move forward. While there is significant support for BDCP, plans are currently in flux – environmental review is ongoing and is not anticipated to be final until at least 2016, and several regulatory and legal requirements must be met prior to construction.

For purposes of the MWA UWMP, the ELT scenario analyzed in DWR's 2015 DCR is deemed to be the most conservative and appropriate study to use for long-term planning estimates of future SWP supply availability. The ELT scenario, based on existing facilities and current operations, adjusted for the expected effects of climate change, is consistent with the studies DWR has used in its previous SWP Delivery Reliability Reports for supply availability under future conditions. Therefore, future SWP supply availability is based on the ELT study included in the 2015 DCR. In the 2015 Report, DWR presents the results of its analysis of the reliability of SWP supplies, based on model studies of SWP operations. In general, DWR model studies show the anticipated amount of SWP supply that would be available for a given SWP water demand, given an assumed set of physical facilities and operating constraints, based on more than 80 years of historic hydrology. The results are interpreted as the capability of the SWP to meet the assumed SWP demand, over a range of

hydrologic conditions, for that assumed set of physical facilities and operating constraints. DWR presents the anticipated long-term average SWP delivery reliability as a percent of full contractor Table A amounts, which is 62 percent of Table A as the long-term average supply.

The extremely dry sequence from the beginning of January 2013 through the end of 2014 was one of the driest two-year periods in the historical record. Water year 2013 was a year with two hydrologic extremes.[56] October through December 2012 was one of the wettest fall periods on record, and was followed by the driest consecutive 12 months on record. Accordingly, the 2013 SWP supply allocation was a low 35 percent of SWP Table A amounts. The 2013 hydrology ended up being even drier than DWR's conservative hydrologic forecast, so the SWP began 2014 with reservoir storage lower than targeted levels and less stored water available for 2014 supplies. Compounding this low storage situation, 2014 also was an extremely dry year, with runoff for water year 2014 the fourth driest on record. Due to extraordinarily dry conditions in 2013 and 2014, the 2014 SWP water supply allocation was a historically low 5 percent of Table A amounts. The dry hydrologic conditions that led to the low 2014 SWP water supply allocation were extremely unusual, and to date have not been included in the SWP delivery estimates presented in DWR's 2015 Delivery Capability Report.[57] It is anticipated that the hydrologic record used in the DWR model will be extended to include the period through 2014 during the next update of the model, which is expected to be completed prior to issuance of the next update to the biennial SWP Delivery Capability Report. For the reasons stated above, the MWA UWMP uses a conservative assumption that a 5 percent allocation of SWP Table A amounts represents the "worst case" scenario.

For the MWA UWMP, the availability of SWP supplies to MWA was estimated by multiplying MWA's Table A amount (85,800 AFY in 2015 and 89,800 in 2020) by the delivery percentages from the 2015 DCR, discussed below. DWR analyses projected that the SWP deliveries during multiple-dry year periods could average about 33 percent of Table A amounts and could drop as low as 11 percent during an unusually dry single year. Table 7-2 summarizes the estimated SWP supply availability in a single dry year (based on a repeat of the worst-case historic hydrologic conditions of 1977) and over a multiple dry year period (based on a repeat of the worst-case historic four-year drought of 1931-1934).

Table 7-2: SWP Supply Availability

SWP	Average Year	Single Dry Year (1977)[a]	Single Dry Year (2014)[b]	Multiple Dry Years[c]
2015 - % of Table A Amount Available	62%	11%	5%	33%
2020 - % of Table A Amount Available	62%	11%	5%	33%

(a) The percentages of Table A amount projected to be available are taken from Table 6-3 of the 2015 DCR. Supplies are calculated by multiplying MWA's Table A amount of 85,800 AF (2015) or 89,800 AF (2020) by these percentages. Maximum Table A amount is referenced from DWR Bulletin 132.
(b) Based on the 2015 DCR historic single dry year of 1977.
(c) Based on worst-case single dry year of 2014, which is not captured in the 2015 DCR.

[56] A water year begins in October and runs through September.
[57] SWP delivery estimates from DWR's 2015 SWP Delivery Capability Report are from computer model studies, which use 82 years of historical hydrologic inflows from 1922 to 2003.

7.1.2 Local Supply

Net Natural Supply

A net natural supply of 57,349 AFY, including surface and subsurface water, flows to the five Subareas in the Mojave Basin area and to the Morongo Area.[58] Because the definition of the net natural supply is long-term natural supply estimates, the supplies are going to remain constant regardless of any annual changes in hydrology. Annual fluctuations in natural supplies do not impact the long-term sustainability of the groundwater basins; therefore, the supply is assumed to be 100 percent available in single-dry year and multiple-dry year conditions.

Return Flow

Return flow is the portion of pumped groundwater not consumptively used. Return flow becomes part of the water supply via treated wastewater effluent discharge (offsite disposal), septic system discharge (onsite disposal), return flow from agricultural uses, and to a much lesser extent from the irrigation of golf courses, parks and other outdoor uses. Return flow in the form of treated effluent becomes supply to a different part of the basin than where the pumping or the water use occurred. The timing of return flow is also important when considering return flow as supply as the return flow may not become available for many years.

In both single-dry year and multiple-dry year conditions, the return flow supplied by onsite disposal and discharge of treated effluent is assumed to be available immediately; this assumption is based on the prior uses of water generating returns that are continuing or have come online recently. Consequently, for planning purposes assuming the water uses remain similar in the future as in the past, the return flow supplied is considered 100 percent available.

Treated Wastewater Effluent

Treated wastewater as a source of supply has the advantage of consistently being available during any type of single-dry or multiple-dry year. The regional water supply balance benefits from these supplies because the groundwater basin is a closed system. MWA assumed that 100 percent of the existing supply of treated wastewater is available every year, as is the planned treated wastewater supply.

Local Supply Summary

The sum of the net natural supply, wastewater imports and return flow from pumped groundwater not consumptively used is the total local supplies for MWA. Therefore, the total local supply added to the SWP imported supply is the combined total available to the Mojave Basin Area and the Morongo Area. The net natural supply from the Mojave Basin Area is projected to be approximately 55,241 AFY in average and dry years.

As discussed in Section 6.2 Water Supply, Adelanto is within the Alto Subarea of the Mojave Basin, which is an adjudicated basin under which Basin Annual Production (BAP) and Free Production Allowances (FPA) have been established. Additionally, a Production Safe Yield (PSY) is determined annually for each of the five previously referenced Subareas. The PSY for the Alto Subarea is shown in Table 7-3.

[58] Draft MWA 2015 UWMP, May 9, 2016

Table 7-3: Mojave Basin Alto Subarea Projected Groundwater Production (AFY)						
Subarea	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Alto	71,300	80,346	84,767	90,163	95,747	100,823

Source: Draft MWA 2015 UWMP, Table 3-7, May 9, 2016

Adequacy of Supply. The MWA 2015 UWMP notes the current (2014/15) BAP for the Alto Subarea was 116,412 AFY, the FPA was 72,867 AFY, and the PSY was 69,862 AFY. MWA projects net long-term Alto Subarea supply reliability in the amounts of 25,900 AFY for normal, single-dry and multiple-dry years. The long term supply to each Subarea, and the Basin Area as a whole, is assumed to be available in all year types, normal, single dry year and multiple dry year. A premise of the Mojave Basin Judgment is that all demands are met. The Mojave Basin Judgment requires that any deficit in any year, must be purchased and recharged the following year. During dry periods water will be depleted from groundwater storage (as measured against the long term average) and replaced into storage during wet periods. Annual Deficits in each Subarea are to be resolved by importation of SWP imports.

Essentially all of the water used within the MWA is supplied by pumping groundwater. The physical solution to the Mojave Basin Judgment sets limits on the amount of groundwater production that can occur in each Subarea without incurring an obligation to buy imported water. Subareas upstream have an annual obligation to provide specific inflows to Subareas downstream based on long-term averages between 1931 and 1990.

Because water use within the MWA service area is supplied entirely by groundwater, MWA does not have any inconsistent water sources that cause reduced deliveries to users within the service area. Natural supply estimates are based on the long-term averages which account for inconsistency in supplies (i.e. historic periods of drought are included in the long-term average). A potential exception is any area where water quality could limit use as a potable supply. Wellhead treatment or provision of an alternative supply is planned for these areas.

Sustainability. Producers in the Mojave Basin Area are allowed to produce as much water as they need annually to meet their requirements, including the City, subject only to compliance with the physical solution set forth in the Mojave Basin Area Judgment. An underlying assumption of the Judgment is that sufficient water will be made available to meet the needs of the Basin in the future from a combination of natural supply, imported water, water conservation, water reuse and transfers of FPA among parties.

Based on this information, MWA concluded sufficient water supplies will exist to meet the demand of their retail agencies through 2040 for all normal, single-dry and multiple dry years. While these findings are subject to future evaluation, they currently represent the best available information on which to base Adelanto's 2015 UWMP.

7.1.3 Banked Groundwater Storage

MWA has a conjunctive use program to take advantage of the available MWA SWP supply, which, on average, is greater than the demand in the service area. MWA is able to store this water for future use when SWP supplies may not be available. This activity also allows MWA

to take advantage of wet year supplies based on the abundant groundwater storage capacity available in the Basins.

During normal and wet years, MWA delivers SWP water in excess of local demands and stores the surpluses as a part of the groundwater storage program. During dry years when SWP supplies are not sufficient to meet demands, MWA debits from banked supplies to meet demands. Some retail water agencies also have banked storage accounts which they may choose to draw from during any year, regardless of weather conditions. Table 6-3 in Section 6 shows the storage available for the Alto Subarea as of December 31, 2015.

7.1.4 Groundwater Quality Constraints

Identified in Section 6, groundwater quality presents constraints in several wells.

Arsenic. In 2010, arsenic was detected in Well 8A with a concentration of 39 μg/L (MCL is 10 μg/L). Well 8A was removed from service at that time and remains out of service until appropriate mitigation measures can be taken or the contaminant level drops below the MCL. In addition, arsenic levels in Well 4 were found to exceed the MCL. Well 4 water is now being blended with well waters with low levels of Arsenic to produce finished water below the MCL for Arsenic. A blending plan for Arsenic was submitted to CDPH in 2013.

Iron and Manganese. Filtration treatment is required for Iron and Manganese for wells 1G, 3G2, 4G, and 8G2. In addition, Well 14A is currently being planned for treatment for high Manganese.

7.1.5 Infrastructure Constraints

In Section 6.6 Future Water Projects, a number of capital projects have been identified to improve the City's water supply reliability and enhancing the operations of the City's facilities. Many of these projects, which are referenced in the City's Capital Improvement Program, have been and may continue to be deferred due to budget constraints. Reliability projects include:

- Upgrade Electrical Switch Gear Booster and Booster 1200 B1Motor Replacement – The electrical switch gear booster 1200 and the B1 motor have surpassed their useful life. Upon failure of this equipment, the City could lose up to 65 percent of its water delivery.
- Well 5A Rehabilitation – Well 5A was vandalized in 2013 and is currently inactive. Activating this well will allow the City to access additional local groundwater and maintain a reliable supply of water into the future.
- Well 6 Rehabilitation – Well 6 pump and motor are at the end of their useful life and are inoperable. The well pumped only 33 AF in 2015 and is currently inactive. Activating this well will allow the City to access additional local groundwater and maintain a reliable supply of water into the future.
- Reservoir Mixers – The installation of reservoir mixers at five reservoirs will eliminate stratification and help maintain water quality, as well as more consistent CL2 (chlorine) residual.

- Water Treatment Plant Project – The City has access to SWP water via the Barstow Pipeline, but before the surface water can be utilized, it must first be treated. The utilization of the SWP in future years will be important in meeting the City's future development needs. To assist in meeting that need, this project envisions design and development of a water treatment facility to treat SWP to meet safe drinking water standards as well as the extension of transmission lines to connect that source to the City's distribution grid.
- Water Reclamation Pipeline and Storage Project – The City has been exploring construction of a recycled water system as an alternative source of water for irrigation and other non-potable uses: design and development a waste water effluent reclamation facility capable of storing and distributing recycled water as well as construction of a recycled water distribution system with connections to parks and streetscape irrigation. A portion of the recycled water system has been constructed; however, further construction is needed to treat wastewater to tertiary levels for recycled use and transmission pipelines must be constructed.
- Water Storage Reservoir Zone 3 Tank Site Project - The City has identified the need to expand existing storage capacity to meet future peak demands relating to the potential development of a new prison facility. The City has additional space at the existing storage facilities in pressure zone three. This project will include design and construction of one to two additional storage reservoirs.
- Supervisory Control and Data Acquisition System (SCADA) – A SCADA system is envisioned to automatically operate the City's water treatment plant, wells, and storage reservoirs. SCADA controls the on-off operation of the wells and booster pumps, alerts staff to malfunctions and their location, generates reports, provides storage reservoir water levels, and other data, which will contribute to the increased reliability of the overall water system. The proposed system will replace an existing system, which is over 15 years old, obsolete, and inefficient, suffers from frequently malfunctions and requires semi-automatic or manual operation.

7.1.6 SWP and MWA Water Transfer and Exchange Programs

California's agricultural activities consume approximately 34 million acre-feet of water annually, which is 80 percent of the total water used for agricultural and urban uses and 40 percent of the water used for all consumptive uses. Voluntary water transfers and exchanges can make a portion of this agricultural water supply available to support the State's urban areas. Such existing and potential water transfers and exchanges are an important element for improving the water supply reliability within MWA's service area.

MWA is currently exploring opportunities to purchase water supplies from other water agencies and sources. Such transfers, exchanges, and groundwater banking programs, are important elements to enhancing the long-term reliability of the total mix of supplies currently available to meet water demand. MWA has identified several transfer and exchange opportunities with the Metropolitan Water District of Southern California, Solano County Water Agency and other SPW contractors.[59]

[59] Draft MWA 2015 UWMP, May 9, 2016, Section 3.5.

MWA has implement or identified the following transfer and exchange opportunities throughout its service area to continue to ensure water supply reliability:

- Pre-delivery of unused SWP supplies; up to 220,000 AF from 2010 to 2030
- Antelope Valley-East Kern Water Agency; transfer 1,800 AF; ongoing
- Central Coast Water Authority; exchange 1,000 AF; ongoing
- Metropolitan Water District Water Exchange Program; 465,000 AF; ongoing
- Other SWP contractors; water transfers, exchange or banking; under consideration
- Transfer within Mojave Basin Subareas; variable; ongoing

7.1.7 Regional Water Quality Control Board – Lahontan Region 6

The State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB or Regional Board) are responsible for the protection and, where possible, the enhancement of the quality of California's waters. The SWRCB sets statewide policy, and together with the Regional Boards, implements state and federal laws and regulations. Each of the nine Regional Boards adopts a Water Quality Control Plan, also known as a Basin Plan, which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems.

The current Lahontan Basin Plan incorporates language from and replaces three earlier plans: the Lahontan Regional Board's 1975 *North and South Lahontan Basin Plans*, as amended through 1991, and the State Water Resources Control Board's 1980 *Lake Tahoe Basin Water Quality Plan*, as amended through 1989. The earlier plans were combined into a single plan which was adopted by the Lahontan Regional Board in November 1994 and which took effect upon approval by the California Office of Administrative Law in March 1995. The current Basin Plan, includes amendments through September 10, 2015, and also incorporates important provisions of the Tahoe Regional Planning Agency's *Water Quality Management Plan for the Lake Tahoe Region*.

Rather than simply a collection of abstract goals and policies, the Lahontan Region Basin forms the basis for the Regional Board's regulatory program. It sets forth water quality standards for the surface and ground waters of the Region, which include both designated beneficial uses of water and the narrative and numerical objectives which must be maintained or attained to protect those uses. It also identifies general types of water quality problems, which can threaten beneficial uses in the Region as well as required or recommended control measures for these problems. In some cases, it prohibits certain types of discharges in particular areas. The Basin Plan summarizes applicable provisions of separate State Board and Regional Board planning and policy documents and water quality management plans adopted by other federal, state, and regional agencies. The Basin Plan also summarizes past and present water quality monitoring programs, and identifies monitoring activities, which should be carried out to provide the basis for future Basin Plan updates as well as waste discharge requirements or conditional waivers. The Basin Plan is not only a resource for the Regional Board's technical staff, but also serves as an educational document for both staff and dischargers. Regional Board orders cite the Basin Plan's applicable water quality standards and prohibitions. The Lahontan Basin is also used by

other agencies in their permitting and resource management activities.[60]

7.2 Reliability by Type of Year

While the MWA service area has four sources of water supply – SWP imported water, natural surface water flow, return flow from pumped groundwater not consumptively used, and wastewater imports from outside the MWA service area, almost all of the water use within MWA is supplied by pumped groundwater. Native surface supply and SWP imports recharge the groundwater basins and are not supplied directly to any of MWA retail agencies, with the exception of two power plants. While SWP supplies, as shown in Table 7-1, on average only provides 62% of Table A amounts for an average year, 5-11% for a single dry year, and 33% for multiple dry years, MWA has indicated that groundwater supplies are available in sufficient quantity to meet demands in its service area during average, single-dry, and multiple-dry years.

The available supplies and water demands for the City's service area were analyzed to assess the region's ability to satisfy demands during three scenarios: an average water year, single-dry year, and multiple-dry years. The tables in this section present the supplies and demands for the various drought scenarios for the projected planning period of 2015 to 2040 in five year increments. Table 7-4 presents the data set (basis of water year data) for selecting Average, Single-Dry, and Multiple-Dry Years. Data is based on MWA's base years and reliability in the region and for the Mojave Basin.

Table 7-4: Basis of Water Year Data

Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	1922-2003	100%
Single-Dry Year	1977, 2014[a]	100%
Multiple-Dry Years 1st Year	1931-1934	100%
Multiple-Dry Years 2nd Year	1931-1934	100%
Multiple-Dry Years 3rd Year	1931-1934	100%
Multiple-Dry Years 4th Year	1931-1934	100%

[a] The 2015 DWR State Water Project Delivery Capability Report (DCR) utilizes 1977 as the historic single-dry water year, with an allocation of 11 percent. The allocation was lower in 2014 with a delivery percentage of five percent, but 2014 is not incorporated in the 2015 DCR. However, it is anticipated that it will be included in the next update of the DCR. Both years are shown to represent a single-dry water year.

NOTES: MWA has indicated it has adequate supplies to meet demands during average, single-dry, and multiple-dry years throughout the 25-year planning period (MWA 2015 UWMP).

[60] Additional detailed information on the Lahontan Basin Plan is available on the Lahontan RWQCB website at http://www.waterboards.ca.gov/rwqcb6/water_issues/programs/basin_plan/

7.2.1 Average Year

An average year is a year, or an averaged range of years, that most closely represents the average water supply available to the City. The UWMP Act uses the term "normal" conditions, which is interchangeable with "average". Consistent with MWA, the City has identified 1922 through 2003 as base years to calculate an average year.

7.2.2 Single-Dry Year

A single-dry year is the year that represents the lowest water supply available to the agency. The water supplies and demands for City's service area over the 25-year planning period were analyzed in the event that a single-dry year occurs. Consistent with MWA, the City has identified 1977 and 2014 as the single driest years. The 2015 DCR utilizes 1977 as the historic single-dry water year, with an allocation of 11 percent. The allocation was lower in 2014 with a delivery percentage of five percent, but 2014 is not incorporated in the 2015 DCR. It is anticipated that it will be included in the next update of the DCR. Both years are shown herein to represent a single-dry water year.

7.2.3 Multiple-Dry Year Period

A multiple dry year period is represented by the lowest average water supply availability to the City for a consecutive multiple year period (three years or more). This is generally considered to be the lowest average runoff for a consecutive multiple year period (three years or more) for a watershed since 1903. DWR has interpreted "multiple dry years" to mean three dry years; however, water agencies may project their water supplies for a longer time period.

Consistent with MWA, water supplies and demands for City's service area over the 25-year planning period were analyzed in the event that a four-year multiple-dry year event occurs, similar to the drought that occurred during the years 1931 to 1934. During multiple-dry years, SWP availability is anticipated to be reduced to 33 percent limiting the ability to recharge the groundwater basin, although MWA confirms that adequate groundwater supplies are available in all hydrologic conditions, as explained previously.

7.2.4 Sources for Water Data

The City utilized the MWA 2015 UWMP for water supply reliability data, which successively relies on DWR water supply data for the SWP, as well as local water data for natural supply, water conservation, water reuse and transfers of FPA among parties. The City also utilized certain information from the Mojave Basin Area Watermaster Annual Report for Water Year 2013-14.

7.3 Supply and Demand Assessment

MWA has stated that it has adequate supplies to meet demands during average, single-dry, and multiple-dry years throughout the 25-year planning period. The following sections present the City's supply and demand assessment/comparison in average, single-dry, and multiple-dry years through 2040. The assessment makes the best determination of the reliability of the City's water supply based upon the information that was reasonably available at the time the 2015 UWMP was prepared.

Information utilized includes known information about the City's service area as well as the Mojave Basin region, water sources, water supply reliability, and water demand projections.

Projected water demand was calculated by MWA by analyzing historical per capita water use and utilizing the population projections (Beacon Economics, December 2015). For each water purveyor within MWA's service area, historical per capita water use was calculated for each available water use sector, such as residential, commercial, industrial, landscape irrigation, etc. A logarithmic regression was applied for the historical per capita water use of each sector, which projects future per capita water use to 2060. The projected future per capita water use for each sector is aggregated into an overall future per capita water use for the water purveyor. The projected per capita water use was multiplied by the water purveyor's population projection to calculate a water use projection. Demand is projected to remain constant in the different hydrologic years – single-dry and multiple-dry.

MWA's 2015 UWMP forecasts good supply availability during all single dry years occurring over the next 25 years with supplies at 100 percent of normal year supplies in average, single dry and multiple-dry water years. These projections support MWA's finding that it has adequate supplies to meet demands during average, single-dry, and multiple-dry years throughout the 25-year planning period.

Table 7-5 shows a comparison of supply and demand in a Normal or Average year for the 25-year planning horizon in 5-year increments.

Table 7-5: Normal (Avg) Year Supply and Demand Comparison (AFY)

Average Year	2020	2025	2030	2035	2040
Supply - Groundwater	9,300	10,444	11,581	12,640	13,750
Demand	4,578	4,872	5,292	5,737	6,195
Difference	**4,722**	**5,572**	**6,289**	**6,903**	**7,555**

Table 7-6 shows a comparison of supply and demand in a Single-Dry year for the 25-year planning horizon in 5-year increments. Single-dry projections presented for the City are consistent with MWA's regional projections for Single-Dry years.

Table 7-6: Single-Dry Year Supply and Demand Comparison (AFY)

Groundwater Supply 100% of Average	2020	2025	2030	2035	2040
Supply - Groundwater	9,300	10,444	11,581	12,640	13,750
Demand	4,578	4,872	5,292	5,737	6,195
Difference	**4,722**	**5,572**	**6,289**	**6,903**	**7,555**

Table 7-7 shows a comparison of supply and demand for Multiple-Dry years for the 25-year planning horizon in 5-year increments. Multiple-Dry year projections presented for the City are consistent with MWA's regional projections for Multiple-Dry years.

Table 7-7: Multiple Dry Years Supply and Demand Comparison (AFY)

Groundwater Supply 100% of Average		2020	2025	2030	2035	2040
First Year	Supply	9,300	10,444	11,581	12,640	13,750
	Demand	4,578	4,872	5,292	5,737	6,195
	Difference	**4,722**	**5,572**	**6,289**	**6,903**	**7,555**
Difference as a % of Supply		**51%**	**53%**	**54%**	**55%**	**55%**
Second Year	Supply	9,300	10,444	11,581	12,640	13,750
	Demand	4,696	5,040	5,470	5,921	6,291
	Difference	**4,604**	**5,404**	**6,111**	**6,719**	**7,459**
Difference as a % of Supply		**50%**	**52%**	**53%**	**53%**	**54%**
Third Year	Supply	9,300	10,444	11,581	12,640	13,750
	Demand	4,755	5,124	5,559	6,013	6,387
	Difference	**4,545**	**5,320**	**6,022**	**6,627**	**7,363**
Difference as a % of Supply		**49%**	**51%**	**52%**	**52%**	**54%**
Fourth Year	Supply	9,300	10,444	11,581	12,640	13,750
	Demand	4,814	5,208	5,648	6,105	6,483
	Difference	**4,486**	**5,236**	**5,933**	**6,535**	**7,267**
Difference as a % of Supply		**48%**	**50%**	**51%**	**52%**	**53%**

7.4 Regional Supply Reliability

An urban water supplier must shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions. (CWC 10620)

The general goal of MWA's groundwater protection activities is to maintain the groundwater and the aquifer to ensure a reliable high quality supply. MWA's 2015 UWMP provides water

management strategies to achieve this goal even during dry periods based on conservative water supply and demand assumptions over the next 25 years.

To supplement local groundwater supplies, MWA contracts with the DWR for delivery of SWP water, providing an imported water supply to the groundwater basins. However, the variability in SWP supplies affects the ability of MWA to meet the overall water supply needs for the region. While each of the groundwater basin's available supply sources have some variability, the variability in SWP supplies has the largest effect on overall annual supply reliability. This annual variability is mitigated through the use of the groundwater aquifer by pre-storing SWP water when it is available.

As mentioned earlier, MWA has a conjunctive use program to take advantage of available MWA SWP supply. MWA is able to store this water for future use when SWP supplies may not be available. This activity also allows MWA to take advantage of wet year supplies because of the abundant groundwater storage capacity available in the Basins.

During normal and wet years, MWA delivers SWP water in excess of local demands and stores the surpluses as a part of the groundwater storage program. During dry years when SWP supplies are not sufficient to meet demands, MWA debits from banked supplies to meet demands.

Table 7-8 shows MWA's projected supply and demand in all water year types. Maximizing the use of SWP water, optimizing groundwater banking, continuing regional water management and coordination, along with local agency planned improvements and expansion projects, conservation and water use efficiency measures, and maximizing the use of recycled water, MWA has adequate supplies to meet demands within the region during average, single-dry, and multiple-dry years throughout the 25-year planning period.

Table 7-8: MWA Projected Supply and Demand in All Water Year Types (AFY)

Water Supply Source and Water Year Type	2020	2025	2030	2035	2040
Wholesale (Imported) (% of Table A)					
SWP – Avg/Normal Year (62%)	55,676	55,676	55,676	55,676	55,676
SWP – Single-Dry Year – 1977 (11%)	9,878	9,878	9,878	9,878	9,878
SWP – Single-Dry Year – 2014 (5%)	4,490	4,490	4,490	4.490	4,490
SWP – Multiple-Dry Year (33%)	29,634	29,634	29,634	29,634	29,634
Yuba Accord Water – Avg-Normal Year	600	600	600	600	600
Yuba Accord Water – Single- and Multiple-Dry Year	0	0	0	0	0
Local Supplies					
Net Natural Supply – All water year types	57,349	57,349	57,349	57,349	57,349

Table 7-8: MWA Projected Supply and Demand in All Water Year Types (AFY)					
Water Supply Source and Water Year Type	**2020**	**2025**	**2030**	**2035**	**2040**
Return Flow – All water year types	52,356	54,471	57,057	59,727	62,157
Wastewater Import – All water year types	2,800	2,800	2,800	2,800	2,800
Groundwater Banking – Avg/Normal Year [a]	0	0	0	0	0
Groundwater Banking – Single-Dry Year – 1977 [b]	25,983	27,857	31,164	34,579	37,685
Groundwater Banking – Single-Dry Year – 2014 [b]	31,371	33,245	36,552	39,967	43,073
Groundwater Banking – Multiple-Dry Years [b]	6,227	8,101	11,408	14,823	17,929
Total Supply – Avg/Normal Year	**168,781**	**170,896**	**173,482**	**176,152**	**178,582**
Total Supply – Single-Dry Year – 1977	**148,366**	**152,355**	**158,248**	**164,333**	**169,869**
Total Supply – Single-Dry Year - 2014	**148,366**	**152,355**	**158,248**	**164,333**	**169,869**
Total Supply – Multiple-Dry Years	**148,366**	**152,355**	**158,248**	**164,333**	**169,869**
Total Estimated Demands	**148,366**	**152,355**	**158,248**	**164,333**	**169,869**

[a] Not needed in normal/average years.

[b] Existing banked SWP water in MWA groundwater storage accounts; amounts reflect stored water needed to meet demand after all other supplies are used.

Source: Draft MWA 2015 UWMP, May 9, 2016, Tables 6-3, 6-4, 6-5, and 6-6.

8.0 WATER SHORTAGE CONTINGENCY PLANNING

California's extensive system of water supply infrastructure, its reservoirs, groundwater basins, and inter-regional conveyance facilities, mitigates the effect of short-term dry periods. Defining when a drought begins is a function of drought impacts to water users. Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Droughts occur slowly, over a multiyear period. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. In addition to climate, other factors that can cause water supply shortages include earthquakes, chemical spills, and energy outages at treatment and pumping facilities. The City has included the probability of catastrophic outages in its reliability planning.

On June 24, 2015, the City adopted a revised Water Conservation Plan (same as Water Shortage Contingency Plan) to respond to the Governor's Proclamation declaring a drought State of Emergency to exist in California due to severe drought conditions.

The January 2014 Governor's Proclamation finds that dry conditions and lack of precipitation present urgent problems to drinking water supplies and cultivation of crops, which put farmers long term investments at risk. The conditions also threaten the survival of animals and plants that rely on California's rivers, including many species in danger of extinction. The January 2014 Proclamation also calls on all Californians to reduce their water usage by 20 percent. As the drought continued, on April 25, 2014 the Governor's signed a Proclamation declaring a drought State of Emergency to exist in California due to severe drought conditions and signed an Executive Order to redouble drought actions.

The City's revised Water Conservation Plan (Appendix L) is summarized as presented in this chapter.

8.1 Stages of Action

The City of Adelanto has proposed a four-stage plan of action for implementation in the event of a long-term drought or a significant loss of supply, including losses of up to 50 percent of the water supply. The four stages of action include:

Stage 1 – Stage 1 becomes effective when the City declares a water shortage exists. In this stage, the APUA will recommend a voluntary 10 percent reduction in water use based on an established baseline year determined by the City at the time Stage 1 is implemented. Simultaneously with this declaration, the City will begin a public outreach campaign to encourage the efficient use of water. This will include articles published in local newspapers, information posted on the City's website, literature distributed to customers and educational conservation programs held on school campuses.

Stage 2 – Stage 2 is entered when the Stage 1 reduction goal has not been met for two consecutive years of a drought. Public awareness efforts will continue and a survey will be conducted on Stage 1 efforts. The City will establish a water conservation advisory committee

comprised of officials from the Adelanto Public Utilities Authority and the City of Adelanto.

Stage 3 - Stage 3 goes into effect if the water shortage continues for four consecutive years. This stage recommends 20% Mandatory reductions in water use effective June 1, 2015. A plan and Ordinance to enforce penalties for excessive water use will be developed as part of Stage 3. The Ordinance will include prohibitions against specific wasteful practices such as gutter flooding, open-hose car washing, driveway wash downs and other similar practices as described in further detail below (under the heading "Water Conservation Plan"). During Stage 3, the City will also analyze the impacts of the Conservation Plan on revenue and expenditures and propose measures to overcome those impacts.

Stage 4 – Stage 4 will be declared if a water shortage continues for one year beyond Stage 3. In this stage, the City shall determine the extent of any required additional conservation measures needed to address water supply reductions of up to 50 percent.

Consumer compliance with all stages will be enforced through penalties, as outlined in Section 8.3.

Table 8-1 shows the use reduction stages as a guideline for recommending the appropriate conservation stage and water conservation target.

Table 8-1: Stages of Water Shortage Contingency Plan

Stage	Percent Supply Reduction[1] *(Numerical value as a percent)*	Water Supply Condition *(Narrative description)*
Stage 1	Up to 10%	Water shortgage declared
Stage 2	Up to 10%	Stage 1 reduction goal has not been met for two consecutive years of drought
Stage 3	10% to 20%	Water shortage continues for four consecutive years
Stage 4	20% to 50%	Water shortage continues for one year beyond Stage 3

[1] Stage 4 in the Water Shortage Contingency Plan addresses a water shortage of 50%.

8.2 Prohibitions on End Uses – Water Conservation Plan

Chapter 8.20 (Appendix L) of Adelanto's Municipal Code entitled "Water Conservation Plan"[61] sets forth the rules and regulations governing the use of water in the City, even during

61 http://library.amlegal.com/nxt/gateway.dll/California/adelanto_ca/cityofadelantocaliforniamunicipalcode?f=templates$fn=default.htm$3.0$vid=amlegal:adelanto_ca

non-drought times. The Code also requires adherence to the City's Landscape Water Conservation Ordinance contained within Section 17.60 of the Municipal Code (Adopted by Ordinance No. 441 – Appendix M).

This section of the City's Municipal Code specifically requires all water users to abide by specific water conservation measures at all time, including during non-drought times. Table 8-2 presents a summary of the restrictions and prohibitions, following by more detailed narrative of each prohibition.

Table 8-2: Restrictions and Prohibition

Stage	Restrictions and Prohibitions on End Users	Penalty, Charge, or Other Enforcement?
All Stages	Landscape - Restrict or prohibit runoff from landscape irrigation	Yes
All Stages	Landscape - Limit landscape irrigation to specific days	Yes
All Stages	Landscape - Limit landscape irrigation to specific times	Yes
All Stages	Other - Prohibit use of potable water for washing hard surfaces	Yes
All Stages	Other - Require automatic shut of hoses	Yes
All Stages	Water Features - Restrict water use for decorative water features, such as fountains	Yes
All Stages	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Yes
All Stages	CII - Restaurants may only serve water upon request	Yes
All Stages	CII - Construction water shall be used in an efficient manner	Yes
All Stages	All new construction shall have low-flush toilets and low-flow showerheads and faucets	Yes
All Stages	Water for cooling systems must be recycled where possible	Yes
All Stages	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	Yes
All Stages	CII - Lodging establishments must post a notice to urge guests to conserve water	Yes
All Stages	Customers encouraged to install flow restrictors or pressure reducer, intall toilet tank displacement devices, and replace appliances with water savings models	Yes
All Stages	Use drought tolerant or native plant material	Yes
All Stages	Use low precipitation irrigation and timing devices	Yes
All Stages	At least 50% of new model homes shall include low water use, drought tolerant or native plants	Yes
All Stages	Provide exemptions where recycled water is used	Yes

1. The use of water for any purpose shall not result in flooding or unnecessary runoff in gutters, driveways, streets or adjacent lands.
2. Lawns, trees, shrubs, and other landscaping shall not be watered beyond what they need for growth and to sustain life and water shall not be permitted to pool or to run off property onto streets or adjacent land.

- Watering of lawns, grass, shrubbery, ground cover or other landscaping shall only be done on set watering days.
- Even address numbers water outdoor landscape on Tuesday and Thursday.
- Odd address numbers water outdoor landscape on Wednesday and Friday.
- No outdoor landscape watering on Mondays and weekends.

3. Sidewalks, walkways, driveways, parking areas, patios, porches or verandas or any other like area shall not be washed off with water from hoses or by any other means. The exception to this shall be the washing of flammable or other similar dangerous substances that require direct hose flushing using recognized safety control measures for the benefit of the public health and safety. Notification to the City of such wash down is required.
4. Water, sprinkling, aerial watering or irrigating of any landscaped or vegetated areas, including lawns, trees, shrubs, grass, ground cover, plants, vines, gardens, vegetables, flowers, or other landscaping shall not occur between the hours of 9:00 a.m. and 6:00 p.m. during the months of April through September; provided, however, that these restrictions shall not apply to hand-held hose or drip irrigation systems or to establishment of new lawns, landscaping, or gardens.
5. Non-commercial washing of privately owned vehicles, trailers, motor homes, buses, boats and mobile homes is prohibited except from a bucket, and except that a hose equipped with an automatic shut-off nozzle may be used for a quick rinse.
6. Water shall not be used to clean, fill, operate or maintain levels in decorative fountains unless such water is for replenishment of a recycling system.
7. Water lines, faucets, and other facilities shall be maintained so that they do not leak water. Existing leaks shall be repaired in a timely manner.
8. Restaurants, other food establishments, or other public places where food is served, shall not routinely provide glasses of drinking water to customers unless specifically requested by the customer.
9. Water for construction purposes including, but not limited to, debrushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, shall be used in an efficient manner. The use of aerial type sprinklers is not recommended but, if used, shall not be operated between the hours of 9:00 a.m. and 6:00 p.m.
10. All new residential, commercial and industrial construction shall be equipped with low-flush toilets and low-flow showers and faucets.
11. Water used for cooling systems must be recycled to the extent possible.
12. Evaporation resistant covers are required for all new swimming pools and hot tubs and are encouraged to be installed for existing pools. The covers required by this Chapter shall, at the time of purchase, installation and all subsequent maintenance, meet or exceed current standards and specifications for swimming pool, spa and hot tub covers adopted by the American Society for Testing and Materials (ASTM).
13. Hotels/motels are required to post a notice in substantially the form provided by the

City urging guests to conserve water.

14. All current and future water customers are encouraged to install flow restrictors or pressure reducers and to install toilet tank displacement devices (dams, bottles or bags), and as appliances or fixtures wear out, replace them with water saving models.
15. Parks, schools, golf courses, cemeteries, school grounds and all public use lands shall not irrigate between the hours of 9:00 a.m. and 6:00 p.m. during the months of April through September inclusive and are encouraged to use water conservation irrigation equipment.
16. The use of drought tolerant or native plant material is encouraged for exterior landscaping in all new residential construction, and required for new commercial and industrial construction.
17. The use of low precipitation sprinkler heads, bubblers, drip irrigation and timing devices are required in the exterior landscaping in all new residential, commercial and industrial construction.
18. At least fifty percent (50%) of all new model homes shall include as a part of the exterior landscape development low water use, drought-tolerant or native plants.
19. Projects, including Commercial and Planned Unit Developments, which utilize recycled water from sewage treatment or agricultural operations, may receive an exemption from Subsections 15 through 18 of this Section by approval of the City Council.

8.3 Penalties, Charges, Other Enforcement of Prohibitions

Chapter 8.20.050 of the City's Municipal Code stipulates that anyone who violates any provision of the City's water conservation code (Chapter 8.20) shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished in accordance with the provisions of Chapter 1.20 of the Code (Municipal Code Violations).

Enforcement Code Compliance officers shall be empowered to investigate instances of Water Waste and enforce all provisions. Officers will issue any notice of violation or administrative citation in accordance with the provision in the Chapter 8.20.050 of the City's Municipal code.

(a) Administrative Fines shall be assessed as follows:

(1) For a first violation of any prohibition of this Chapter 8.20 prior to the issuance of an administrative citation, shall be issued in accordance with the procedures for service and posting set forth in Section 8.20.050 of this Chapter.

(2) For violation (s) of any prohibitions during Shortage Stage 1, Administrative Fines may be assessed for each violation of the provisions of Section 8.20.050 in the amount of two hundred dollars ($200.00).

(3) For violation(s) of any prohibitions during Shortage Stage 2 Administrative Fines may be assessed for each violation of the provisions of Section 8.20.050 in the amount of three hundred dollars ($300.00).

(4) For violation(s) of any prohibitions during Shortage Stage 3, Administrative Fines may be assessed for each violation of the provisions of Section 8.20.050 in the amount of five hundred dollars ($500.00).

(5) For violation(s) of any prohibitions during Shortage Stage 4, Administrative Fines may be assessed for each violation of the Provisions of Section 8.20.050 in the amount of Seven hundred dollars ($700.00).

(b) The City Manager or his/her designee may waive any Administrative Fine or portion thereof assessed under this Section Pursuant to written procedures (to be developed by the City Manager) wherein mitigating circumstances or other conditions make the imposition of the Administrative Fine unreasonable.

(c) If the Responsible Person(s) fails to correct the violation(s), subsequent administrative citations and fines may be issued for the same violation(s).

(d) Payment of the Administrative Fine shall not excuse the failure to correct the violation nor shall it bar further enforcement action up to and including discontinuance of water service (following the notice specified in Section 8.20.050 (c) of this Chapter.

(e) Any fines imposed under this Section shall be collected in accordance with the Cities currently-effective Water Regulations and Service provisions as adopted by Ordinance. Such fines shall be deposited in the Cities APUA fund.

8.4 Consumption Reduction Methods

Table 8-3 summarizes the consumption reduction methods the City will enact in each shortage stage and the water savings percentage goal.

Table 8-3: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods

Stage	Consumption Reduction Methods by Water Supplier
Stage 1	Expand Public Information Campaign; up to 10% water savings
Stage 2	Expand Public Information Campaign; conduct survey on Stage 1 efforts; establish water conservation advisory committee among APUA and City; up to 10% water savings
Stage 3	Enforce penalties for excessive water use and prohibition infractions; analyze impacts of Water Conservation Plan on revenue and expenditures, and proposed measures to overcome impacts; 10% to 20% water savings
Stage 4	Additional conservation measures to address water supply reductions up to 50%; 20% to 50% water savings

8.5 Determining Water Shortage Reductions

During normal water supply conditions, production figures are recorded daily and are incorporated into the City's water production report. During water shortages, water usage will continue to be closely monitored on a daily or, if necessary, hourly basis depending on the severity of the drought. Production data from the City's wells can be retrieved on an hourly basis. This will allow City staff to determine the effects of a reduction on water production

within the system. Further, since all City water customers are metered, the City will monitor water demand based on billing records during water shortages.

During a shortage resulting from a disaster, production figures will be monitored on an ongoing basis. The City's SCADA system will provide prompt warning of any critical conditions. Once a shortage stage is implemented, actual reductions in water production and usage can be determined based on the SCADA system monitoring. Reports will be provided on a daily basis to the City's Director of Utilities.

8.6 Revenue and Expenditure Impacts

The Adelanto Water Authority Fund provides funding for the operation and maintenance of the City's water distribution system under an enterprise fund separate from the City's General Fund. In governmental accounting, enterprise funds are used to account for operations that are operated and financed in a manner similar to private business enterprises where the intent is that the costs (expenses including depreciation) of providing goods or services to the general public on a continuing basis are to be financed or recovered primarily through user charges; or where periodic determination of revenues earned, expenses incurred, and/or net income is deemed appropriate, for capital maintenance, public policy, management control accountability or other purposes.

The Water Authority Enterprise Fund also serves as an emergency source of funds in the event of an extreme water shortage. Should an extreme shortage be declared and a large reduction in water sales occur for an extended period of time, the City would re-examine its water rate structure and monitor projected expenditures. If needed, the City would consider increases in rates to overcome revenue lost.

8.7 Water Shortage Stage Resolution

The City's Water Shortage Contingency Plan identifies actions to be taken by water consumers within the City's service area during periods of adequate water supply and during moderate, high, and severe water shortages. The purpose of the Water Shortage Contingency Plan is to provide procedures with voluntary and mandatory provisions to minimize the effect of a water shortage and reduce overall water usage. A Water Shortage Stage Resolution that could be enacted by the Adelanto Public Utility Authority during times of a declared water shortage is included in Appendix N.

Prior to and during implementation of the Water Shortage Contingency Plan and Resolution, the City would likely meet water shortage demands by increasing groundwater pumping and implementing water use efficiency programs. Water for public health, safety and welfare, water for maintenance of water facilities, and "grey water" use are all exempt from mandatory reductions. Special case circumstances may be reviewed by the City Manager's Office.

8.8 Catastrophic Supply Interruption

A water shortage emergency could result from a drought or a catastrophic event such as an earthquake, transmission facility failure, regional power outage, flooding, supply contamination from chemical spills, or other adverse conditions.

The City recognizes, that in the event of an emergency such as an earthquake, the integrity of the water system can be breached causing disruptions in water supply. Because of the possibility of emergencies from both man-made and natural causes, water utility emergency planning is of utmost importance. The City's Emergency Operations Plan (EOP) complies with the Standardized Emergency Management System (SEMS) developed by the State of California, and the National Incident Management System (NIMS) developed by the Federal Emergency Management Agency. The EOP includes information on the Emergency Operations Organization, the roles and responsibilities of each section, and includes operational checklists to guide response actions.

In the event of an emergency, the City Manager will assume overall responsibility for coordinating the City's response. The City's Director of Public Utilities will coordinate all activities relating to water operations. The City of Adelanto has also entered into mutual aid agreements with other local cities and the County of San Bernardino, which may be implemented during an emergency, if necessary.

8.9 Minimum Supply Next Three Years

The Mojave Water Agency has projected a reliable supply of water during all multiple dry years through 2040. Consequently, MWA does not anticipate any problems in meeting the City's demands during multiple dry years occurring over the next three years. Information shown in Table 8-4 is extracted from Table 6-2.

Table 8-4: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply	9,300	9,300	9,300

9.0 DEMAND MANAGEMENT MEASURES

The City of Adelanto recognizes water use efficiency as an integral component of current and future water strategy in its service area. Demand management measures (DMM) refer to policies, programs, rules, regulation and ordinances, and the use of devices, equipment and facilities that, over the long term, have been generally justified and accepted by the industry as providing the means to achieve a "reliable" reduction in water demand. This means providing education, tools, and incentives to help residents and businesses reduce the amount of water used on their property. Demand management is as important to ensuring water supply reliability as is providing a new water supply. The City has aggressively pursued conservation in an effort to reduce demand and stretch existing water supplies.

The Urban Water Management Planning Act originally required implementation of 14 DMMs; also known as best management practices (BMP). These 14 DMMs include technologies and methodologies that have been sufficiently documented in multiple demonstration projects that result in more efficient water use and conservation.

In 2014, the section of the CWC addressing DMMs was significantly modified based on recommendations from the Independent Technical Panel (ITP)[62] to the legislature. In its report to the Legislature, the ITP recommended that the UWMP Act should be amended to simplify, clarify, and update the DMM reporting requirements. The ITP recommended, and the legislature enacted, streamlining the retail agency requirements from the 14 specific measures to six more general requirements plus an "other" category. "Other" programs are those that have a significant impact on water use as measured in GPCD, including innovative measures and rebate programs, if implemented. Urban water suppliers can choose to follow the six general requirements or report by type of DMM.

Table 9-1 shows the six general requirement categories for 2015 compared to the original 14 DMMs for reporting. The six general DMM requirements are consistent with the CUWCC Foundational BMPs, while the "other" category is consistent with the CUWCC Programmatic BMP programs.

Table 9-1 Demand Management Measure Reporting

2015 DMM Reporting	2010 and Prior DMM Reporting
Six General DMM Categories	**14 Original DMMs**
1. Water Waste Prevention Ordinance	1. Water survey programs for single-family residential and multifamily residential customers
2. Metering	2. Residential Plumbing Retrofit
3. Conservation Pricing	3. System water audits, leak detection, and repair
4. Public Education and Outreach	4. Metering with commodity rates for all new connections and retrofit of existing connections

[62] The ITP was formed by DWR to provide information and recommendations to DWR and the Legislature on new demand management measures, technologies and approaches to water use efficiency (see http://www.water.ca.gov/wateruseefficiency/sb7/committees/urban/u2/).

Table 9-1 Demand Management Measure Reporting	
2015 DMM Reporting	**2010 and Prior DMM Reporting**
Six General DMM Categories	**14 Original DMMs**
5. Programs to Assess and Manage Distribution System Real Loss	5. Large landscape conservation programs and incentives
6. Water Conservation Program Coordination and Staffing Support	6. High-efficiency washing machine rebate programs
Other – Programs with a significant impact on water use as measured in GPCD	7. Public information programs
	8. School education programs
	9. Conservation programs for commercial, institutional, and industrial
	10. Wholesale agency programs
	11. Conservation pricing
	12. Water conservation coordinator
	13. Water waste prohibition
	14. Residential ultra-low flush toilet replacement programs

The City's UWMP presents its DMM efforts by the six general categories and the "other" category. Each category includes a description of planned efforts, past and current, by the City in implementing DMMs to meet its water use targets.

MWA Implements DMMs on Behalf of the City. The Mojave Water Agency is a member of the California Urban Water Conservation Council (CUWCC/Council)[63]. As a CUWCC member, MWA submits annual reports to the Council in accordance with the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU), most recently amended January 4, 2016.

MWA implements many of the urban water conservation DMMs on behalf of its purveyors, including the City of Adelanto. Since the City is not a member of the CUWCC, it has not submitted past Retail Water Agency Annual Reports to the Council. Therefore, DMM descriptions that follow include activities performed by MWA on behalf of the City.

As Signatory to the CUWCC MOU, MWA has committed to a good faith effort in implementing the 14 previously mentioned cost-effective BMPs. "Implementation" means achieving and maintaining the staffing, funding, and in general, the priority levels necessary to achieve the level of activity called for in each BMP's definition, and to satisfy the commitment by the signatories to use good faith efforts to optimize savings from implementing BMPs as described in the MOU. A BMP, as defined in the MOU, is a "policy, program, practice, rule, regulation or ordinance or the use of devices, equipment or facilities which meets either of the following criteria; (a) An established and general accepted practice among water suppliers that results in more efficient use or conservation of water; or (b) A

[63] Information on CUWCC can be found on their website at: https://www.cuwcc.org/

practice for which sufficient data are available from existing water conservation projects to indicate that significant conservation or conservation related benefits can be achieved; that the practice is technically and economically reasonable and not environmentally or socially unacceptable; and that the practice is not otherwise unreasonable for most water agencies to carry out."

Alliance for Water Awareness and Conservation. In addition to the DMM assistance the City receives from MWA, the City is also a member of the Alliance for Water Awareness and Conservation (AWAC).[64] AWAC is a collaborative group of over twenty agencies committed to achieving water conservation goals within the 4,900 square mile service area of MWA. AWAC's mission is "to promote the efficient use of water and increase awareness of conservation as an important tool to ensure an adequate water supply." AWAC's vision is "to be a collaborative alliance providing leadership, education, resources, support, ideas and solutions to agencies region-wide to conserve and protect our water supplies."

AWAC Goals include:

- Serve as a network to assist agencies in educating the public on water conservation.
- Provide resources with a consistent message to help agencies meet their respective conservation goals.
- Maintain current gallons per capita per day (GPCD) or lower, and continue to position agencies for meeting future conservation needs.
- Exchange ideas between agencies, especially at quarterly meetings.

AWAC has also adopted an Operational Plan to assist its members in reporting on conservation activities in their service areas in accordance with state requirements.[65] The Operation Plan addresses feasible water conservation alternatives, including implementation of the DMMs and conservation priorities as contained in the MWA's IRWM Plan and CUWCC's MOU.

Strategic Partners Program. MWA values its partnerships with the local communities, and attributes the region's conservation success to collaborative efforts, funding community projects that promote water resource education and water conservation projects through a set-aside in its conservation budget. Working through AWAC, MWA regularly extends its Strategic Partners Program to other groups and agencies. Previously funded projects include the following, with the most recent applications accepted in February 2016:

- Demonstration Gardens designed to teach the public about native plants and water-wise gardening
- Scholarships for water-related classes
- Wildlife and ecosystem restoration projects
- Water saving projects
- Other water conservation projects

[64] Information on AWAC can be found on their website at: http://www.hdawac.org/aboutus/
[65] The Operational Plan, adopted in November 2006 and most recently amended in November 2009 can be found on AWAC's website at: http://www.hdawac.org/documents/documents/OperationalPlan2009.pdf

9.1 Demand Management Measures – Recent and Current

The City's DMMs that have been or are being implemented within the City's water service area, by the City, MWA, or with assistance from AWAC, are discussed below following the six general categories, as allowed by the CWC. MWA's Final 2015 UWMP should be referred to for more detailed information on the regional BMPs program and each individual BMP that are being implemented on behalf of the City.

1 – Water Waste Prevention Ordinances

The City's water waste ordinance explicitly states that the waste of water is to be prohibited. The ordinance prohibits specific actions that waste water, such as excessive runoff from landscape irrigation, or use of a hose outdoors without a shut off nozzle at all times and is not dependent upon a water shortage for implementation.

Section 8 of this UWMP presents the City's Water Shortage Contingency Plan including reference to water waste prohibition included in the City's Water Conservation Plan. Chapter 8.20 (Appendix L) of Adelanto's Municipal Code entitled "Water Conservation Plan" sets forth the rules and regulations governing the use of water in the City, even during non-drought times. The Code also requires adherence to the City's Landscape Water Conservation Ordinance contained within Section 17.60 of the Municipal Code (Adopted by Ordinance No. 441-Appendix M). This section of the City's Municipal Code specifically requires all water users to abide by the following water conservation measures at all times:

1. The use of water for any purpose shall not result in flooding or unnecessary runoff in gutters, driveways, streets or adjacent lands.
2. Lawns, trees, shrubs, and other landscaping shall not be watered beyond what they need for growth and to sustain life and water shall not be permitted to pool or to run off property onto streets or adjacent land. Watering of lawns, grass, shrubbery, ground cover or other landscaping shall only be done on set watering days. The Water Conservation Plan specifies the watering days based on address, with the exception of no outdoor landscape watering on Mondays and weekends.
3. Sidewalks, walkways, driveways, parking areas, patios, porches or verandas or any other like area shall not be washed off with water from hoses or by any other means. The exception to this shall be the washing of flammable or other similar dangerous substances that require direct hose flushing using recognized safety control measures for the benefit of the public health and safety. Notification to the City of such wash down is required.
4. Water, sprinkling, aerial watering or irrigating of any landscaped or vegetated areas, including lawns, trees, shrubs, grass, ground cover, plants, vines, gardens, vegetables, flowers, or other landscaping shall not occur between the hours of 9:00 a.m. and 6:00 p.m. during the months of April through September; provided, however, that these restrictions shall not apply to hand-held hose or drip irrigation systems or to establishment of new lawns, landscaping, or gardens.
5. Non-commercial washing of privately owned vehicles, trailers, motor homes, buses, boats and mobile homes is prohibited except from a bucket, and except that a hose equipped with an automatic shut-off nozzle may be used for a quick rinse.

6. Water shall not be used to clean, fill, operate or maintain levels in decorative fountains unless such water is for replenishment of a recycling system.
7. Water lines, faucets, and other facilities shall be maintained so that they do not leak water. Existing leaks shall be repaired in a timely manner.
8. Restaurants, other food establishments, or other public places where food is served, shall not routinely provide glasses of drinking water to customers unless specifically requested by the customer.
9. Water for construction purposes including, but not limited to, debrushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, shall be used in an efficient manner. The use of aerial type sprinklers is not recommended but, if used, shall not be operated between the hours of 9:00 a.m. and 6:00 p.m.
10. All new residential, commercial and industrial construction shall be equipped with low-flush toilets and low-flow showers and faucets.
11. Water used for cooling systems must be recycled to the extent possible.
12. Evaporation resistant covers are required for all new swimming pools and hot tubs and are encouraged to be installed for existing pools. The covers required by this Chapter shall, at the time of purchase, installation and all subsequent maintenance, meet or exceed current standards and specifications for swimming pool, spa and hot tub covers adopted by the American Society for Testing and Materials (ASTM).
13. Hotels/motels are required to post a notice in substantially the form provided by the City urging guests to conserve water.
14. All current and future water customers are encouraged to install flow restrictors or pressure reducers and to install toilet tank displacement devices (dams, bottles or bags), and as appliances or fixtures wear out, replace them with water saving models.
15. Parks, schools, golf courses, cemeteries, school grounds and all public use lands shall not irrigate between the hours of 9:00 a.m. and 6:00 p.m. during the months of April through September inclusive and are encouraged to use water conservation irrigation equipment.
16. The use of drought tolerant or native plant material is encouraged for exterior landscaping in all new residential construction, and required for new commercial and industrial construction.
17. The use of low precipitation sprinkler heads, bubblers, drip irrigation and timing devices are required in the exterior landscaping in all new residential, commercial and industrial construction.
18. At least fifty percent (50%) of all new model homes shall include as a part of the exterior landscape development low water use, drought-tolerant or native plants.
19. Projects, including Commercial and Planned Unit Developments, which utilize recycled water from sewage treatment or agricultural operations, may receive an exemption from Subsections 15 through 18 of this Section by approval of the City Council.

2 – Metering

All service connections within the City's water service area are provided with water meters. Standard Conditions of Approval for new development include a requirement install water meters prior to the issuance of building permits.

There are no unmetered water service connections within the service area. The City's meters are classified into four sectors including residential (combining both single and multi-family), commercial (including institutional), industrial and irrigation (combining both agricultural and non-agricultural). Residents in small areas of the City that do not currently have water lines purchase water from a water fill station located at the City's main Water Service yard. Water sales at the fill station are metered and accounted for in Commercial water use. Any unmetered use generally occurs at fire hydrants or from distribution system breaks.

The City performs meter reading, repair, replacement and calibration on a routine basis and when specifically reported by City customers. The City continues to budget and schedule annual meter replacements for older meters as part of its Meter Replacement Program. Routine tests on existing meters is performed for accuracy and reliability. Meter repair, replacement, and calibration activities help to ensure that customers are paying for all of the water they consume, which results in water conservation.

The City bills each customer based on the volume of water used on a tiered rate structure. Further details on the rate structure are discussed below in section 3 – Conservation Pricing.

3 – Conservation Pricing

Conservation pricing sends a signal to customers regarding their water use. A common model of conservation pricing is a tiered rate structure, where efficient water use is billed at a low price and higher water use billed at progressively higher prices.

In 2009, after eight years with no increases in water rates, the City adopted a tiered rate structure, which encourages water conservation. Specific information on the City's rate structure is presented in Table 9-2. As noted, the tiered commodity rates were phased in over a four year period, beginning in 2009 and completed in 2013.

Table 9-2 City of Adelanto Base Monthly Rates and Tiered Water Usage Rates

Meter Size	Base Monthly Water Service Rate	Tier 1 Usage (units)[1, 2]	Tier 1 Water Usage Rate	Tier 2 Usage (units)	Tier 2 Water Usage Rate	Tier 3 Usage (units)	Tier 3 Water Usage Rate
¾"	$26.50	1-15	$2.40	16-25	$3.40	26+	$4.40
1"	$44.26	1-25	$2.40	26-42	$3.40	43+	$4.40
1-½"	$88.25	1-50	$2.40	51-83	$3.40	84+	$4.40
2"	$141.25	1-80	$2.40	81-133	$3.40	134+	$4.40
3"	$265.00	1-150	$2.40	151-250	$3.40	251+	$4.40
4"	$441.76	1-250	$2.40	251-417	$3.40	418+	$4.40
Senior Low Income ¾"	$13.25	1-15	$2.40	16-25	$3.40	26+	$4.40
Low Income ¾"	$18.54	1-15	$2.40	16-25	$3.40	26+	$4.40

[1] Units are billed in hundred cubic feet (CCF) which is approximately 748 gallons.
[2] All commercial and industrial properties will be charged at Tier 1 rates for all water used.

4 – Public Education and Outreach

Public Communication Measures

Adelanto, MWA and AWAC. The City works collaboratively with MWA and AWAC to provide outreach, educational and informational materials and literature, and water use efficiency programs. Program and support include:

- Conservation and water use efficiency information promoted on the following websites:
  - City of Adelanto: http://www.ci.adelanto.ca.us, then Water Efficiency
  - MWA: http://www.mojavewater.org/why-save-water-.html
  - AWAC: http://www.hdawac.org/
- The City has installed a kiosk in the lobby of City Hall to provide information on water conservation and efficiency. Anyone coming into City Hall can explore the kiosk and gain valuable information.
- Host community events annually to distribute conservation and water use efficiency information, as well as free conservation devices, including faucet aerators, showerheads, and hose nozzles; see Community Event information below.
- Large Landscape Rebates Program: The Cash for Grass program provides $1.00 per foot of turf converted to desert adaptive landscaping with 25 percent canopy coverage for lot sizes ranging from 20,000 square feet to 500,000 square feet. Applications approved for the Cash for Grass program equals 286 for a total of 188,367 square feet of turf removed, resulting in 31.79 AFY of water savings. A similar program for small landscapes was offered through the end of 2015 (program data was not immediately available at the time of the UWMP Update).
- Public Information and Education Programs:
  - Host and staff workshops on conservation, and sponsor and hosts public events and booths at community functions.
  - Outreach, educational, informational materials and literature, public service announcements, and paid advertisements promoting water conservation to the public throughout its service area, including articles in newsletters, Chamber of Commerce publications and regional newspapers.
  - Provide the City with flyers and bill inserts, and other promotional materials, which Adelanto provides to its customers. Bill inserts are distributed several times annually to all 8,165 service connections. In addition to distribution of information at community events and as bill inserts, up to 500 fact sheets, brochures, and other literature are placed at and distributed through community locations such as the senior center, community center, police station, and key stores.
  - Partner with the school districts to educate students and parents on water conservation and water use efficiency. Future plans include production of information videos with the schools on water conservation and efficiency with the students as the problem solvers. The City partners with nine (9) schools reaching an average of 800 students per school through two (2) programs. This results to

reaching 7,200 students twice annually with water awareness education.

- AWAC also prepares and distributes various outreach materials including information on its website and through the following booklets, pamphlets, and handouts:
  - A Guide to High Desert Landscaping
  - A Complete Guide to High Desert Water Conservation
  - High Desert Vegetable Planting Guide
  - Water Efficient and Native Plants Lists
  - Water Efficient Irrigation
  - Water Efficient Landscaping
  - Water Smart Landscaping

Community Events

City staff continues to participate in six to eight community events annually, one that lasts a total of three days. Events include the annual Adelanto Community Water Awareness Festival as well as other regional events promoted by AWAC, including the San Bernardino County Fair and Home and Garden Trade Show at the County Fair Grounds in Victorville and the Desert Communities Water Awareness Expo, which promotes water awareness at regional trade shows and Valley Mall. Information is provided in both English and Spanish, and includes a guide to High Desert Landscape, numerous plant brochures and a recommended plant list, calendars with key water conservation information, fact sheets on how to check for water leaks, how to read a meter, winterizing, and drip irrigation.

Free conservation devices are also distributed at community events to each person stopping by the booth and speaking with a conservation specialist. Devices include faucet aerators, showerheads, and hose nozzles. Children also receive fun and informative items including coloring books, rulers, bracelets, and stuffed toys.

Each community event draws from 500 to 15,000 people, reaching upwards to 30,000 people annually.

School Education Program

The City participates in school water conservation education programs in cooperation with MWA and the Mojave Environmental Education Consortium (MEEC). MWA provides literature, staff support and in-kind services to support teacher training workshops funded through the Project Wet Foundation. These training courses on water education curriculum are done in collaboration with MWA retailers, including the City, and MEEC. Additionally, AWAC works with local school districts and community colleges and prepares and distributes the outreach materials.

Water Association Education and Outreach

City staff also participates in the High Desert Mountain Water Association, which provides a forum for water resource education on local, state and federal issues and regulations and the exchange of ideas, education, and mutual support of its membership. The mission of the High Desert Mountain Water Association (www.hdmwa.com) is “to provide a venue for those

involved in the waterworks industry located in the greater Victor Valley and Mountain communities." City staff participates in the Association meetings held on the 4th Wednesday of February, April, June, August, October (pending Holidays) with a Christmas Dinner Event in early December.

High Desert Regional Partnership with SCE

The City participates in the High Desert Regional Partnership with Southern California Edison (SCE). In November 2014, the cities of Victorville and Hesperia, along with the town of Apple Valley, joined Barstow and Adelanto in the Partnership, who has been a partner since 2008. Adelanto led the initiative and received more than $300,000 in incentive funds for energy efficiency modifications.

The Partnership encourages municipalities to promote energy efficiency and regional sustainability goals in the region, which promotion of SCE rebates to residents. This includes rebates for: 1) Hybrid Electric Heat Pump Water Heater; and Variable Speed Pool Pump and Motor. The City provides information about and online links to the SCE rebates program.

5 – Programs to Assess and Manage Distribution System Real Loss

As presented in Section 4.4, reporting of system losses is required by the CWC for the first time 2015 UWMPs. System water loss is the difference between water production and water consumption and represents "lost" water. Distribution system losses can include both accounted-for and unaccounted-for losses attributed to unmetered water use, leaking pipes, or other events causing water to be withdrawn from the system and not measured, such as hydrant flushing, street cleaning, new construction line draining and/or filling and draining and flushing, and firefighting.

Accounted-for losses within the City include the following activities that are known although not metered or charged for:

- Hydrant Testing and Flushing – Hydrant testing to monitor the level of fire protection available throughout the City is performed by the San Bernardino County Fire Department. The APUA also performs hydrant flushing to eliminate settled sediment and ensure better water quality water. Water used during hydrant testing and flushing is not metered.
- Firefighting – Water used to fight fires is also not metered.

AWWA has formally abandoned the concept of unaccounted-for-water as an effective tool for managing system losses due to its unreliable application and inconsistent definition, citing all volumes of water, including water losses, can be accounted for. However, for the benefit of contrast to accounted-for losses listed above, the following are identified as unaccounted-for losses that may occur, although can be managed:

- Leakage – Water lost from system leakage from pipes, valves, pumps, and other water system appurtenances.
- Customer Meter Inaccuracies – Meters have an inherent accuracy for a specified flow range; however, flow above or below that range is usually registered at a lower rate. Meters also become less accurate with time due to wear.

The City recently transitioned to a new water billing system and is unable to obtain water use data by customer type. While the City continues to work on this issue, it is not possible to identify an accurate percentage of water loss for the most recent 12 months representing calendar year 2015. However, as discussed in Section 4.4, the City has completed the AWWA Water Audit WAS v5.0 (Appendix G) based on best available information.

The AWWA Water Audit shows water loss for the past 12-month period is 18.9 percent; much higher than the previous reporting period. The City intends to conduct performance measures to lower its water losses to at least 10 percent, an acceptable rate as defined by AWWA.[66] Therefore, for the purposes of this Plan, the water loss percentage projected for the planning horizon is 10 percent projected for the years 2020 through 2040, as shown in Table 9-3. The City is confident that this is within the range of acceptable water loss and is within a small margin of error.

Table 9-3: City of Adelanto System Water Loss 2015 – 2040 (AFY)

Agency	2015	2020	2025	2030	2035	2040
Water Production	4,049	4,578	4,872	5,292	5,737	6,195
Water Consumption	3,282	4,120	4,385	4,763	5,163	5,576
Difference (System Loss)	767	458	487	529	574	620
System Loss Percentage	18.9%	10.0%	10.0%	10.0%	10.0%	10.0%

The City currently conducts routine and planned system maintenance to prevent losses. The City's water loss percentage suggests that un-calibrated water meters, service line breaks, leaking pipes, and other unusual events may be a factor within the City's water system.

City staff anticipates that current practices and future capital improvement projects will help to reduce the percentage of system water loss. The City will also utilize the methodology presenting in the AWWA "Manual of Water Supply Practices, Water Audits and Leak Detection" to help reduce water lost to leaks. In addition, MWA is currently developing a program to provide technical support to its retailers for addressing the new AWWA requirements for System Water Audit implementation. While many of the recommendations noted in the manual are currently integrated into the City's regular operations and maintenance procedures, the City will collaborate with MWA to improve its procedure. There is no timeline for implementation currently proposed.

6 – Water Conservation Program Coordination and Staffing Support

The City has one designated Conservation Specialist who is responsible for coordination of water conservation and water use efficiency activities and programs for the benefit of the City's residents and businesses, as well as conservation ordinances and plans. In addition, the Conservation Specialist works in collaboration with and is supported by programs and information from MWA and AWAC, as described in 4 – Public Education and Outreach. The City's annual budget includes funding for the Conservation Specialist.

[66] American Water Works Association states 10 percent or less unaccounted-for water (losses) in a water system is acceptable.

Conservation Coordinator Contact:

Belen Cordero
Conservation Specialist
bcordero@ci.adelanto.ca.us
(760) 559-2683
11600 Air Expressway, Adelanto, CA 92301

7 – Other Demand Management Measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented

The City works in collaboration with MWA to offer free and rebate programs to residents across its service area. The following provides an overview of the programs available:

1. **Free Programs**
   a. MWA offers free low-flow shower heads, faucet aerators, and leak detection dye tablets to the City's customers.
   b. In collaboration with MWA, the City conducts periodic giveaway and support programs.
      i. The City held a recent toilet giveaway resulting in distribution of 600 ultra-low flow toilets in 30 days to apartments, mobile home parks, and other residents through the community.
      ii. The City replaced toilets in all city buildings with high-efficiency toilets (HET) (1.28 gallons per flush or less).
      iii. The City replaced all 48 toilets and urinals at Heritage Field at Maverick Stadium in October 2015 with HETs and high-efficiency urinals. Heritage Field at Maverick Stadium is primarily used for baseball and is the home field of the High Desert Mavericks minor league baseball team. It holds 3,808 people.
   c. The City coordinates with MWA and AWAC to encourage the use of EPA WaterSense certified HETs, using only 1.28 gallons per flush, as well as high-efficiency clothes washers, turf replacement, commercial conservation programs, and other water conservation actions.
2. **Rebate Programs**
   a. Statewide Rebates: Encourage residents to visit www.saveourwaterrebates.com to access statewide water rebate programs on such water-saving devices as low-flow toilets and turf replacement.
   b. Turf: MWA offers large landscape rebates at $1.00 per square foot of turf converted to desert adaptive landscaping with 25 percent canopy coverage for lot sizes ranging from 20,000 square feet to 500,000 square feet. MWA offered a similar program for small landscapes (residential) through the end of 2015, and will consider offering a similar program in the future. AWAC turf replacement incentives for both residential and commercial users, and was instrumental in drafting the compliant water efficiency landscape ordinance template for AB 1881.[67]

[67] A copy of AB 1881 (the Model Efficiency Landscape Ordinance) can be found here:

c. High-Efficiency Clothes Washers (HECW): In recent years, MWA offered rebates of $175 to residential customers who purchase a HECW with a minimum water use efficiency, or water factor. Approximately 250 applications were processed for a total of 20.14 AFY of water savings. The program has concluded at this time, although the City, MWA and AWAC continue promotes the use of HECWs.

d. HETs: In recent years, MWA offered rebates of $165 for each high efficiency toilet installed to both single family and multi-family residential customers to encourage them to replace older, high volume toilets with new, high-efficiency models. This program has concluded, although installation of HETs is continuing to be encouraged.

3. **Assistance**

a. MWA provides city and school districts with assistance with turf replacement, installation of new weather-based irrigation controllers, use of efficiency spray nozzles, as well as assistance with developing landscape and water conservation programs.

b. MWA and AWAC are promoting conservation and other programs that offer rebates as an incentive to upgrade to commercial, industrial and institutional accounts more efficient equipment.

9.2 Planned Implementation to Achieve Water Use Targets

As previously discussed in Section 5.7, the City is already achieving and surpassing its water use targets, but will continue water conservation and water use efficiency to ensure it will meet its 2020 Target GPCD. The City will continue to implement its Water Use Reduction Plan as first identified in its 2010 UWMP.

The City will continue to encourage water conservation and water use efficiency through the following:

- Enforce the Water Waste Ordinance.
- Maintain and strengthen the tiered rate structure.
- Continue public education and outreach on water use efficiency and conservation in collaboration with MWA and AWAC through public communication, community events, and school education programs.
- Encourage or require new developments to install water conservation fixtures and landscape with low water use plant materials (xeriscape).
- Continue to operate and maintain the City's water distribution system with a goal of reducing water losses by repairing or eliminating any leaks that may develop as soon as practical and enhanced tracking.
- Continue planning toward the construction of a recycled water system.

http://www.water.ca.gov/wateruseefficiency/docs/ab_1881_bill.pdf

9.3 California Urban Water Conservation Council

California Urban Water Conservation Council (CUWCC) members have the option of submitting their 2013–2014 Best Management Practices (BMP) annual reports in lieu of, or in addition to, describing the DMMs in their UWMP, if the supplier is in full compliance with the CUWCC's MOU.

Since the City is not a CUWCC member, it has provided a description of its DMMs in section 9.1 above.

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10.0 PLAN ADOPTION, SUBMITTAL AND IMPLEMENTATION

10.1 Inclusion of all 2015 Data

The City of Adelanto 2015 UWMP includes water use and planning data for the entire year of 2015.

10.2 Notice to Cities and Counties

The City notified the County of San Bernardino, Mojave Water Agency and City of Victorville (Victorville Water District) on April 18, 2016 that it is reviewing its 2010 UWMP and considering amendments to the Plan. The notification letter included the UWMP revision schedule, contact information, and where the Final Draft 2015 UWMP could be viewed once it is available. This occurred within the required 60-day notification period prior to the public hearing. Copies of the notification letters are included in Appendix O.

Table 10-1. Notification to County and Agencies

City/Agency Name	60-Day Notice	Notice of Public Hearing
Mojave Water Agency	☑	☑
Victorville Water District	☑	☑
County Name	**60-Day Notice**	**Notice of Public Hearing**
San Bernardino County	☑	☑

10.3 Notice to the Public

In accordance with Government Code 6066, the City noticed the public hearing in the Daily Press[68], a local newspaper in the Victorville/San Bernardino County area, which included the time and place of the hearing, as well as the location where the Plan is available for public inspection. Copies of the public notices, including proof of publication, are included in Appendix O.

In addition, the City again notified the County of San Bernardino, Mojave Water Agency and City of Victorville (Victorville Water District) on June 6, 2016 that it would be holding a

[68] http://www.vvdailypress.com/

public hearing on June 22, 2016 to review its 2015 UWMP and considering amendments to the Plan. Copies of the public hearing notification letters are also included in Appendix O.

10.4 Public Hearing and Plan Adoption

The 2015 UWMP Update was adopted by resolution of the Adelanto Public Utilities Authority (APUA) on June 22, 2016, following a public hearing at the same meeting. The public hearing included a presentation on the City's baseline values, water use targets, and implementation plan of the 2015 UWMP. The public hearing allowed the public the opportunity to comment on the Plan and further allowed the APUA Board to consider any further modifications of the UWMP in response to public input before adoption. The resolution of adoption is included in Appendix O.

Draft copies of the Plan were posted on the City's website prior to the Public Hearing thereby making them available to the public.

10.5 Plan Submittal

The Plan was submitted to the DWR electronically by July 1, 2016 through WUEdata, the State's online submittal tool at https://wuedata.water.ca.gov.secure/, a CD copy was submitted to the State Library, Government Publications Section within 30 days of approval of the Plan, and an electronic copy was provided to the County of San Bernardino within 30 days of approval of the Plan. Finally, copies of the adopted UWMP were also made available to the public within 30 days following City Council adoption. The public can access an electronic copy of the Plan on the City's website and also obtain a copy at City Hall during normal business hours.

The City anticipates review by DWR of its UWMP within about one year from submittal. DWR will review the Plan using the checklist (Appendix D) and make a determination whether or not the UWMP addresses the requirements of the CWC. Upon completion of their review, DWR will issue a letter to the City with the results of the review.

10.6 Amending the Adopted UWMP

If the City amends its adopted UWMP, each of the steps for notification, public hearing, adoption, and submittal must also be followed for the amended Plan.

In June 2015, the City amended its 2010 UWMP to respond to the State Water Resources Control Board emergency regulations pertaining to drought conservation in response to the Governor's Executive Order B-29-15 addressing the state's historic and relentless drought. These regulations required the City to cut its water consumption by 20 percent beginning June 1, 2015. The City addressed this mandatory requirement by amending its 2010 UWMP, Section 8.5 Water Shortage Contingency Ordinance to include provisions necessary to comply with the Governor's decree. This 2015 UWMP update includes the 2015 amended Water Shortage Contingency Ordinance.

APPENDICES

Appendix A	California Water Code – Urban Water Management Planning Act of 1983, amended to 2015
Appendix B	California Water Code – Sustainable Water Use and Demand Reduction (SB X7-7)
Appendix C	Changes to California Water Code Since 2010
Appendix D	DWR Urban Water Management Plan Checklist
Appendix E	60-Day Notice Letters
Appendix F	Mojave Water Agency Population Forecast
Appendix G	AWWA Water Loss Audit
Appendix H	2011 Technical Memorandum on SBx7-7 20x2020 GPCD Baseline Calculation & Water Use Target Method Selection
Appendix I	SB X7-7 Verification Form
Appendix J	Mojave Basin Judgement
Appendix K	City of Adelanto 2014 Consumer Confidence Report
Appendix L	Landscape Water Conservation Ordinance No. 441, Adelanto Municipal Code, Section 17.60
Appendix M	City of Adelanto Water Conservation Plan, Adelanto Municipal Code, Section 8.20
Appendix N	Draft Water Conservation Plan Resolution
Appendix O	Notice of Public Hearing Letters, Notice of Public Hearing and Resolution for Plan Adoption, Proof of Publication of Public Hearing Notice

APPENDICES

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Appendix M	*City of Adelanto Water Conservation Plan, Adelanto Municipal Code, Section 8.20*
Appendix N	*Draft Water Conservation Plan Resolution*
Appendix O	*Notice of Public Hearing Letters, Notice of Public Hearing and Resolution for Plan Adoption, Proof of Publication of Public Hearing Notice*

APPENDIX A

California Water Code – Urban Water Management Planning Act of 1983, amended to 2015

California Water Code Division 6, Part 2.6.
Chapter 1. General Declaration and Policy §10610-10610.4
Chapter 2. Definitions §10611-10617
Chapter 3. Urban Water Management Plans
Article 1. General Provisions §10620-10621
Article 2. Contents of Plans §10630-10634
Article 2.5. Water Service Reliability §10635
Article 3. Adoption And Implementation of Plans §10640-10645
Chapter 4. Miscellaneous Provisions §10650-10656

Chapter 1. General Declaration and Policy

SECTION 10610-10610.4

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

Chapter 2. Definitions

SECTION 10611-10617

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. “Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses,

reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

Chapter 3. Urban Water Management Plans

Article 1. General Provisions

SECTION 10620-10621

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that

share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero, except as provided in subdivision (d).

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

(d) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

Article 2. Contents of Plan

SECTION 10630-10634

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of

water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(A) An average water year.

(B) A single-dry water year.

(C) Multiple-dry water years.

(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

(d) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(J) Distribution system water loss.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(3) (A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(4) (A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(g) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water

use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(h) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

(i) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(j) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.2. (a) In addition to the requirements of Section 10631, an urban water management plan may, but is not required to, include any of the following information:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

10631.5. (a) (1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has

submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay-Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions that are applicable to each stage.

(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are

appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

(6) Penalties or charges for excessive use, where applicable.

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

(8) A draft water shortage contingency resolution or ordinance.

(9) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

(b) Commencing with the urban water management plan update due July 1, 2016, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Article 2.5. Water Service Reliability

SECTION 10635

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Article 3. Adoption and Implementation of Plans

SECTION 10640-10645

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area.

After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644. (a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) (1) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part.

The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(2) A report to be submitted pursuant to paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section 10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

Chapter 4. Miscellaneous Provisions

SECTION 10650-10656

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26

(commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

APPENDIX B

California Water Code – Sustainable Water Use and Demand Reduction (SB X7-7)

California Water Code Division 6, Part 2.55.

Chapter 1. General Declarations and Policy §10608-10608.8
Chapter 2. Definitions §10608.12
Chapter 3. Urban Retail Water Suppliers §10608.16-10608.44
Chapter 4. Agricultural Water Suppliers §10608.48
Chapter 5. Sustainable Water Management §10608.50
Chapter 6 Standardized Data Collection §10608.52
Chapter 7 Funding Provisions §10608.56-10608.60
Chapter 8 Quantifying Agricultural Water Use Efficiency §10608.64

Chapter 1. General Declarations and Policy

SECTION 10608-10608.8

10608. The Legislature finds and declares all of the following:

(a) Water is a public resource that the California Constitution protects against waste and unreasonable use.

(b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.

(c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.

(d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.

(e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.

(f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

(g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

(h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

10608.4. It is the intent of the Legislature, by the enactment of this part, to do all of the following:

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(k) Advance regional water resources management.

10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to

California Water Code Division 6, Part 2.55.

Chapter 1. General Declarations and Policy §10608-10608.8
Chapter 2. Definitions §10608.12
Chapter 3. Urban Retail Water Suppliers §10608.16-10608.44
Chapter 4. Agricultural Water Suppliers §10608.48
Chapter 5. Sustainable Water Management §10608.50
Chapter 6 Standardized Data Collection §10608.52
Chapter 7 Funding Provisions §10608.56-10608.60
Chapter 8 Quantifying Agricultural Water Use Efficiency §10608.64

Chapter 1. General Declarations and Policy

SECTION 10608-10608.8

10608. The Legislature finds and declares all of the following:

(a) Water is a public resource that the California Constitution protects against waste and unreasonable use.

(b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.

(c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.

(d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.

(e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.

(f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

(g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

(h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

10608.4. It is the intent of the Legislature, by the enactment of this part, to do all of the following:

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(k) Advance regional water resources management.

10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to

January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

(b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

(c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

(d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

Chapter 2 Definitions

SECTION 10608.12

10608.12. Unless the context otherwise requires, the following definitions govern the construction of this part:

(a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.

(b) "Base daily per capita water use" means any of the following:

(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

(c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.

(d) "Commercial water user" means a water user that provides or distributes a product or service.

(e) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.

(f) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.

(g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.

(2) The net volume of water that the urban retail water supplier places into long-term storage.

(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.

(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

(h) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.

(i) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.

(j) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.

(k) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.

(l) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.

(m) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050, that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:

(1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:

(A) Metered.

(B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.

(C) Treated to a minimum tertiary level.

(D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.

(2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.

(n) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:

(1) The capture and reuse of stormwater or rainwater.

(2) The use of recycled water.

(3) The desalination of brackish groundwater.

(4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.

(o) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.

(p) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.

(q) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.

(r) "Urban wholesale water supplier," means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

Chapter 3 Urban Retail Water Suppliers

SECTION 10608.16-10608.44

10608.16.(a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.

(b) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.

10608.20.(a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

(2) It is the intent of the Legislature that the urban water use targets described in paragraph (1) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

(b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

(1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.

(2) The per capita daily water use that is estimated using the sum of the following performance standards:

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.

(B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.

(3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.

(4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:

(A) Consider climatic differences within the state.

(B) Consider population density differences within the state.

(C) Provide flexibility to communities and regions in meeting the targets.

(D) Consider different levels of per capita water use according to plant water needs in different regions.

(E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.

(F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.

(c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method

described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

(d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.

(e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

(f) When calculating per capita values for the purposes of this chapter, an urban retail water supplier shall determine population using federal, state, and local population reports and projections.

(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

(h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:

(A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.

(B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.

(2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its Internet Web site, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

(i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with subdivision (l) of Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the

Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

(j) (1) An urban retail water supplier is granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow the use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.

(2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water supplier and urban retail water suppliers.

10608.22. Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph(3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

10608.24.(a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

(b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.

(c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.

(d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.
(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in

paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

(e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

(f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

(2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

10608.26.(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

(b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under federal Executive Order 13514.

(d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit

an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

(2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

10608.28.(a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

(1) Through an urban wholesale water supplier.

(2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).

(3) Through a regional water management group as defined in Section 10537.

(4) By an integrated regional water management funding area.

(5) By hydrologic region.

(6) Through other appropriate geographic scales for which computation methods have been developed by the department.

(b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

10608.32. All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

10608.36. Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans

submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

10608.42.(a) The department shall review the 2015 urban water management plans and report to the Legislature by July 1, 2017, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.

(b) A report to be submitted pursuant to subdivision (a) shall be submitted in compliance with Section 9795 of the Government Code.

10608.43. The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

(a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.

(b) Evaluation of water demands for manufacturing processes, goods, and cooling.

(c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.

(d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.

(e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

10608.44. Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

Chapter 4 Agricultural Water Suppliers

SECTION 10608.48

10608.48.(a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).

(b) Agricultural water suppliers shall implement all of the following critical efficient management practices:

(1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).

(2) Adopt a pricing structure for water customers based at least in part on quantity delivered.

(c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:

(1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

(2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

(3) Facilitate the financing of capital improvements for on-farm irrigation systems.

(4) Implement an incentive pricing structure that promotes one or more of the following goals:

(A) More efficient water use at the farm level.

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

(F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

(5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

(6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.

(7) Construct and operate supplier spill and tailwater recovery systems.

(8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.

(9) Automate canal control structures.

(10) Facilitate or promote customer pump testing and evaluation.

(11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.

(12) Provide for the availability of water management services to water users. These services may include, but are not limited to, all of the following:

(A) On-farm irrigation and drainage system evaluations.

(B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.

(C) Surface water, groundwater, and drainage water quantity and quality data.

(D) Agricultural water management educational programs and materials for farmers, staff, and the public.

(13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.

(14) Evaluate and improve the efficiencies of the supplier's pumps.

(d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.

(e) The data shall be reported using a standardized form developed pursuant to Section 10608.52.

(f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.

(g) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.

(h) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.

(i) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

Chapter 5 Sustainable Water Management

Section 10608.50

10608.50.(a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

(1) Revisions to the requirements for urban and agricultural water management plans.

(2) Revisions to the requirements for integrated regional water management plans.

(3) Revisions to the eligibility for state water management grants and loans.

(4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.

(5) Increased funding for research, feasibility studies, and project construction.

(6) Expanding technical and educational support for local land use and water management agencies.

(b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

Chapter 6 Standardized Data Collection

SECTION 10608.52

10608.52.(a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

(b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

Chapter 7 Funding Provisions

Section 10608.56-10608.60

10608.56.(a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

10608.60.(a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

(b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

Chapter 8 Quantifying Agricultural Water Use Efficiency

SECTION 10608.64

10608.64. The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

Appendix C

Changes to California Water Code Since 2010

Changes to the Water Code Since 2010

Italicized text indicates new language

Strike out text indicates language that has been removed

Regular font indicates existing text

Change Number	Topic	CWC Section	Legislative Bill	Summary	Guidebook Section
1	Demand Management Measures	10631 (f)(1) and (2)	AB 2067, 2014	Requires water suppliers to provide narratives describing their water demand management measures, as provided. Requires retail water suppliers to address the nature and extent of each water demand management measure implemented over the past 5 years and describe the water demand management measures that the supplier plans to implement to achieve its water use targets.	Chapter 9
2	Submittal Date	10621 (d)	AB 2067, 2014	Requires each urban water supplier to submit its 2015 plan to the Department of Water Resources by July 1, 2016.	Chapter 10
3	Electronic Submittal	10644 (a) (2)	SB 1420, 2014	Requires the plan, or amendments to the plan, to be submitted electronically to the department.	Chapter 10
4	Standardized Forms	10644 (a) (2)	SB 1420, 2014	Requires the plan, or amendments to the plan, to include any standardized forms, tables, or displays specified by the department.	CH 1, Section 1.4
5	Water Loss	10631 (e) (1) (J) and (e) (3) (A) and (B)	SB 1420, 2014	Requires a plan to quantify and report on distribution system water loss.	Appendix L
6	Estimating Future Water Savings	10631 (e) (4)	SB 1420, 2014	Provides for water use projections to display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans, when that information is available and applicable to an urban water supplier.	Appendix K
7	Voluntary Reporting of Energy Intensity	10631.2 (a) and (b)	SB 1036, 2014	Provides for an urban water supplier to include certain energy-related information, including, but not limited to, an estimate of the amount of energy used to extract or divert water supplies.	Appendix O
8	Defining Water Features	10632	AB 2409, 2010	Requires urban water suppliers to analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	CH 8, Section 8.2.4

1. Demand Management Measures (AB 2067, 2014)

10631(f) Provide a description of the supplier's water demand management measures. This description shall include all of the following:
~~(1) A description of each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following:~~

~~(A) Water survey programs for single-family residential and multifamily residential customers.~~
~~(B) Residential plumbing retrofit.~~
~~(C) System water audits, leak detection, and repair.~~
~~(D) Metering with commodity rates for all new connections and retrofit of existing connections.~~
~~(E) Large landscape conservation programs and incentives.~~
~~(F) High-efficiency washing machine rebate programs.~~
~~(G) Public information programs.~~
~~(H) School education programs.~~
~~(I) Conservation programs for commercial, industrial, and institutional accounts.~~
~~(J) Wholesale agency programs.~~
~~(K) Conservation pricing.~~
~~(L) Water conservation coordinator.~~
~~(M) Water waste prohibition.~~
~~(N) Residential ultra-low-flush toilet replacement programs.~~

~~(2) A schedule of implementation for all water demand management measures proposed or described in the plan.~~
~~(3) A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan.~~
~~(4) An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand.~~

~~(g) An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following:~~
~~(1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors.~~
~~(2) Include a cost-benefit analysis, identifying total benefits and total costs.~~
~~(3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost.~~
~~(4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation.~~
(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the

supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.
(ii) Metering.
(iii) Conservation pricing.
(iv) Public education and outreach.
(v) Programs to assess and manage distribution system real loss.
(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

~~(h)~~

(g) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water ~~use~~ *use,* as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and ~~programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f),~~ *programs* that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

~~(i)~~

(h) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

~~(j)~~

(i) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of ~~subdivisions~~ *subdivision* (f) ~~and (g)~~ by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the
annual reports required by Section 6.2 of that memorandum.

~~(k) Urban~~

2. Submittal Date (AB 2067, 2014)

10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero *, except as provided in subdivision (d).*

(d) Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.

3. Electronic Submittal (SB 1420, 2014)

10644. (a)*(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically…*

4. Standardized Forms (SB 1420, 2014)

10644. (a)*(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) … shall include any standardized forms, tables, or displays specified by the department.*

5. Water Loss (SB 1420, 2014)

(e) (1) Quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:

(A) Single-family residential.
(B) Multifamily.
(C) Commercial.
(D) Industrial.
(E) Institutional and governmental.
(F) Landscape.
(G) Sales to other agencies.
(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.
(I) Agricultural.
(J) Distribution system water loss.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(3) (A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

6. Voluntary Reporting of Passive Savings (SB 1420, 2014)

10631 (4) (A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

7. Voluntary Reporting of Energy Intensity (SB 1036, 2014)

10631.2. (a) In addition to the requirements of Section 10631, an urban water management plan may, but is not required to, include any of the following information:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

8. Defining Water Features (AB 2409, 2010)

10632 (b) Commencing with the urban water management plan update due December 31, 2015, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

APPENDIX D

DWR Urban Water Management Plan Checklist

2015 City of Adelanto UWMP Checklist - Arranged by Subject

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location *(Optional Column for Agency Use)*
10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1	**Section 2.1, Page 2-1**
10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.5.2	**Section 2.4, Page 2-3**
10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	Plan Preparation	Section 2.5.2	**Section 2.4, Page 2-3**
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	**Section 3.1, Page 3-1**
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	**Section 3.3, Page 3-3**
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	**Section 3.5, Page 3-11, Table 3-3**
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	**Section 3.5, Page 3-11**
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	**Section 3.5, Page 3-11, Table 3-3**
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	**Section 4.2, Page 4-1, Tables 4-1 and 4-2**
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	**Section 4.4, Page 4-3, Table 4-4**
10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	**Section 4.6, Page 4-5, Table 4-6**
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	**Section 5.1, Page 5-1**

10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5 and App E	**Sections 5.4, 5.5, and 5-6, Pages 5-4 to 5-7**
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	**Section 5.4, Page 5-4**
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	**Section 5.6, Page 5-7**
10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.8.2	**No adjustment; Section 5.6, Page 5-7, Tale 5-9**
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	**n/a; retailer**
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	**Chapter 5.0, Page 5-1, Appendix I**
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	**Section 6.1, Page 6-1, Table 6-2**
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	**Section 6.2.1, Page 6-4**
10631(b)(1)	Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2	**Section 6.2.1, Page 6-4, Appendix J**
10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	**Section 6.2.1, Page 6-4**
10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	**Section 6.2.1, Page 6-4, Appendix J**
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become	System Supplies	Section 6.2.3	**n/a**

	overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.			
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.4	**Section 6.2.1, Pages 6-4 to 6-17, Tables 6-4, 6-5 and 6-6**
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	**Section 6.2.1, Page 6-17, Table 6-6**
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	**Section 6.5, Page 6-23**
10631(g)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years.	System Supplies	Section 6.8	**Section 6.6, Page 6-24**
10631(h)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	**Section 6.4, Page 6-22**
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	System Supplies	Section 2.5.1	**Setion 4.3, Page 4-2, Tale 4-3**
10631(j)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.5.1	**n/a; retailer**
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	**Section 6.3.1, Page 6-18**
10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	System Supplies (Recycled Water)	Section 6.5.2	**Section 6.3.2, Pager 6-19, Tables 6-7 and 6-8**
10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5.2.2	**Section 6.3.2, paer 6-19, Table 6-8**
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	**Section 6.3.3, Page 6-20**

10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4	**Section 6.3.3, Page 6-20**
10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.4	**Section 6.3.3, Page 6-20**
10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5.5	**Section 6.3.4, Page 6-21**
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	**Section 6.3.4, Page 6-21**
10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.4	**Section 7.1, Pages 7-2 to 7-10**
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	**Section 6.8, Page 6-27, Section 7.1, Pages 7-2 to 7-10**
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	**Section 7.2, Pages 7-11 to 7-16, Tables 7-5, 7-6, and 7-7**
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	**n/a**
10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	**Section 6.9, Page 6-28**
10635(a)	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.3	**Section 7.2, Pages 7-11 to 7-16, Tables 7-5, 7-6, and 7-7**
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	**Chapter 8.0, Pages 8-1 to 8-8, Tables 8-1, 8-2, and 8-3**

10632(a)(2)	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency.	Water Shortage Contingency Planning	Section 8.9	**Section 8.9, Pager 8-8, Table 8-4**
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	**Section 8.8, Page 8-8**
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	**Section 8.2, Page 8-2**
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	**Section 8.4, Page 8-6**
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	**Section 8.3, Page 8-5**
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	**Section 8.6, Pager 8-7**
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	**Section 8.7, Pager 8-7, Appendix N**
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	**Section 8.5, Page 8-6**
10631(f)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.2 and 9.3	**Section 9.1, Page 9-1**
10631(f)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Sections 9.1 and 9.3	**n/a**
10631(i)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	**n/a; not a CUWCC member**
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	**Section 10.2, Page 10-2, Appendix O**

10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	**Section 10.2, Page 10-1, Appendix O**
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	**Section 10,5, Page 10-2**
10635(b)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**Section 10.2, Pager 10-2**
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	**Section 10.3, Page 10-1**
10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Sections 10.2.1	**Section 10.3, Page 10-1, Appendix O**
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	**Ssection 10.4, Page 10-2, Appendix O**
10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3	**Section 10.5, Page 10-2**
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**Section 10.5, Page 10-2**
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	**Section 10.5, Page 10-2**
10645	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5	Section 10.5, Pager 10-2

APPENDIX E

60-Day Notice and Public Hearing Letters

City of ADELANTO

Rich Kerr
Mayor

Jermaine Wright Sr.
Mayor Pro-Tem

Ed Camargo
Council Member

Charley B. Glasper
Council Member

John "Bug" Woodard Jr.
Council Member

Cynthia M. Herrera
City Manager

April 18, 2016

City of Victorville
14343 Civic Dr.
Victorville, CA 92392

SUBJECT: CITY OF ADELANTO 2015 URBAN WATER MANAGEMENT PLAN UPDATE

Dear Doug Matthews,

The City of Adelanto (City) is in the process of reviewing its 2010 Urban Water Management Plan (UWMP) and will consider if changes or amendments are needed in the preparation of its 2015 UWMP Update.

The City is currently documenting its sources of available water, system demands and water use analysis of SB x7-7 baseline and targets for 2015 and 2020, water reliability, water shortage contingency planning, water quality, and demand management measures.

The Urban Water Management Planning Act (Act) requires urban water suppliers providing water to more than 3,000 customers, or providing more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP every five years in December in years ending in five and zero. However, because of recent changes in State law, the due date for submittal has been extended to July 1, 2016.

The City's Draft 2015 UWMP is anticipated to be available in May 2016 for review, with a Public Hearing and City Council adoption planned in June 2016. If you have any questions, please contact Wilson So, Director of Public Services/City Engineer 760-246-2300 WilsonSo@saeinc.org
Sincerely,

CITY OF ADELANTO

Wilson So
Director of PublicServices/City Engineer

C: Cindy Herrera, City Manager

City of ADELANTO

Rich Kerr
Mayor

Jermaine Wright Sr.
Mayor Pro-Tem

Ed Camargo
Council Member

Charley B. Glasper
Council Member

John "Bug" Woodard Jr.
Council Member

Cynthia M. Herrera
City Manager

April 18, 2016

County of San Bernardino
Division of Environmental Health Services
172 W. 3rd Streeet
San Bernardino, Ca 92415

SUBJECT: CITY OF ADELANTO 2015 URBAN WATER MANAGEMENT PLAN UPDATE

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Sincerely,

CITY OF ADELANTO

Wilson So
Director of PublicServices/City Engineer

C: Cindy Herrera, City Manager

City of ADELANTO

Rich Kerr
Mayor

Jermaine Wright Sr.
Mayor Pro-Tem

Ed Camargo
Council Member

Charley B. Glasper
Council Member

John "Bug" Woodard Jr.
Council Member

Cynthia M. Herrera
City Manager

April 18, 2016

Mojave Water Agency
13846 Conference Center Drive
Apple Valley, CA 92307

SUBJECT: CITY OF ADELANTO 2015 URBAN WATER MANAGEMENT PLAN UPDATE

Lance Eckhart,

The City of Adelanto (City) is in the process of reviewing its 2010 Urban Water Management Plan (UWMP) and will consider if changes or amendments are needed in the preparation of its 2015 UWMP Update.

The City is currently documenting its sources of available water, system demands and water use analysis of SB x7-7 baseline and targets for 2015 and 2020, water reliability, water shortage contingency planning, water quality, and demand management measures.

The Urban Water Management Planning Act (Act) requires urban water suppliers providing water to more than 3,000 customers, or providing more than 3,000 acre-feet of water annually, to prepare and adopt an UWMP every five years in December in years ending in five and zero. However, because of recent changes in State law, the due date for submittal has been extended to July 1, 2016.

The City's Draft 2015 UWMP is anticipated to be available in May 2016 for review, with a Public Hearing and City Council adoption planned in June 2016. If you have any questions, please contact Wilson So, Director of Public Services/City Engineer 760-246-2300 WilsonSo@saeinc.org
Sincerely,

CITY OF ADELANTO

Wilson So
Director of PublicServices/City Engineer

C: Cindy Herrera, City Manager

APPENDIX F

Mojave Water Agency Population Forecast

Mojave Water Agency Population Forecast

Mojave Water Agency

December 2015

BEACON ECONOMICS

Mojave Water Agency Population Forecast

This publication was prepared for:

Mojave Water Agency

This publication was prepared by:

Beacon Economics

Christopher Thornberg
Founding Partner
5777 West Century Boulevard, Suite 895
Los Angeles, California 90045
310.571.3399
Chris@BeaconEcon.com

Eric Meux
Senior Research Associate
Eric@BeaconEcon.com

For further information about this publication please contact:

Victoria Pike Bond
Director of Communications
Beacon Economics, LLC
415.457.6030
Victoria@BeaconEcon.com

Rick Smith
Director of Business Development
Beacon Economics, LLC
858.997.1834
Rick@BeaconEcon.com

Or visit our website at www.BeaconEcon.com.

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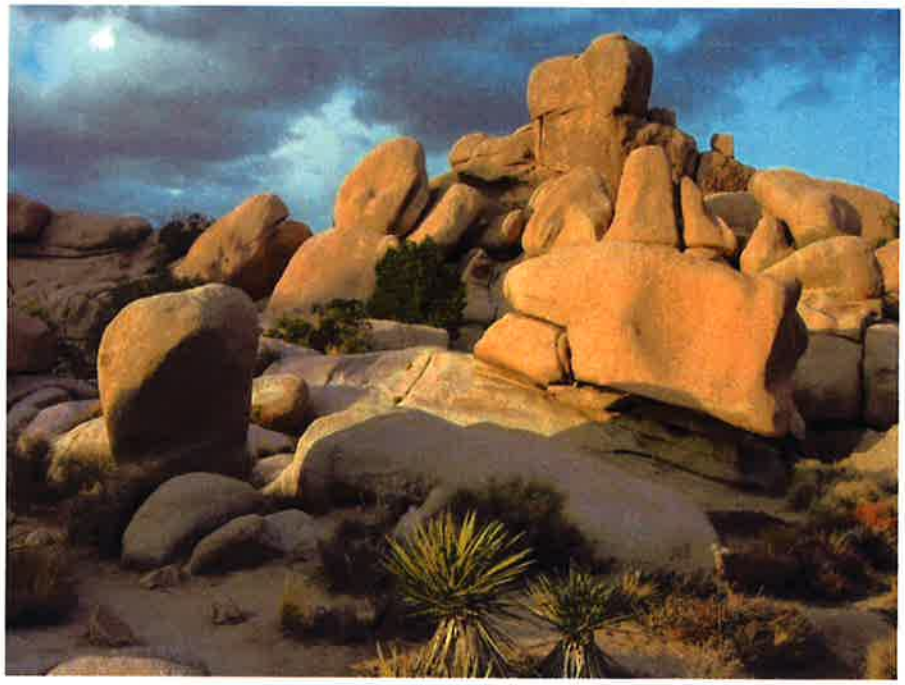
Executive Summary



Having a good sense of population growth trends is a crucial part of urban development planning, especially when it comes to water. Food and other resources can be readily imported, but developing and managing water infrastructure and resources is best done over the long run with a keen eye on the future. Population forecasting then becomes an integral part of that planning process, and to that end this report has been commissioned by the Mojave Water Agency (MWA) in order to get a better sense of future population growth, as well as the magnitude of that growth.

San Bernardino County and the broader Inland Empire region are anticipated to see more population growth in the near term than the coastal regions of Southern California, and in the longer run, Beacon Economics expects the MWA service area to see even stronger population growth. Affordability is the name of the game here. As housing has become more unaffordable in the coastal counties of Los Angeles, Orange, and San Diego, the Inland Empire has been a destination of choice for many residents willing to commute to the coast.

This has boosted economic activity within the Inland Empire as these commuters spend their wages locally, creating a positive feedback effect which drives further growth and attracts more residents to the area. The MWA service area is, in terms of housing prices, even more affordable than other parts of San Bernardino County, and we expect these dynamics to help drive future population growth above and beyond growth in the County overall.

This forecast uses historical trends primarily to drive future results. Areas that have grown the fastest in the past are projected to see population growth rates above and beyond what is projected for the MWA service area as a whole. Similarly, areas that have grown slower in the past are projected to see slower population growth over the life of the forecast. The forecasts for the incorporated cities have a large influence on the forecasts for the unincorporated regions of the MWA service area (which will be discussed in the subsequent section). Some of the incorporated areas worthy of mention include:

- Victorville: This city experienced one of the strongest average annual population growth rates from 1990 to 2010 – and the 2011 to 2015 estimates indicate similar relative growth. The current forecast calls for 2.0% average annual population growth, slightly higher than the 1.8% for the MWA service area overall.

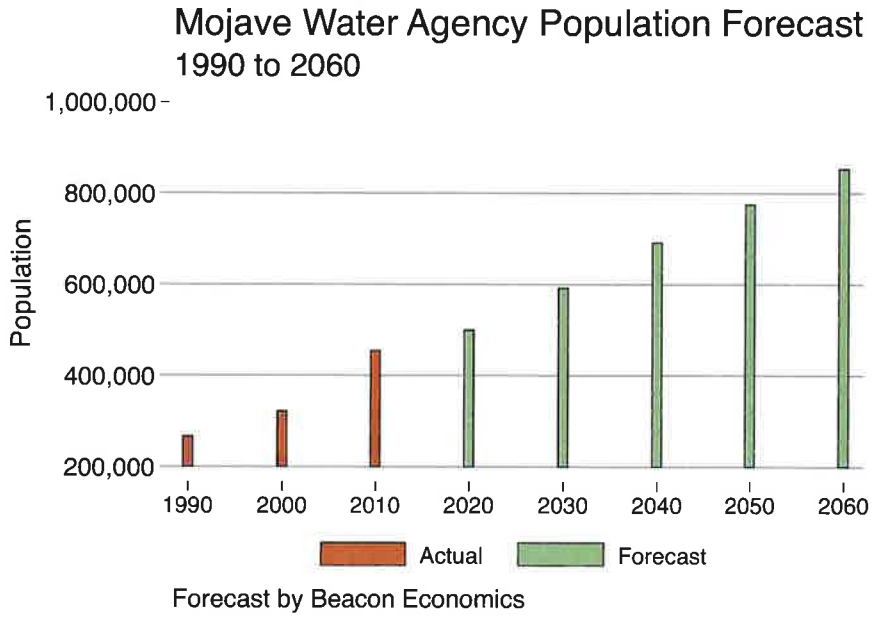
- Barstow: Out of the incorporated cities Barstow experienced some of the slowest growth from 1990 to 2010 – and the 2011 to 2015 estimates indicate the same trend. As such, this city is expected to be one of the slower growing over the life of the forecast.

This report is divided into three sections. In the first section we provide a broad overview of the methodology used to arrive at the current forecast. The affordability dynamics that have helped drive growth in the broader Inland Empire region are examined in the second part of this report, and in the third part, the similar dynamics are examined for the MWA service area specifically. The detailed forecasts of the MWA service area and it's various regions can be found in the appendices at the end of the report.

Forecast Methodology

Beacon Economics forecast of the MWA service area and its incorporated cities, sub areas, and water purveyors is based on historic correlations with population trends in their surrounding area. A long run driver of future population in the surrounding area was used to forecast population growth out to the year 2060. In the case of the incorporated portions of the MWA service area, historic population trends were correlated with population growth in San Bernardino County overall. In the case of the sub areas and water purveyors in unincorporated regions of the MWA service area, the historical population data was correlated with the nearest incorporated city.

Historical data used in the forecast of the incorporated cities were obtained from the California Department of Finance (DOF), which makes estimates available from 1970 forward on an annual basis. With this data in hand, an econometric time series model was created to capture the historical correlations with countywide population growth. Future population growth for the incorporated cities of the MWA service area was then estimated using these historic correlations and a long run driver of countywide population growth.



Population projections for San Bernardino County from the DOF were used as the long run driver for the forecasts of incorporated cities. The DOF uses a baseline cohort-component method to produce their population projections out to the calendar year 2060. This method traces people born in a given year throughout their lives. As each year passes, cohorts change due to mortality and migration assumptions. Applying fertility assumptions to women of childbearing age forms new cohorts.[1]

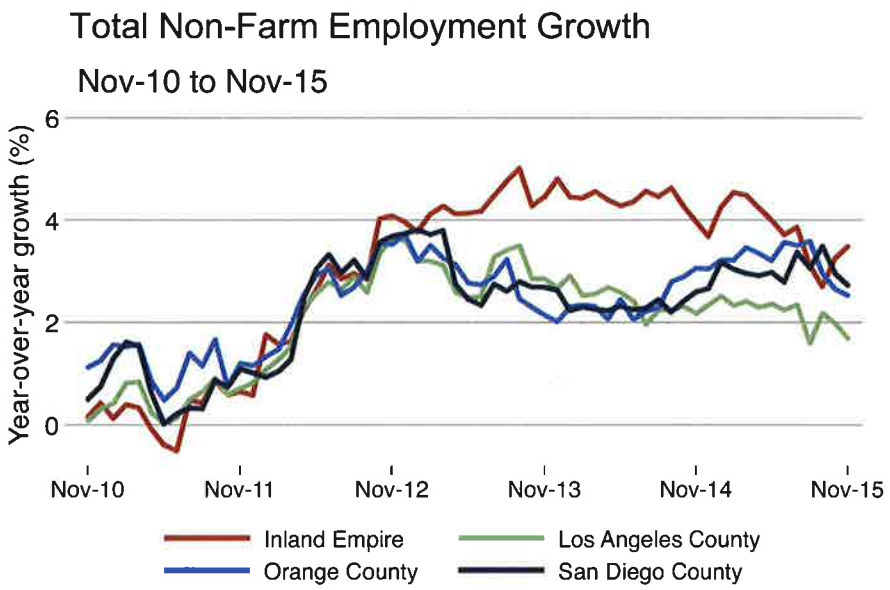
[1]For a more detailed description of the DOF methodology see State of California, Department of Finance, State and County Population Projections by Race/Ethnicity, Sex, and Age 2010-2060, Sacramento, California, December 2014.

Several sub areas and water purveyors in the MWA service area are closely associated with the boundaries of one or more incorporated cities. In these cases the forecasted population growth rates from the incorporated cities were applied to historical population counts for these areas to produce a forecast of future population. For sub areas or water purveyors in an unincorporated portion of the MWA service area, the historical correlations between the respective area and the nearest incorporated city were used to project future population growth. Due to the long run nature of this forecast, DOF countywide population estimates were the primary driver of the estimates for future population in the MWA service area. Other factors, such as building permits or planned developments, were not used as they represent a very short term outlook and are not a driver of population growth in of themselves. A forecast of long run population growth carries with it the assumption that there will be sufficient residential development to accommodate future population growth.

It should be noted that long run forecasts of any nature have a greater margin of error the longer the forecast time frame. Forecasts of one to two years can be quite accurate, whereas forecasts of five to ten years into the future are less likely to be as accurate. Several factors, most notably business cycle effects, can have strong impacts on population or other socioeconomic indicators, over the long run. Forecasts are a ultimately a "best guess" given current data and assumptions, and forecasts far into the future, such as a ten years plus, can be subject to very large forecast errors.

San Bernardino County / Inland Empire Economic and Demographic Trends

In order to put population growth of the Mojave Water Agency regions in proper context, it is important to consider the broader San Bernardino and Inland Empire economy. The various regions of California experience population and economic growth differently, which in turn impacts sub-regional performance over time. The inland regions of California, for example, are expected to grow quite differently than coastal areas, and San Bernardino is no exception to this.



Source: California Employment Development Department

Historically, economic growth has been concentrated in the coastal regions of California, particularly in Southern California. This has resulted in the coastal regions of Los Angeles, Orange, and San Diego counties becoming the major job centers in Southern California. With economic and employment growth concentrated along the coast, real estate prices, on both the residential and commercial sides of the market, remain higher in coastal counties. This has in turn resulted in inland areas having a considerable

affordability advantage, which has and will continue to attract residents and businesses to regions like the Inland Empire.

In recent years, we have already begun to see the Inland Empire region begin to separate itself from the major job centers along the coast. Total nonfarm employment growth in the Inland Empire has drastically outpaced its coastal neighbors. Since the beginning of 2012, the Inland Empire has seen year-over-year nonfarm job growth average 3.8%, noticeably higher than Los Angeles County (2.5%), Orange County (2.8%), and San Diego County (2.7%).

California Taxable Sales Growth (%)

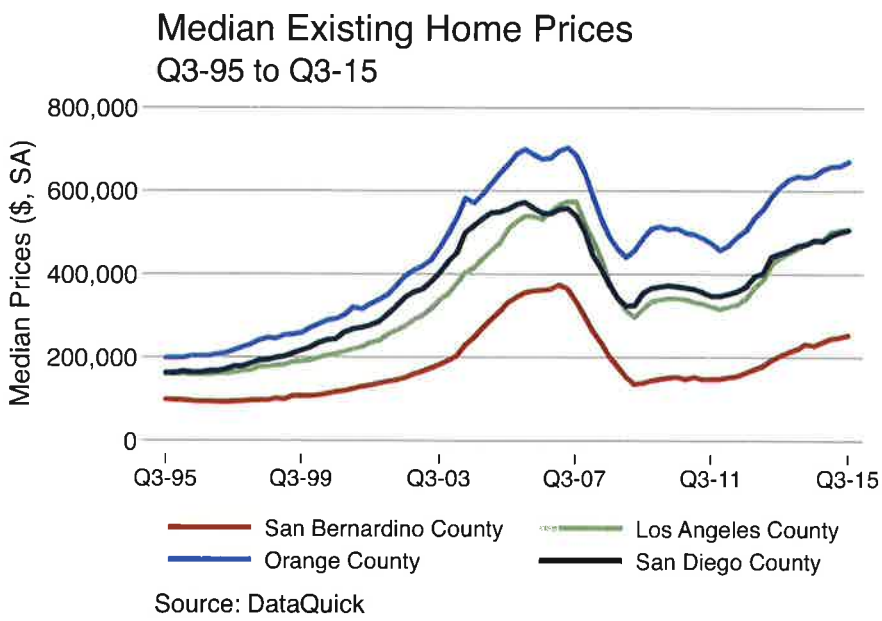
County	2009 to 2014	2015 YTD
Los Angeles	31.0	4.0
Orange	31.1	2.3
San Bernardino	38.7	7.6
San Diego	32.6	3.6

Source: California Board of Equalization

Many workers in the coastal job centers choose to take advantage of more affordable housing in the Inland Empire region. According to the American Community Survey, 29.1% of workers age 16 and over in San Bernardino County in 2014 commuted outside of the County for work.

These commuters spend most of their wages locally, which in turn fosters "internal" driven economic growth. Indeed, consumer and business spending in San Bernardino County, as measured by taxable sales, has grown faster in recent years compared to its coastal neighbors. From 2009 to 2014 taxable sales in San Bernardino grew by 38.7% over the five-year period, faster than Los Angeles (31.0%), Orange (31.1%), and San Diego (32.6%) counties. During the first three quarters of 2015, growth has accelerated as taxable sales in San Bernardino County were 7.6% higher than the same year-to-date period the prior year, vastly outpacing the coastal counties.

Home prices in San Bernardino County in particular present a stark example of just how affordable housing is in the County, relative to the coastal regions. As of the third quarter of 2015, the median price for an existing home in San Bernardino County stood at $254,000 on a seasonally adjusted basis. In contrast, median prices in Los Angeles and San Diego counties were both $507,000, double the median price in San Bernardino County. The price differential was even greater in Orange County where the median price was $670,000 in the third quarter.



On the commercial side of the market we see very similar affordability dynamics at work. For both office and retail properties, the average rent per square foot in the Inland Empire is more than 25% lower compared to the coastal counties. So not only does the

Inland empire region attract new residents through housing affordability, but businesses have an incentive to start up or relocate to the region as well.

The affordability advantage of the Inland Empire region, coupled with the strong post-recession growth of the region's economy, has succeeded in drawing residents to the region, even more than the coastal counties of Southern California. In fact, net migration to the Inland Empire has been greater than the coastal regions in both 2014 and 2015. In 2014 there were 14,256 more residents that moved into the Inland Empire than those that left the Inland Empire, and net migration was 9,418 in 2015. In contrast, Los Angeles County experienced negative net migration for both years (-4,183 in 2014; -3,651 in 2015), and both San Diego County (13,818 in 2014; 2,977 in 2015) and Orange County (6,697 in 2014; 5,128 in 2015) had lower net migration in absolute terms.

California Commercial Rents ($/Sq. Ft.)

Region	Office	Retail
Los Angeles County	35.12	31.24
Inland Empire	21.79	21.48
Orange County	30.07	32.25
San Diego County	30.61	30.13

Source: REIS

The higher net migration in the Inland Empire has resulted in faster rates of population growth in recent years compared to these coastal counties. The latest data from the California Department of Finance shows that the Inland Empire population increased 1% from July 2014 to July 2015, which had faster population growth than Los Angeles County (0.7%), Orange County (0.8%), and San Diego County (0.9%).

Looking forward, Beacon Economics expects these affordability advantages to continue to promote economic and population growth in the Inland Empire region. The Inland Empire is home to many commuters working in the coastal job centers, but they spend much of their wages locally. This in turn generates positive feedback within the region's economy and helps to promote further business and employment growth. Compared to the coastal regions of Southern California, the Inland Empire is expected to experience higher growth rates for the foreseeable future due to its affordability advantage, much like we have seen in the last few years.

Mojave Water Agency Population Forecast

The service area of the MWA has vast potential for future growth over the next several decades. In much the same way that San Bernardino County and the broader Inland Empire region hold an affordability advantage over coastal counties, making the area more attractive to residents and businesses, the MWA area holds an affordability advantage within San Bernardino County. This will allow the population within the MWA service area to increase at a faster rate than the County overall for the life of this forecast.

MWA Incorporated City Median Home Prices

City	Oct-2015 ($)	YoY (%)
Adelanto	156,500	1.0
Apple Valley	189,000	-0.8
Barstow	76,750	-4.1
Hesperia	220,000	16.4
Victorville	185,000	5.0
Yucca Valley	142,500	10.5
San Bernardino County	260,000	7.0

Source: DataQuick

Looking at median home prices in the incorporated parts of the MWA service area provides the clearest example of this affordability advantage. As of October 2015, all six of the incorporated cities within the MWA service areas have median home prices that are lower than the countywide median of $260,000. Hespe-

ria comes the closest with a median price of $220,000, and Barstow is on the lower end of the spectrum with a median price of $76,750.

The lower home prices in the incorporated cities within the MWA service areas indicate that demand for housing is currently not as strong as in other parts of the county, but as population grows in other cities this will drive up prices in those parts and the MWA areas will become that much more attractive. This is the same dynamic that has been at work for the larger Inland Empire region as coastal parts of Southern California become increasingly unaffordable.

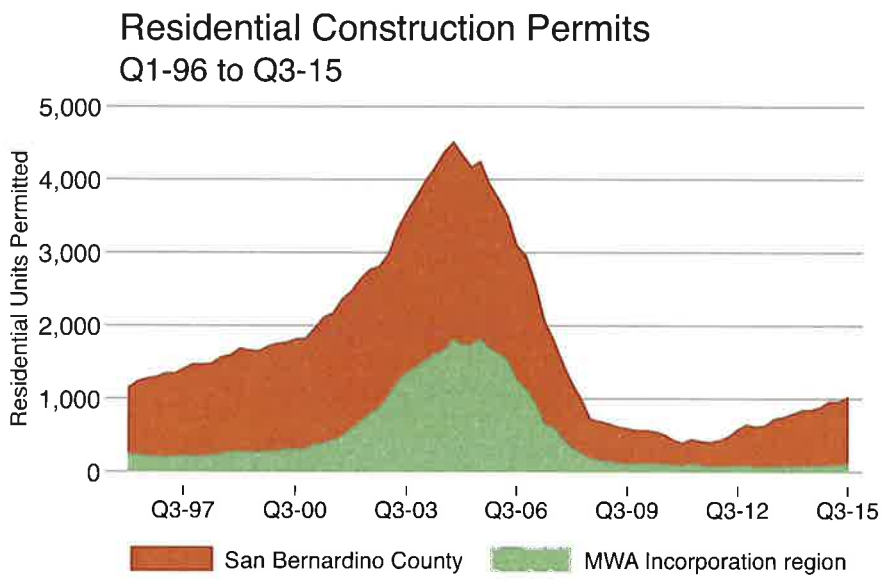
MWA IncorporatedTaxable Sales Growth (%)

City	2009 to 2014	2015 YTD
Adelanto	40.1	-17.4
Apple Valley	15.8	-0.1
Barstow	31.2	-5.5
Hesperia	54.0	-1.1
Victorville	28.0	3.6
Yucca Valley	6.2	5.5
San Bernardino County	38.7	7.6

Source: California Board of Equalization

Overall economic growth in the incorporated cities of the MWA service area, as measured by taxable sales, indicates that these cities have yet to transition towards the growth centers of San Bernardino County. Five-year growth trends show that most of the incorporated cities grew slower than the County overall. During the first three quarters of 2015, all six incorporated cities witnessed lower growth than the County overall compared to the same year-to-date period the year prior. In the coming years, we expect this trend to reverse as more residents choose to live in the more affordable areas within the MWA service area and these cities, as well as the unincorporated parts of the MWA area, and taxable sales growth in these regions overtakes the countywide average growth.

Residential construction is another area where the MWA service areas has lagged behind the rest of the County, however we expect this trend to reverse as well in the coming years. Since 2012, the incorporated region of the MWA service area has seen slower growth in permitting for new residential structures on an annual basis. For the first three quarters of 2015, however, residential permitting growth was slightly stronger in the MWA area. We should see more of that in the years to come as affordability continues to attract more residents and fuel population growth.



Source: Construction Industry Research Board

Summary

The MWA service area is anticipated to experience population growth rates over the next several decades that are stronger than those anticipated for San Bernardino County overall. The broader Inland Empire region has seen strong economic and employment growth these last few years, and much of that has been due to its affordability advantage it holds over coastal counties of Southern California.

In similar fashion, the MWA service area is expected to see this kind of growth as well, relative to other parts of the Inland Empire, due to its affordability advantage relative to the broader region. The current data available for the incorporated cities of the MWA service area shows that the region has not yet transitioned to being one of the growth centers for San Bernardino County, but given its clear advantage in terms of home prices, Beacon Economics expects economic and population growth to pick up in the years to come and over the life of this forecast.

Appendix 1: MWA Incorporated City Forecasts

Year	Adelanto	Apple Valley	Barstow	Hesperia	Victorville	Yucca Valley
1990	6,751	46,159	24,260	50,705	50,579	16,442
2000	17,895	54,240	22,699	62,740	64,165	16,855
2010	31,760	69,144	22,757	90,170	115,913	20,656
2011	31,609	69,484	23,010	90,539	117,239	20,727
2012	30,918	69,769	23,161	90,739	118,933	20,783
2013	31,178	70,261	23,340	91,221	120,388	20,922
2014	32,472	70,743	23,517	91,541	120,882	20,992
2015	33,080	71,453	23,661	92,302	121,568	21,317
2020	35,476	75,731	24,239	99,716	132,153	22,211
2025	38,453	81,566	24,858	108,659	147,364	23,395
2030	42,221	87,767	25,475	118,976	163,486	24,720
2035	46,311	93,862	26,059	129,739	179,396	26,028
2040	50,182	99,189	26,604	139,849	194,677	27,190
2045	53,560	103,816	27,122	148,888	209,137	28,189
2050	56,555	108,352	27,648	157,422	222,675	29,123
2055	59,573	112,685	28,163	165,674	235,240	30,012
2060	62,482	116,772	28,674	173,574	246,817	30,846

Forecast by Beacon Economics

Appendix 2: MWA Sub Area Forecasts

Year	Alto	Alto Transition Zone	Baja	Centro	Este	Morongo	Oeste
1990	165,100	17,468	5,782	35,046	5,167	31,001	5,501
2000	222,012	14,636	5,035	33,392	5,822	31,375	7,838
2010	334,862	23,366	4,729	34,167	7,370	38,177	10,595
2011	337,146	23,305	4,735	34,546	7,422	38,325	10,687
2012	339,478	22,909	4,739	34,774	7,454	38,414	10,743
2013	342,261	23,113	4,746	35,043	7,512	38,578	10,846
2014	343,913	23,957	4,753	35,308	7,568	38,734	10,945
2015	346,665	24,364	4,762	35,524	7,646	38,952	11,084
2020	371,356	26,132	4,812	36,393	8,073	40,140	11,844
2025	407,344	28,465	4,872	37,322	8,615	41,608	12,819
2030	449,520	31,413	4,933	38,248	9,196	43,140	13,880
2035	493,686	34,616	4,989	39,125	9,753	44,567	14,913
2040	535,002	37,663	5,036	39,943	10,244	45,791	15,835
2045	571,913	40,342	5,076	40,720	10,672	46,834	16,646
2050	607,027	42,744	5,112	41,510	11,086	47,827	17,440
2055	641,206	45,158	5,146	42,284	11,479	48,752	18,198
2060	674,042	47,489	5,177	43,050	11,851	49,613	18,922

Forecast by Beacon Economics

Appendix 3: MWA Water Purveyor Forecasts

Year	Apple Valley Ranchos Water Company	Bighorn-Desert View Water Agency	City of Adelanto Water District	County Service Area 64	County Service Area 70 J	Golden State Water Company - Barstow System
1990	37,228	1,200	6,751	5,353	3,328	29,905
2000	45,207	2,892	17,895	7,595	5,652	29,337
2010	57,847	3,839	31,760	9,075	9,467	30,173
2011	58,132	3,891	31,609	9,163	9,609	30,479
2012	58,370	3,922	30,918	9,216	9,695	30,662
2013	58,781	3,981	31,178	9,314	9,855	30,878
2014	59,185	4,037	32,472	9,408	10,009	31,090
2015	59,779	4,116	33,080	9,541	10,227	31,261
2020	63,357	4,554	35,476	10,267	11,433	31,951
2025	68,240	5,135	38,453	11,205	13,049	32,684
2030	73,427	5,794	42,221	12,236	14,906	33,412
2035	78,526	6,463	46,311	13,246	16,811	34,096
2040	82,983	7,082	50,182	14,156	18,597	34,732
2045	86,854	7,644	53,560	14,961	20,233	35,333
2050	90,649	8,209	56,555	15,753	21,891	35,940
2055	94,274	8,763	59,573	16,514	23,528	36,533
2060	97,693	9,303	62,482	17,243	25,135	37,116

Forecast by Beacon Economics

Year	Helendale Community Services District	Hesperia Water District	Hi-Desert Water District	Joshua Basin County Water District	Phelan Pinon Hills Community Services District	Victorville Water District
1990	3,273	50,976	19,060	7,515	9,688	54,539
2000	4,704	62,592	19,198	8,062	13,770	69,095
2010	6,180	89,742	23,760	9,534	19,423	122,051
2011	6,247	90,110	23,842	9,590	19,683	122,551
2012	6,287	90,308	23,906	9,624	19,841	122,821
2013	6,362	90,788	24,065	9,687	20,134	123,474
2014	6,434	91,106	24,147	9,746	20,416	123,907
2015	6,535	91,864	24,520	9,830	20,814	124,937
2020	7,090	99,242	25,548	10,287	23,009	139,151
2025	7,812	108,143	26,911	10,860	25,919	155,167
2030	8,613	118,411	28,435	11,469	29,219	172,144
2035	9,407	129,123	29,939	12,047	32,561	188,896
2040	10,127	139,185	31,276	12,551	35,655	204,986
2045	10,769	148,181	32,425	12,986	38,462	220,211
2050	11,406	156,675	33,499	13,406	41,283	234,466
2055	12,020	164,888	34,522	13,801	44,043	247,697
2060	12,612	172,750	35,481	14,172	46,735	259,887

Forecast by Beacon Economics

About Beacon Economics

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- Economic, revenue and occupational forecasting
- Economic impact analysis
- Regional economic analysis
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- EB-5 Economic analysis
- Public Speaking
- Expert Testimony

Contacts

- **Sherif Hanna**
  Managing Partner
  (424) 646-4656
  Sherif@BeaconEcon.com
- **Victoria Pike Bond**
  Director of Communications
  (415) 457-6030
  Victoria@BeaconEcon.com
- **Rick Smith**
  Director of Business Development
  (858) 997-1834
  Rick@BeaconEcon.com

APPENDIX G

AWWA Water Loss Audit

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.
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? Click to access definition
+ Click to add a comment

Water Audit Report for: << Please enter system details and contact information on the Instructions tab >>
Reporting Year: 2015 | 1/2015 - 12/2015

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

WATER SUPPLIED

							Pcnt:		Value:
Volume from own sources:	+ ?	7	4,049.000	acre-ft/yr	+ ?	8		○ ◉	2.000 acre-ft/yr
Water imported:	+ ?	n/a	0.000	acre-ft/yr	+ ?			○ ◉	acre-ft/yr
Water exported:	+ ?	n/a	0.000	acre-ft/yr	+ ?			○ ◉	acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 4,047.000 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:		Value:
Billed metered:	+ ?	6	3,282.000	acre-ft/yr			
Billed unmetered:	+ ?	n/a	0.000	acre-ft/yr			
Unbilled metered:	+ ?	n/a	0.000	acre-ft/yr			
Unbilled unmetered:	+ ?		50.588	acre-ft/yr	1.25%	◉ ○	acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: ? 3,332.588 acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) 714.413 acre-ft/yr

Apparent Losses

					Pcnt:		Value:
Unauthorized consumption:	+ ?		10.118	acre-ft/yr	0.25%	◉ ○	acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+ ?	4	324.593	acre-ft/yr	9.00%	◉ ○	acre-ft/yr
Systematic data handling errors:	+ ?		8.205	acre-ft/yr	0.25%	◉ ○	acre-ft/yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? 342.916 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 371.497 acre-ft/yr

WATER LOSSES: 714.413 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 765.000 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	5	113.0	miles
Number of active AND inactive service connections:	+ ?	8	8,165	
Service connection density:	?		72	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: + ? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: + ? 7 55.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	10	$9,300,000	$/Year	
Customer retail unit cost (applied to Apparent Losses):	+ ?	8	$2.40	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	+ ?	7	$1,000.00	$/acre-ft	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 67 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources
2: Customer metering inaccuracies
3: Billed metered

AWWA Free Water Audit Software:
System Attributes and Performance Indicators

WAS v5.0

American Water Works Association.
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Water Audit Report for: << Please enter system details and contact information on the Instructions tab >>
Reporting Year: 2015 | 1/2015 - 12/2015

***** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 67 out of 100 *****

System Attributes:

Apparent Losses:	342.916	acre-ft/yr
+ Real Losses:	371.497	acre-ft/yr
= **Water Losses:**	**714.413**	acre-ft/yr
? Unavoidable Annual Real Losses (UARL):	113.12	acre-ft/yr
Annual cost of Apparent Losses:	$358,498	
Annual cost of Real Losses:	$371,497	Valued at **Variable Production Cost**

Return to Reporting Worksheet to change this assumpiton

Performance Indicators:

Financial:	Non-revenue water as percent by volume of Water Supplied:	18.9%	
	Non-revenue water as percent by cost of operating system:	8.4%	Real Losses valued at Variable Production Cost
Operational Efficiency:	Apparent Losses per service connection per day:	37.49	gallons/connection/day
	Real Losses per service connection per day:	40.62	gallons/connection/day
	Real Losses per length of main per day*:	N/A	
	Real Losses per service connection per day per psi pressure:	0.74	gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL):	371.50	acre-feet/year
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	3.28	

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline

AWWA Free Water Audit Software:
User Comments

WAS v5.0

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Use this worksheet to add comments or notes to explain how an input value was calculated, or to document the sources of the information used.

General Comment:	

Audit Item	Comment
Volume from own sources:	
Vol. from own sources: Master meter error adjustment:	
Water imported:	
Water imported: master meter error adjustment:	
Water exported:	
Water exported: master meter error adjustment:	
Billed metered:	
Billed unmetered:	
Unbilled metered:	

Audit Item	Comment
Unbilled unmetered:	
Unauthorized consumption:	
Customer metering inaccuracies:	
Systematic data handling errors:	
Length of mains:	
Number of active AND inactive service connections:	
Average length of customer service line:	
Average operating pressure:	
Total annual cost of operating water system:	
Customer retail unit cost (applied to Apparent Losses):	
Variable production cost (applied to Real Losses):	

AWWA Free Water Audit Software: Water Balance

WAS v5.0

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Water Audit Report for:	<< Please enter system details and contact information on the Instructions tab >>
Reporting Year:	2015 — 1/2015 - 12/2015
Data Validity Score:	67

Own Sources (Adjusted for known errors) 4,047.000	System Input 4,047.000	Water Exported 0.000			Billed Water Exported	Revenue Water 0.000
		Water Supplied 4,047.000	Authorized Consumption 3,332.588	Billed Authorized Consumption 3,282.000	Billed Metered Consumption (water exported is removed) 3,282.000	Revenue Water 3,282.000
					Billed Unmetered Consumption 0.000	
				Unbilled Authorized Consumption 50.588	Unbilled Metered Consumption 0.000	Non-Revenue Water (NRW) 765.000
					Unbilled Unmetered Consumption 50.588	
			Water Losses 714.413	Apparent Losses 342.916	Unauthorized Consumption 10.118	
					Customer Metering Inaccuracies 324.593	
					Systematic Data Handling Errors 8.205	
Water Imported 0.000				Real Losses 371.497	Leakage on Transmission and/or Distribution Mains Not broken down	
					Leakage and Overflows at Utility's Storage Tanks Not broken down	
					Leakage on Service Connections Not broken down	

AWWA Free Water Audit Software:
Dashboard

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The graphic below is a visual representation of the Water Balance with bar heights propotional to the volume of the audit components

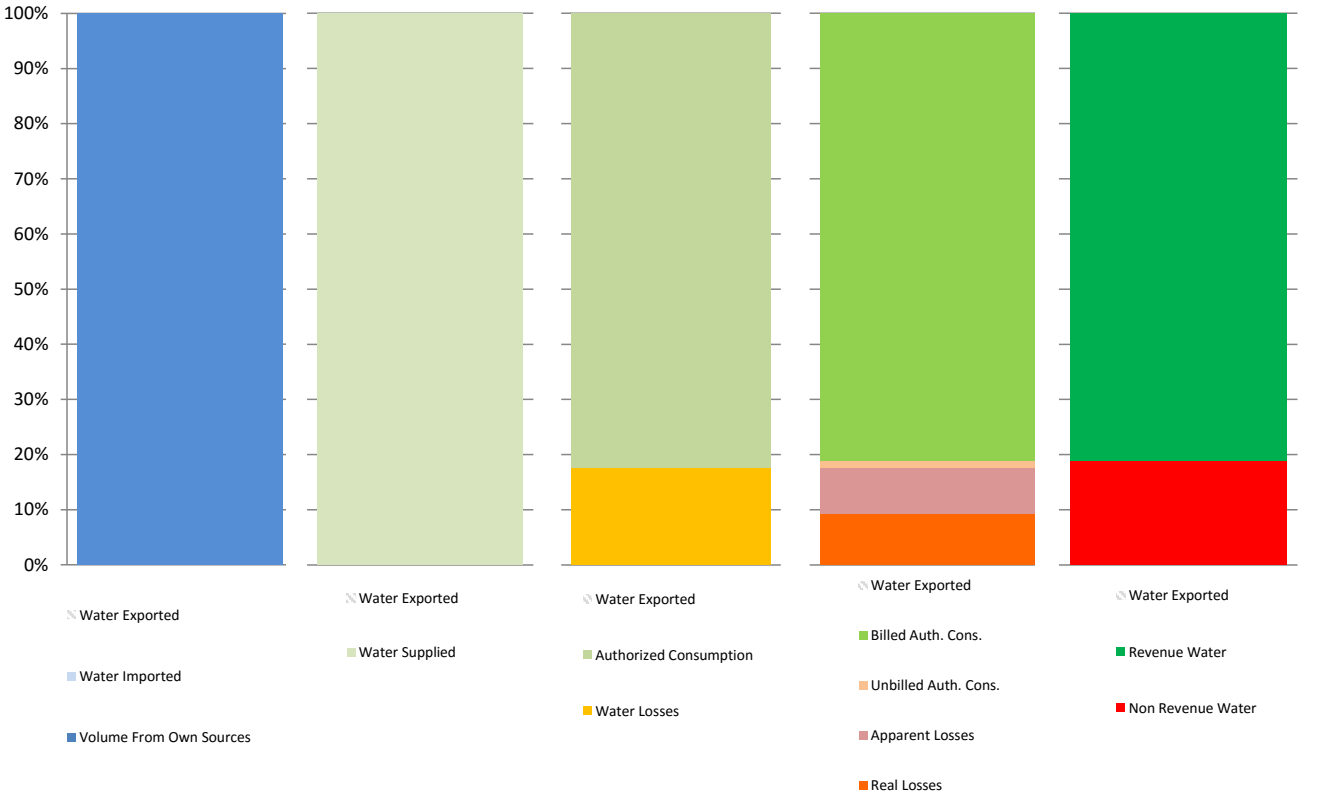
Water Audit Report for: << Please enter system details and contact information on the Instructions tab >>

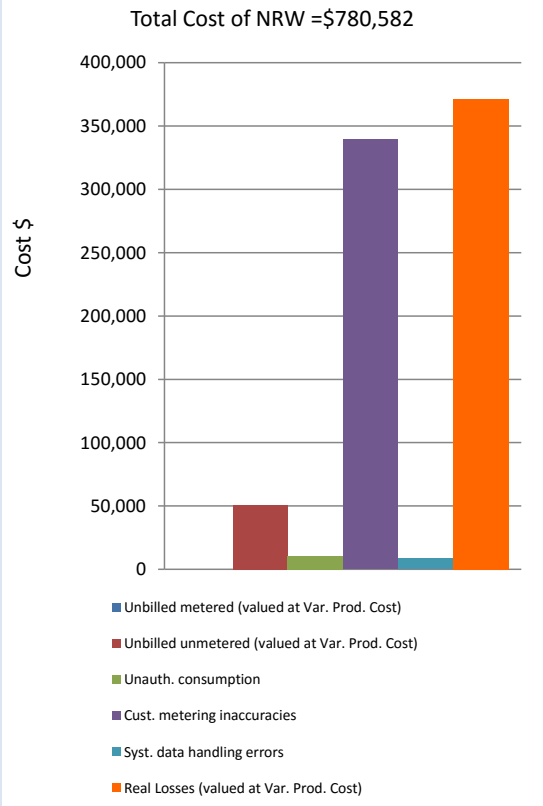
Reporting Year: 2015 | 1/2015 - 12/2015

Data Validity Score: 67

○ Show me the VOLUME of Non-Revenue Water

◉ Show me the COST of Non-Revenue Water





AWWA Free Water Audit Software: Grading Matrix

WAS 5.0

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The grading assigned to each audit component and the corresponding recommended improvements and actions are highlighted in yellow. Audit accuracy is likely to be improved by prioritizing those items shown in red

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
WATER SUPPLIED											
Volume from own sources:	Select this grading only if the water utility purchases/imports all of its water resources (i.e. has no sources of its own)	Less than 25% of water production sources are metered, remaining sources are estimated. No regular meter accuracy testing or electronic calibration conducted.	25% - 50% of treated water production sources are metered; other sources estimated. No regular meter accuracy testing or electronic calibration conducted.	Conditions between 2 and 4	50% - 75% of treated water production sources are metered, other sources estimated. Occasional meter accuracy testing or electronic calibration conducted.	Conditions between 4 and 6	At least 75% of treated water production sources are metered, or at least 90% of the source flow is derived from metered sources. Meter accuracy testing and/or electronic calibration of related instrumentation is conducted annually. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of treated water production sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of treated water production sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually, with less than 10% found outside of +/- 3% accuracy. Procedures are reviewed by a third party knowledgeable in the M36 methodology.
Improvements to attain higher data grading for "Volume from own Sources" component:		to qualify for 2: Organize and launch efforts to collect data for determining volume from own sources	to qualify for 4: Locate all water production sources on maps and in the field, launch meter accuracy testing for existing meters, begin to install meters on unmetered water production sources and replace any obsolete/defective meters.		to qualify for 6: Formalize annual meter accuracy testing for all source meters; specify the frequency of testing. Complete installation of meters on unmetered water production sources and complete replacement of all obsolete/defective meters.		to qualify for 8: Conduct annual meter accuracy testing and calibration of related instrumentation on all meter installations on a regular basis. Complete project to install new, or replace defective existing, meters so that entire production meter population is metered. Repair or replace meters outside of +/- 6% accuracy.		to qualify for 10: Maintain annual meter accuracy testing and calibration of related instrumentation for all meter installations. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to further improve meter accuracy.		to maintain 10: Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.
Volume from own sources master meter and supply error adjustment:	Select n/a only if the water utility fails to have meters on its sources of supply	Inventory information on meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined	No automatic datalogging of production volumes; daily readings are scribed on paper records without any accountability controls. Flows are not balanced across the water distribution system: tank/storage elevation changes are not employed in calculating the "Volume from own sources" component and archived flow data is adjusted only when grossly evident data error occurs.	Conditions between 2 and 4	Production meter data is logged automatically in electronic format and reviewed at least on a monthly basis with necessary corrections implemented. "Volume from own sources" tabulations include estimate of daily changes in tanks/storage facilities. Meter data is adjusted when gross data errors occur, or occasional meter testing deems this necessary.	Conditions between 4 and 6	Hourly production meter data logged automatically & reviewed on at least a weekly basis. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and/or error is confirmed by meter accuracy testing. Tank/storage facility elevation changes are automatically used in calculating a balanced "Volume from own sources" component, and data gaps in the archived data are corrected on at least a weekly basis.	Conditions between 6 and 8	Continuous production meter data is logged automatically & reviewed each business day. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and/or results of meter accuracy testing. Tank/storage facility elevation changes are automatically used in "Volume from own sources" tabulations and data gaps in the archived data are corrected on a daily basis.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically balances flows from all sources and storages; results are reviewed each business day. Tight accountability controls ensure that all data gaps that occur in the archived flow data are quickly detected and corrected. Regular calibrations between SCADA and sources meters ensures minimal data transfer error.
Improvements to attain higher data grading for "Master meter and supply error adjustment" component:		to qualify for 2: Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature.	to qualify for 4: Install automatic datalogging equipment on production meters. Complete installation of level instrumentation at all tanks/storage facilities and include tank level data in automatic calculation routine in a computerized system. Construct a computerized listing or spreadsheet to archive input volumes, tank/storage volume changes and import/export flows in order to determine the composite "Water Supplied" volume for the distribution system. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps.		to qualify for 6: Refine computerized data collection and archive to include hourly production meter data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Use daily net storage change to balance flows in calculating "Water Supplied" volume. Necessary corrections to data errors are implemented on a weekly basis.		to qualify for 8: Ensure that all flow data is collected and archived on at least an hourly basis. All data is reviewed and detected errors corrected each business day. Tank/storage levels variations are employed in calculating balanced "Water Supplied" component. Adjust production meter data for gross error and inaccuracy confirmed by testing.		to qualify for 10: Link all production and tank/storage facility elevation change data to a Supervisory Control & Data Acquisition (SCADA) System, or similar computerized monitoring/control system, and establish automatic flow balancing algorithm and regularly calibrate between SCADA and source meters. Data is reviewed and corrected each business day.		to maintain 10: Monitor meter innovations for development of more accurate and less expensive flowmeters. Continue to replace or repair meters as they perform outside of desired accuracy limits. Stay abreast of new and more accurate water level instruments to better record tank/storage levels and archive the variations in storage volume. Keep current with SCADA and data management systems to ensure that archived data is well-managed and error free.
Water Imported:	Select n/a if the water utility's supply is exclusively from its own water resources (no bulk purchased/ imported water)	Less than 25% of imported water sources are metered, remaining sources are estimated. No regular meter accuracy testing.	25% - 50% of imported water sources are metered; other sources estimated. No regular meter accuracy testing.	Conditions between 2 and 4	50% - 75% of imported water sources are metered, other sources estimated. Occasional meter accuracy testing conducted.	Conditions between 4 and 6	At least 75% of imported water sources are metered, meter accuracy testing and/or electronic calibration of related instrumentation is conducted annually for all meter installations. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of imported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of imported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually for all meter installations, with less than 10% of accuracy tests found outside of +/- 3% accuracy.
Improvements to attain higher data grading for "Water Imported Volume" component: *(Note: usually the water supplier selling the water - "the Exporter" - to the utility being audited is responsible to maintain the metering installation measuring the imported volume. The utility should coordinate carefully with the Exporter to ensure that adequate meter upkeep takes place and an accurate measure of the Water Imported volume is quantified.)*		to qualify for 2: Review bulk water purchase agreements with partner suppliers; confirm requirements for use and maintenance of accurate metering. Identify needs for new or replacement meters with goal to meter all imported water sources.	To qualify for 4: Locate all imported water sources on maps and in the field, launch meter accuracy testing for existing meters, begin to install meters on unmetered imported water interconnections and replace obsolete/defective meters.		to qualify for 6: Formalize annual meter accuracy testing for all imported water meters, planning for both regular meter accuracy testing and calibration of the related instrumentation. Continue installation of meters on unmetered imported water interconnections and replacement of obsolete/defective meters.		to qualify for 8: Complete project to install new, or replace defective, meters on all imported water interconnections. Maintain annual meter accuracy testing for all imported water meters and conduct calibration of related instrumentation at least annually. Repair or replace meters outside of +/- 6% accuracy.		to qualify for 10: Conduct meter accuracy testing for all meters on a semi-annual basis, along with calibration of all related instrumentation. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to improve meter accuracy.		to maintain 10: Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Continue to conduct calibration of related instrumentation on a semi-annual basis. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Water imported master meter and supply error adjustment:	Select n/a if the Imported water supply is unmetered, with Imported water quantities estimated on the billing invoices sent by the Exporter to the purchasing Utility.	Inventory information on imported meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined Written agreement(s) with water Exporter(s) are missing or written in vague language concerning meter management and testing.	No automatic datalogging of imported supply volumes; daily readings are scribed on paper records without any accountability controls to confirm data accuracy and the absence of errors and data gaps in recorded volumes. Written agreement requires meter accuracy testing but is vague on the details of how and who conducts the testing.	Conditions between 2 and 4	Imported supply metered flow data is logged automatically in electronic format and reviewed at least on a monthly basis by the Exporter with necessary corrections implemented. Meter data is adjusted by the Exporter when gross data errors are detected. A coherent data trail exists for this process to protect both the selling and the purchasing Utility. Written agreement exists and clearly states requirements and roles for meter accuracy testing and data management.	Conditions between 4 and 6	Hourly Imported supply metered data is logged automatically & reviewed on at least a weekly basis by the Exporter. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and to correct for error confirmed by meter accuracy testing. Any data gaps in the archived data are detected and corrected during the weekly review. A coherent data trail exists for this process to protect both the selling and the purchasing Utility.	Conditions between 6 and 8	Continuous Imported supply metered flow data is logged automatically & reviewed each business day by the Exporter. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and/or results of meter accuracy testing. Any data errors/gaps are detected and corrected on a daily basis. A data trail exists for the process to protect both the selling and the purchasing Utility.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically records data which is reviewed each business day by the Exporter. Tight accountability controls ensure that all error/data gaps that occur in the archived flow data are quickly detected and corrected. A reliable data trail exists and contract provisions for meter testing and data management are reviewed by the selling and purchasing Utility at least once every five years.
Improvements to attain higher data grading for "Water imported master meter and supply error adjustment" component:		to qualify for 2: Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature. Review the written agreement between the selling and purchasing Utility.	to qualify for 4: Install automatic datalogging equipment on Imported supply meters. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps. Launch discussions with the Exporters to jointly review terms of the written agreements regarding meter accuracy testing and data management; revise the terms as necessary.		to qualify for 6: Refine computerized data collection and archive to include hourly Imported supply metered flow data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Make necessary corrections to errors/data errors on a weekly basis.		to qualify for 8: Ensure that all Imported supply metered flow data is collected and archived on at least an hourly basis. All data is reviewed and errors/data gaps are corrected each business day.		to qualify for 10: Conduct accountability checks to confirm that all Imported supply metered data is reviewed and corrected each business day by the Exporter. Results of all meter accuracy tests and data corrections should be available for sharing between the Exporter and the purchasing Utility. Establish a schedule for a regular review and updating of the contractual language in the written agreement between the selling and the purchasing Utility; at least every five years.		to maintain 10: Monitor meter innovations for development of more accurate and less expensive flowmeters; work with the Exporter to help identify meter replacement needs. Keep communication lines with Exporters open and maintain productive relations. Keep the written agreement current with clear and explicit language that meets the ongoing needs of all parties.
Water Exported:	Select n/a if the water utility sells no bulk water to neighboring water utilities (no exported water sales)	Less than 25% of exported water sources are metered, remaining sources are estimated. No regular meter accuracy testing.	25% - 50% of exported water sources are metered; other sources estimated. No regular meter accuracy testing.	Conditions between 2 and 4	50% - 75% of exported water sources are metered, other sources estimated. Occasional meter accuracy testing conducted.	Conditions between 4 and 6	At least 75% of exported water sources are metered, meter accuracy testing and/or electronic calibration conducted annually. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of exported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of exported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually for all meter installations, with less than 10% of accuracy tests found outside of +/- 3% accuracy.
Improvements to attain higher data grading for "Water Exported Volume" component: (*Note: usually, if the water utility being audited sells (Exports) water to a neighboring purchasing Utility, it is the responsibility of the utility exporting the water to maintain the metering installation measuring the Exported volume. The utility exporting the water should ensure that adequate meter upkeep takes place and an accurate measure of the Water Exported volume is quantified.*)		to qualify for 2: Review bulk water sales agreements with purchasing utilities; confirm requirements for use & upkeep of accurate metering. Identify needs to install new, or replace defective meters as needed.	To qualify for 4: Locate all exported water sources on maps and in field, launch meter accuracy testing for existing meters, begin to install meters on unmetered exported water interconnections and replace obsolete/defective meters		to qualify for 6: Formalize annual meter accuracy testing for all exported water meters. Continue installation of meters on unmetered exported water interconnections and replacement of obsolete/defective meters.		to qualify for 8: Complete project to install new, or replace defective, meters on all exported water interconnections. Maintain annual meter accuracy testing for all exported water meters. Repair or replace meters outside of +/- 6% accuracy.		to qualify for 10: Maintain annual meter accuracy testing for all meters. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to improve meter accuracy.		to maintain 10: Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.
Water exported master meter and supply error adjustment:	Select n/a only if the water utility fails to have meters on its exported supply interconnections.	Inventory information on exported meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined Written agreement(s) with the utility purchasing the water are missing or written in vague language concerning meter management and testing.	No automatic datalogging of exported supply volumes; daily readings are scribed on paper records without any accountability controls to confirm data accuracy and the absence of errors and data gaps in recorded volumes. Written agreement requires meter accuracy testing but is vague on the details of how and who conducts the testing.	Conditions between 2 and 4	Exported metered flow data is logged automatically in electronic format and reviewed at least on a monthly basis, with necessary corrections implemented. Meter data is adjusted by the utility selling (exporting) the water when gross data errors are detected. A coherent data trail exists for this process to protect both the utility exporting the water and the purchasing Utility. Written agreement exists and clearly states requirements and roles for meter accuracy testing and data management.	Conditions between 4 and 6	Hourly exported supply metered data is logged automatically & reviewed on at least a weekly basis by the utility selling the water. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and to correct for error found by meter accuracy testing. Any data gaps in the archived data are detected and corrected during the weekly review. A coherent data trail exists for this process to protect both the selling (exporting) utility and the purchasing Utility.	Conditions between 6 and 8	Continuous exported supply metered flow data is logged automatically & reviewed each business day by the utility selling (exporting) the water. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and any error confirmed by meter accuracy testing. Any data errors/gaps are detected and corrected on a daily basis. A data trail exists for the process to protect both the selling (exporting) Utility and the purchasing Utility.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically records data which is reviewed each business day by the utility selling (exporting) the water. Tight accountability controls ensure that all error/data gaps that occur in the archived flow data are quickly detected and corrected. A reliable data trail exists and contract provisions for meter testing and data management are reviewed by the selling Utility and purchasing Utility at least once every five years.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Water exported master meter and supply error adjustment" component:		to qualify for 2: Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature. Review the written agreement between the utility selling (exporting) the water and the purchasing Utility.	to qualify for 4: Install automatic datalogging equipment on exported supply meters. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps. Launch discussions with the purchasing utilities to jointly review terms of the written agreements regarding meter accuracy testing and data management; revise the terms as necessary.		to qualify for 6: Refine computerized data collection and archive to include hourly exported supply metered flow data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Make necessary corrections to errors/data errors on a weekly basis.		to qualify for 8: Ensure that all exported metered flow data is collected and archived on at least an hourly basis. All data is reviewed and errors/data gaps are corrected each business day.		to qualify for 10: Conduct accountability checks to confirm that all exported metered flow data is reviewed and corrected each business day by the utility selling the water. Results of all meter accuracy tests and data corrections should be available for sharing between the utility and the purchasing Utility. Establish a schedule for a regular review and updating of the contractual language in the written agreements with the purchasing utilities; at least every five years.		to maintain 10: Monitor meter innovations for development of more accurate and less expensive flowmeters; work with the purchasing utilities to help identify meter replacement needs. Keep communication lines with the purchasing utilities open and maintain productive relations. Keep the written agreement current with clear and explicit language that meets the ongoing needs of all parties.
AUTHORIZED CONSUMPTION											
Billed metered:	n/a (not applicable). Select n/a only if the entire customer population is not metered and is billed for water service on a flat or fixed rate basis. In such a case the volume entered must be zero.	Less than 50% of customers with volume-based billings from meter readings; flat or fixed rate billing exists for the majority of the customer population	At least 50% of customers with volume-based billing from meter reads; flat rate billing for others. Manual meter reading is conducted, with less than 50% meter read success rate, remaining accounts' consumption is estimated. Limited meter records, no regular meter testing or replacement. Billing data maintained on paper records, with no auditing.	Conditions between 2 and 4	At least 75% of customers with volume-based, billing from meter reads; flat or fixed rate billing for remaining accounts. Manual meter reading is conducted with at least 50% meter read success rate; consumption for accounts with failed reads is estimated. Purchase records verify age of customer meters; only very limited meter accuracy testing is conducted. Customer meters are replaced only upon complete failure. Computerized billing records exist, but only sporadic internal auditing conducted.	Conditions between 4 and 6	At least 90% of customers with volume-based billing from meter reads; consumption for remaining accounts is estimated. Manual customer meter reading gives at least 80% customer meter reading success rate; consumption for accounts with failed reads is estimated. Good customer meter records eixst, but only limited meter accuracy testing is conducted. Regular replacement is conducted for the oldest meters. Computerized billing records exist with annual auditing of summary statistics conducting by utility personnel.	Conditions between 6 and 8	At least 97% of customers exist with volume-based billing from meter reads. At least 90% customer meter reading success rate; or at least 80% read success rate with planning and budgeting for trials of Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) in one or more pilot areas. Good customer meter records. Regular meter accuracy testing guides replacement of statistically significant number of meters each year. Routine auditing of computerized billing records for global and detailed statistics occurs annually by utility personnel, and is verified by third party at least once every five years.	Conditions between 8 and 10	At least 99% of customers exist with volume-based billing from meter reads. At least 95% customer meter reading success rate; or minimum 80% meter reading success rate, with Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) trials underway. Statistically significant customer meter testing and replacement program in place on a continuous basis. Computerized billing with routine, detailed auditing, including field investigation of representative sample of accounts undertaken annually by utility personnel. Audit is conducted by third party auditors at least once every three years.
Improvements to attain higher data grading for "Billed Metered Consumption" component:	If n/a is selected because the customer meter population is unmetered, consider establishing a new policy to meter the customer population and employ water rates based upon metered volumes.	to qualify for 2: Conduct investigations or trials of customer meters to select appropriate meter models. Budget funding for meter installations. Investigate volume based water rate structures.	to qualify for 4: Purchase and install meters on unmetered accounts. Implement policies to improve meter reading success. Catalog meter information during meter read visits to identify age/model of existing meters. Test a minimal number of meters for accuracy. Install computerized billing system.		to qualify for 6: Purchase and install meters on unmetered accounts. Eliminate flat fee billing and establish appropriate water rate structure based upon measured consumption. Continue to achieve verifiable success in removing manual meter reading barriers. Expand meter accuracy testing. Launch regular meter replacement program. Launch a program of annual auditing of global billing statistics by utility personnel.		to qualify for 8: Purchase and install meters on unmetered accounts. If customer meter reading success rate is less than 97%, assess cost-effectiveness of Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) system for portion or entire system; or otherwise achieve ongoing improvements in manual meter reading success rate to 97% or higher. Refine meter accuracy testing program. Set meter replacement goals based upon accuracy test results. Implement annual auditing of detailed billing records by utility personnel and implement third party auditing at least once every five years.		to qualify for 10: Purchase and install meters on unmetered accounts. Launch Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) system trials if manual meter reading success rate of at least 99% is not achieved within a five-year program. Continue meter accuracy testing program. Conduct planning and budgeting for large scale meter replacement based upon meter life cycle analysis using cumulative flow target. Continue annual detailed billing data auditing by utility personnel and conduct third party auditing at least once every three years.		to maintain 10: Continue annual internal billing data auditing, and third party auditing at least every three years. Continue customer meter accuracy testing to ensure that accurate customer meter readings are obtained and entered as the basis for volume based billing. Stay abreast of improvements in Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) and information management. Plan and budget for justified upgrades in metering, meter reading and billing data management to maintain very high accuracy in customer metering and billing.
Billed unmetered:	Select n/a if it is the policy of the water utility to meter all customer connections and it has been confirmed by detailed auditing that all customers do indeed have a water meter; i.e. no intentionally unmetered accounts exist	Water utility policy does not require customer metering; flat or fixed fee billing is employed. No data is collected on customer consumption. The only estimates of customer population consumption available are derived from data estimation methods using average fixture count multiplied by number of connections, or similar approach.	Water utility policy does not require customer metering; flat or fixed fee billing is employed. Some metered accounts exist in parts of the system (pilot areas or District Metered Areas) with consumption read periodically or recorded on portable dataloggers over one, three, or seven day periods. Data from these sample meters are used to infer consumption for the total customer population. Site specific estimation methods are used for unusual buildings/water uses.	Conditions between 2 and 4	Water utility policy does require metering and volume based billing in general. However, a liberal amount of exemptions and a lack of clearly written and communicated procedures result in up to 20% of billed accounts believed to be unmetered by exemption; or the water utility is in transition to becoming fully metered, and a large number of customers remain unmetered. A rough estimate of the annual consumption for all unmetered accounts is included in the annual water audit, with no inspection of individual unmetered accounts.	Conditions between 4 and 6	Water utility policy does require metering and volume based billing but established exemptions exist for a portion of accounts such as municipal buildings. As many as 15% of billed accounts are unmetered due to this exemption or meter installation difficulties. Only a group estimate of annual consumption for all unmetered accounts is included in the annual water audit, with no inspection of individual unmetered accounts.	Conditions between 6 and 8	Water utility policy does require metering and volume based billing for all customer accounts. However, less than 5% of billed accounts remain unmetered because meter installation is hindered by unusual circumstances. The goal is to minimize the number of unmetered accounts. Reliable estimates of consumption are obtained for these unmetered accounts via site specific estimation methods.	Conditions between 8 and 10	Water utility policy does require metering and volume based billing for all customer accounts. Less than 2% of billed accounts are unmetered and exist because meter installation is hindered by unusual circumstances. The goal exists to minimize the number of unmetered accounts to the extent that is economical. Reliable estimates of consumption are obtained at these accounts via site specific estimation methods.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Billed Unmetered Consumption" component:		to qualify for 2: Conduct research and evaluate cost/benefit of a new water utility policy to require metering of the customer population; thereby greatly reducing or eliminating unmetered accounts. Conduct pilot metering project by installing water meters in small sample of customer accounts and periodically reading the meters or datalogging the water consumption over one, three, or seven day periods.	to qualify for 4: Implement a new water utility policy requiring customer metering. Launch or expand pilot metering study to include several different meter types, which will provide data for economic assessment of full scale metering options. Assess sites with access difficulties to devise means to obtain water consumption volumes. Begin customer meter installation.		to qualify for 6: Refine policy and procedures to improve customer metering participation for all but solidly exempt accounts. Assign staff resources to review billing records to identify errant unmetered properties. Specify metering needs and funding requirements to install sufficient meters to significant reduce the number of unmetered accounts		to qualify for 8: Push to install customer meters on a full scale basis. Refine metering policy and procedures to ensure that all accounts, including municipal properties, are designated for meters. Plan special efforts to address "hard-to-access" accounts. Implement procedures to obtain a reliable consumption estimate for the remaining few unmetered accounts awaiting meter installation.		to qualify for 10: Continue customer meter installation throughout the service area, with a goal to minimize unmetered accounts. Sustain the effort to investigate accounts with access difficulties, and devise means to install water meters or otherwise measure water consumption.		to maintain 10: Continue to refine estimation methods for unmetered consumption and explore means to establish metering, for as many billed remaining unmetered accounts as is economically feasible.
Unbilled metered:	select n/a if all billing-exempt consumption is unmetered.	Billing practices exempt certain accounts, such as municipal buildings, but written policies do not exist; and a reliable count of unbilled metered accounts is unavailable. Meter upkeep and meter reading on these accounts is rare and not considered a priority. Due to poor recordkeeping and lack of auditing, water consumption for all such accounts is purely guesstimated.	Billing practices exempt certain accounts, such as municipal buildings, but only scattered, dated written directives exist to justify this practice. A reliable count of unbilled metered accounts is unavailable. Sporadic meter replacement and meter reading occurs on an as-needed basis. The total annual water consumption for all unbilled, metered accounts is estimated based upon approximating the number of accounts and assigning consumption from actively billed accounts of same meter size.	Conditions between 2 and 4	Dated written procedures permit billing exemption for specific accounts, such as municipal properties, but are unclear regarding certain other types of accounts. Meter reading is given low priority and is sporadic. Consumption is quantified from meter readings where available. The total number of unbilled, unmetered accounts must be estimated along with consumption volumes.	Conditions between 4 and 6	Written policies regarding billing exemptions exist but adherence in practice is questionable. Metering and meter reading for municipal buildings is reliable but sporadic for other unbilled metered accounts. Periodic auditing of such accounts is conducted. Water consumption is quantified directly from meter readings where available, but the majority of the consumption is estimated.	Conditions between 6 and 8	Written policy identifies the types of accounts granted a billing exemption. Customer meter management and meter reading are considered secondary priorities, but meter reading is conducted at least annually to obtain consumption volumes for the annual water audit. High level auditing of billing records ensures that a reliable census of such accounts exists.	Conditions between 8 and 10	Clearly written policy identifies the types of accounts given a billing exemption, with emphasis on keeping such accounts to a minimum. Customer meter management and meter reading for these accounts is given proper priority and is reliably conducted. Regular auditing confirms this. Total water consumption for these accounts is taken from reliable readings from accurate meters.
Improvements to attain higher data grading for "Unbilled Metered Consumption" component:		to qualify for 2: Reassess the water utility's policy allowing certain accounts to be granted a billing exemption. Draft an outline of a new written policy for billing exemptions, with clear justification as to why any accounts should be exempt from billing, and with the intention to keep the number of such accounts to a minimum.	to qualify for 4: Review historic written directives and policy documents allowing certain accounts to be billing-exempt. Draft an outline of a written policy for billing exemptions, identify criteria that grants an exemption, with a goal of keeping this number of accounts to a minimum. Consider increasing the priority of reading meters on unbilled accounts at least annually.		to qualify for 6: Draft a new written policy regarding billing exemptions based upon consensus criteria allowing this occurrence. Assign resources to audit meter records and billing records to obtain census of unbilled metered accounts. Gradually include a greater number of these metered accounts to the routes for regular meter reading.		to qualify for 8: Communicate billing exemption policy throughout the organization and implement procedures that ensure proper account management. Conduct inspections of accounts confirmed in unbilled metered status and verify that accurate meters exist and are scheduled for routine meter readings. Gradually increase the number of unbilled metered accounts that are included in regular meter reading routes.		to qualify for 10: Ensure that meter management (meter accuracy testing, meter replacement) and meter reading activities for unbilled accounts are accorded the same priority as billed accounts. Establish ongoing annual auditing process to ensure that water consumption is reliably collected and provided to the annual water audit process.		to maintain 10: Reassess the utility's philosophy in allowing any water uses to go "unbilled". It is possible to meter and bill all accounts, even if the fee charged for water consumption is discounted or waived. Metering and billing all accounts ensures that water consumption is tracked and water waste from plumbing leaks is detected and minimized.
Unbilled unmetered:		Extent of unbilled, unmetered consumption is unknown due to unclear policies and poor recordkeeping. Total consumption is quantified based upon a purely subjective estimate.	Clear extent of unbilled, unmetered consumption is unknown, but a number of events are randomly documented each year, confirming existence of such consumption, but without sufficient documentation to quantify an accurate estimate of the annual volume consumed.	Conditions between 2 and 4	Extent of unbilled, unmetered consumption is partially known, and procedures exist to document certain events such as miscellaneous fire hydrant uses. Formulae is used to quantify the consumption from such events (time running multiplied by typical flowrate, multiplied by number of events).	Default value of 1.25% of system input volume is employed	Coherent policies exist for some forms of unbilled, unmetered consumption but others await closer evaluation. Reasonable recordkeeping for the managed uses exists and allows for annual volumes to be quantified by inference, but unsupervised uses are guesstimated.	Conditions between 6 and 8	Clear policies and good recordkeeping exist for some uses (ex: water used in periodic testing of unmetered fire connections), but other uses (ex: miscellaneous uses of fire hydrants) have limited oversight. Total consumption is a mix of well quantified use such as from formulae (time running multiplied by typical flow, multiplied by number of events) or temporary meters, and relatively subjective estimates of less regulated use.	Conditions between 8 and 10	Clear policies exist to identify permitted use of water in unbilled, unmetered fashion, with the intention of minimizing this type of consumption. Good records document each occurrence and consumption is quantified via formulae (time running multiplied by typical flow, multiplied by number of events) or use of temporary meters.
Improvements to attain higher data grading for "Unbilled Unmetered Consumption" component:		to qualify for 5: Utilize the accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of this use. to qualify for 2: Establish a policy regarding what water uses should be allowed to remain as unbilled and unmetered. Consider tracking a small sample of one such use (ex: fire hydrant flushings).	to qualify for 5: Utilize accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of this use. to qualify for 4: Evaluate the documentation of events that have been observed. Meet with user groups (ex: for fire hydrants - fire departments, contractors to ascertain their need and/or volume requirements for water from fire hydrants).		to qualify for 5: Utilize accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of all such use. This is particularly appropriate for water utilities who are in the early stages of the water auditing process, and should focus on other components since the volume of unbilled, umetered consumption is usually a relatively small quatity component, and other larger-quantity components should take priority.	to qualify for 6 or greater: Finalize policy and begin to conduct field checks to better establish and quantify such usage. Proceed if top-down audit exists and/or a great volume of such use is suspected.	to qualify for 8: Assess water utility policy and procedures for various unmetered usages. For example, ensure that a policy exists and permits are issued for use of fire hydrants by persons outside of the utility. Create written procedures for use and documentation of fire hydrants by water utility personnel. Use same approach for other types of unbilled, unmetered water usage.		to qualify for 10: Refine written procedures to ensure that all uses of unbilled, unmetered water are overseen by a structured permitting process managed by water utility personnel. Reassess policy to determine if some of these uses have value in being converted to billed and/or metered status.		to maintain 10: Continue to refine policy and procedures with intention of reducing the number of allowable uses of water in unbilled and unmetered fashion. Any uses that can feasibly become billed and metered should be converted eventually.
APPARENT LOSSES											

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Unauthorized consumption:		Extent of unauthorized consumption is unknown due to unclear policies and poor recordkeeping. Total unauthorized consumption is guesstimated.	Unauthorized consumption is a known occurrence, but its extent is a mystery. There are no requirements to document observed events, but periodic field reports capture some of these occurrences. Total unauthorized consumption is approximated from this limited data.	conditions between 2 and 4	Procedures exist to document some unauthorized consumption such as observed unauthorized fire hydrant openings. Use formulae to quantify this consumption (time running multiplied typical flowrate, multiplied by number of events).	Default value of 0.25% of volume of water supplied is employed	Coherent policies exist for some forms of unauthorized consumption (more than simply fire hydrant misuse) but others await closer evaluation. Reasonable surveillance and recordkeeping exist for occurrences that fall under the policy. Volumes quantified by inference from these records.	Conditions between 6 and 8	Clear policies and good auditable recordkeeping exist for certain events (ex: tampering with water meters, illegal bypasses of customer meters); but other occurrences have limited oversight. Total consumption is a combination of volumes from formulae (time x typical flow) and subjective estimates of unconfirmed consumption.	Conditions between 8 and 10	Clear policies exist to identify all known unauthorized uses of water. Staff and procedures exist to provide enforcement of policies and detect violations. Each occurrence is recorded and quantified via formulae (estimated time running multiplied by typical flow) or similar methods. All records and calculations should exist in a form that can be audited by a third party.
Improvements to attain higher data grading for "Unauthorized Consumption" component:		to qualify for 5: Use accepted default of 0.25% of volume of water supplied. to qualify for 2: Review utility policy regarding what water uses are considered unauthorized, and consider tracking a small sample of one such occurrence (ex: unauthorized fire hydrant openings)	to qualify for 5: Use accepted default of 0.25% of system input volume to qualify for 4: Review utility policy regarding what water uses are considered unauthorized, and consider tracking a small sample of one such occurrence (ex: unauthorized fire hydrant openings)		to qualify for 5: Utilize accepted default value of 0.25% of volume of water supplied as an expedient means to gain a reasonable quantification of all such use. This is particularly appropriate for water utilities who are in the early stages of the water auditing process.	to qualify for 6 or greater: Finalize policy updates to clearly identify the types of water consumption that are authorized from those usages that fall outside of this policy and are, therefore, unauthorized. Begin to conduct regular field checks. Proceed if the top-down audit already exists and/or a great volume of such use is suspected.	to quality for 8: Assess water utility policies to ensure that all known occurrences of unauthorized consumption are outlawed, and that appropriate penalties are prescribed. Create written procedures for detection and documentation of various occurrences of unauthorized consumption as they are uncovered.		to qualify for 10: Refine written procedures and assign staff to seek out likely occurrences of unauthorized consumption. Explore new locking devices, monitors and other technologies designed to detect and thwart unauthorized consumption.		to maintain 10: Continue to refine policy and procedures to eliminate any loopholes that allow or tacitly encourage unauthorized consumption. Continue to be vigilant in detection, documentation and enforcement efforts.
Customer metering inaccuracies:	select n/a only if the entire customer population is unmetered. In such a case the volume entered must be zero.	Customer meters exist, but with unorganized paper records on meters; no meter accuracy testing or meter replacement program for any size of retail meter. Metering workflow is driven chaotically with no proactive management. Loss volume due to aggregate meter inaccuracy is guesstimated.	Poor recordkeeping and meter oversight is recognized by water utility management who has allotted staff and funding resources to organize improved recordkeeping and start meter accuracy testing. Existing paper records gathered and organized to provide cursory disposition of meter population. Customer meters are tested for accuracy only upon customer request.	Conditions between 2 and 4	Reliable recordkeeping exists; meter information is improving as meters are replaced. Meter accuracy testing is conducted annually for a small number of meters (more than just customer requests, but less than 1% of inventory). A limited number of the oldest meters are replaced each year. Inaccuracy volume is largely an estimate, but refined based upon limited testing data.	Conditions between 4 and 6	A reliable electronic recordkeeping system for meters exists. The meter population includes a mix of new high performing meters and dated meters with suspect accuracy. Routine, but limited, meter accuracy testing and meter replacement occur. Inaccuracy volume is quantified using a mix of reliable and less certain data.	Conditions between 6 and 8	Ongoing meter replacement and accuracy testing result in highly accurate customer meter population. Testing is conducted on samples of meters of varying age and accumulated volume of throughput to determine optimum replacement time for various types of meters.	Ongoing meter replacement and accuracy testing result in highly accurate customer meter population. Statistically significant number of meters are tested in audit year. This testing is conducted on samples of meters of varying age and accumulated volume of throughput to determine optimum replacement time for these meters.	Good records of all active customer meters exist and include as a minimum: meter number, account number/location, type, size and manufacturer. Ongoing meter replacement occurs according to a targeted and justified basis. Regular meter accuracy testing gives a reliable measure of composite inaccuracy volume for the customer meter population. New metering technology is embraced to keep overall accuracy improving. Procedures are reviewed by a third party knowledgeable in the M36 methodology.
Improvements to attain higher data grading for "Customer meter inaccuracy volume" component:	If n/a is selected because the customer meter population is unmetered, consider establishing a new policy to meter the customer population and employ water rates based upon metered volumes.	to qualify for 2: Gather available meter purchase records. Conduct testing on a small number of meters believed to be the most inaccurate. Review staffing needs of the metering group and budget for necessary resources to better organize meter management.	to qualify for 4: Implement a reliable record keeping system for customer meter histories, preferably using electronic methods typically linked to, or part of, the Customer Billing System or Customer Information System. Expand meter accuracy testing to a larger group of meters.		to qualify for 6: Standardize the procedures for meter recordkeeping within an electronic information system. Accelerate meter accuracy testing and meter replacements guided by testing results.		to qualify for 8: Expand annual meter accuracy testing to evaluate a statistically significant number of meter makes/models. Expand meter replacement program to replace statistically significant number of poor performing meters each year.		to qualify for 9: Continue efforts to manage meter population with reliable recordkeeping. Test a statistically significant number of meters each year and analyze test results in an ongoing manner to serve as a basis for a target meter replacement strategy based upon accumulated volume throughput.	to qualify for 10: Continue efforts to manage meter population with reliable recordkeeping, meter testing and replacement. Evaluate new meter types and install one or more types in 5-10 customer accounts each year in order to pilot improving metering technology.	to maintain 10: Increase the number of meters tested and replaced as justified by meter accuracy test data. Continually monitor development of new metering technology and Advanced Metering Infrastructure (AMI) to grasp opportunities for greater accuracy in metering of water flow and management of customer consumption data.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Systematic Data Handling Errors:	Note: all water utilities incur some amount of this error. Even in water utilities with unmetered customer populations and fixed rate billing, errors occur in annual billing tabulations. Enter a positive value for the volume and select a grading.	Policies and procedures for activation of new customer water billing accounts are vague and lack accountability. Billing data is maintained on paper records which are not well organized. No auditing is conducted to confirm billing data handling efficiency. An unknown number of customers escape routine billing due to lack of billing process oversight.	Policy and procedures for activation of new customer accounts and oversight of billing records exist but need refinement. Billing data is maintained on paper records or insufficiently capable electronic database. Only periodic unstructured auditing work is conducted to confirm billing data handling efficiency. The volume of unbilled water due to billing lapses is a guess.	Conditions between 2 and 4	Policy and procedures for new account activation and oversight of billing operations exist but needs refinement. Computerized billing system exists, but is dated or lacks needed functionality. Periodic, limited internal audits conducted and confirm with approximate accuracy the consumption volumes lost to billing lapses.	Conditions between 4 and 6	Policy and procedures for new account activation and oversight of billing operations is adequate and reviewed periodically. Computerized billing system is in use with basic reporting available. Any effect of billing adjustments on measured consumption volumes is well understood. Internal checks of billing data error conducted annually. Reasonably accurate quantification of consumption volume lost to billing lapses is obtained.	Conditions between 6 and 8	New account activation and billing operations policy and procedures are reviewed at least biannually. Computerized billing system includes an array of reports to confirm billing data and system functionality. Checks are conducted routinely to flag and explain zero consumption accounts. Annual internal checks conducted with third party audit conducted at least once every five years. Accountability checks flag billing lapses. Consumption lost to billing lapses is well quantified and reducing year-by-year.	Conditions between 8 and 10	Sound written policy and procedures exist for new account activation and oversight of customer billing operations. Robust computerized billing system gives high functionality and reporting capabilities which are utilized, analyzed and the results reported each billing cycle. Assessment of policy and data handling errors are conducted internally and audited by third party at least once every three years, ensuring consumption lost to billing lapses is minimized and detected as it occurs.
Improvements to attain higher data grading for "Systematic Data Handling Error volume" component:		to qualify for 2: Draft written policy and procedures for activating new water billing accounts and oversight of billing operations. Investigate and budget for computerized customer billing system. Conduct initial audit of billing records by flow-charting the basic business processes of the customer account/billing function.	to qualify for 4: Finalize written policy and procedures for activation of new billing accounts and overall billing operations management. Implement a computerized customer billing system. Conduct initial audit of billing records as part of this process.		to qualify for 6: Refine new account activation and billing operations procedures and ensure consistency with the utility policy regarding billing, and minimize opportunity for missed billings. Upgrade or replace customer billing system for needed functionality - ensure that billing adjustments don't corrupt the value of consumption volumes. Procedurize internal annual audit process.		to qualify for 8: Formalize regular review of new account activation process and general billing practices. Enhance reporting capability of computerized billing system. Formalize regular auditing process to reveal scope of data handling error. Plan for periodic third party audit to occur at least once every five years.		to qualify for 10: Close policy/procedure loopholes that allow some customer accounts to go unbilled, or data handling errors to exist. Ensure that billing system reports are utilized, analyzed and reported every billing cycle. Ensure that internal and third party audits are conducted at least once every three years.		to maintain 10: Stay abreast of customer information management developments and innovations. Monitor developments of Advanced Metering Infrastructure (AMI) and integrate technology to ensure that customer endpoint information is well-monitored and errors/lapses are at an economic minimum.
SYSTEM DATA											
Length of mains:		Poorly assembled and maintained paper as-built records of existing water main installations makes accurate determination of system pipe length impossible. Length of mains is guesstimated.	Paper records in poor or uncertain condition (no annual tracking of installations & abandonments). Poor procedures to ensure that new water mains installed by developers are accurately documented.	Conditions between 2 and 4	Sound written policy and procedures exist for documenting new water main installations, but gaps in management result in a uncertain degree of error in tabulation of mains length.	Conditions between 4 and 6	Sound written policy and procedures exist for permitting and commissioning new water mains. Highly accurate paper records with regular field validation; or electronic records and asset management system in good condition. Includes system backup.	Conditions between 6 and 8	Sound written policy and procedures exist for permitting and commissioning new water mains. Electronic recordkeeping such as a Geographical Information System (GIS) and asset management system are used to store and manage data.	Conditions between 8 and 10	Sound written policy exists for managing water mains extensions and replacements. Geographic Information System (GIS) data and asset management database agree and random field validation proves truth of databases. Records of annual field validation should be available for review.
Improvements to attain higher data grading for "Length of Water Mains" component:		to qualify for 2: Assign personnel to inventory current as-built records and compare with customer billing system records and highway plans in order to verify poorly documented pipelines. Assemble policy documents regarding permitting and documentation of water main installations by the utility and building developers; identify gaps in procedures that result in poor documentation of new water main installations.	to qualify for 4: Complete inventory of paper records of water main installations for several years prior to audit year. Review policy and procedures for commissioning and documenting new water main installation.		to qualify for 6: Finalize updates/improvements to written policy and procedures for permitting/commissioning new main installations. Confirm inventory of records for five years prior to audit year; correct any errors or omissions.		to qualify for 8: Launch random field checks of limited number of locations. Convert to electronic database such as a Geographic Information System (GIS) with backup as justified. Develop written policy and procedures.		to qualify for 10: Link Geographic Information System (GIS) and asset management databases, conduct field verification of data. Record field verification information at least annually.		to maintain 10: Continue with standardization and random field validation to improve the completeness and accuracy of the system.
Number of active AND inactive service connections:		Vague permitting (of new service connections) policy and poor paper recordkeeping of customer connections/billings result in suspect determination of the number of service connections, which may be 10-15% in error from actual count.	General permitting policy exists but paper records, procedural gaps, and weak oversight result in questionable total for number of connections, which may vary 5-10% of actual count.	Conditions between 2 and 4	Written account activation policy and procedures exist, but with some gaps in performance and oversight. Computerized information management system is being brought online to replace dated paper recordkeeping system. Reasonably accurate tracking of service connection installations & abandonments; but count can be up to 5% in error from actual total.	Conditions between 4 and 6	Written new account activation and overall billing policies and procedures are adequate and reviewed periodically. Computerized information management system is in use with annual installations & abandonments totaled. Very limited field verifications and audits. Error in count of number of service connections is believed to be no more than 3%.	Conditions between 6 and 8	Policies and procedures for new account activation and overall billing operations are written, well-structured and reviewed at least biannually. Well-managed computerized information management system exists and routine, periodic field checks and internal system audits are conducted. Counts of connections are no more than 2% in error.	Conditions between 8 and 10	Sound written policy and well managed and audited procedures ensure reliable management of service connection population. Computerized information management system, Customer Billing System, and Geographic Information System (GIS) information agree; field validation proves truth of databases. Count of connections recorded as being in error is less than 1% of the entire population.
Improvements to attain higher data grading for "Number of Active and Inactive Service Connections" component:	**Note: The number of Service Connections does not include fire hydrant leads/lines connecting the hydrant to the water main**	to qualify for 2: Draft new policy and procedures for new account activation and overall billing operations. Research and collect paper records of installations & abandonments for several years prior to audit year.	to qualify for 4: Refine policy and procedures for new account activation and overall billing operations. Research computerized recordkeeping system (Customer Information System or Customer Billing System) to improve documentation format for service connections.		to qualify for 6: Refine procedures to ensure consistency with new account activation and overall billing policy to establish new service connections or decommission existing connections. Improve process to include all totals for at least five years prior to audit year.		to qualify for 8: Formalize regular review of new account activation and overall billing operations policies and procedures. Launch random field checks of limited number of locations. Develop reports and auditing mechanisms for computerized information management system.		to qualify for 10: Close any procedural loopholes that allow installations to go undocumented. Link computerized information management system with Geographic Information System (GIS) and formalize field inspection and information system auditing processes. Documentation of new or decommissioned service connections encounters several levels of checks and balances.		to maintain 10: Continue with standardization and random field validation to improve knowledge of system.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Average length of customer service line:	Note: if customer water meters are located outside of the customer building next to the curb stop or boundary separating utility/customer responsibility, then the auditor should answer "Yes" to the question on the Reporting Worksheet asking about this. If the answer is Yes, the grading description listed under the Grading of 10(a) will be followed, with a value of zero automatically entered at a Grading of 10. See the Service Connection Diagram worksheet for a visual presentation of this distance.	Gradings 1-9 apply if customer properties are unmetered, if customer meters exist and are located inside the customer building premises, or if the water utility owns and is responsible for the entire service connection piping from the water main to the customer building. In any of these cases the average distance between the curb stop or boundary separating utility/customer responsibility for service connection piping, and the typical first point of use (ex: faucet) or the customer meter must be quantified. Gradings of 1-9 are used to grade the validity of the means to quantify this value. (See the "Service Connection Diagram" worksheet)									Either of two conditions can be met for a grading of 10: a) Customer water meters exist outside of customer buildings next to the curb stop or boundary separating utility/customer responsibility for service connection piping. If so, answer "Yes" to the question on the Reporting Working asking about this condition. A value of zero and a Grading of 10 are automatically entered in the Reporting Worksheet . b). Meters exist inside customer buildings, or properties are unmetered. In either case, answer "No" to the Reporting Worksheet question on meter location, and enter a distance determined by the auditor. For a Grading of 10 this value must be a very reliable number from a Geographic Information System (GIS) and confirmed by a statistically valid number of field checks.
		Vague policy exists to define the delineation of water utility ownership and customer ownership of the service connection piping. Curb stops are perceived as the breakpoint but these have not been well-maintained or documented. Most are buried or obscured. Their location varies widely from site-to-site, and estimating this distance is arbitrary due to the unknown location of many curb stops.	Policy requires that the curb stop serves as the delineation point between water utility ownership and customer ownership of the service connection piping. The piping from the water main to the curb stop is the property of the water utility; and the piping from the curb stop to the customer building is owned by the customer. Curb stop locations are not well documented and the average distance is based upon a limited number of locations measured in the field.	Conditions between 2 and 4	Good policy requires that the curb stop serves as the delineation point between water utility ownership and customer ownership of the service connection piping. Curb stops are generally installed as needed and are reasonably documented. Their location varies widely from site-to-site, and an estimate of this distance is hindered by the availability of paper records of limited accuracy.	Conditions between 4 and 6	Clear written policy exists to define utility/customer responsibility for service connection piping. Accurate, well-maintained paper or basic electronic recordkeeping system exists. Periodic field checks confirm piping lengths for a sample of customer properties.	Conditions between 6 and 8	Clearly worded policy standardizes the location of curb stops and meters, which are inspected upon installation. Accurate and well maintained electronic records exist with periodic field checks to confirm locations of service lines, curb stops and customer meter pits. An accurate number of customer properties from the customer billing system allows for reliable averaging of this length.	Conditions between 8 and 10	
Improvements to attain higher data grading for "Average Length of Customer Service Line" component:		to qualify for 2: Research and collect paper records of service line installations. Inspect several sites in the field using pipe locators to locate curb stops. Obtain the length of this small sample of connections in this manner.	to qualify for 4: Formalize and communicate policy delineating utility/customer responsibilities for service connection piping. Assess accuracy of paper records by field inspection of a small sample of service connections using pipe locators as needed. Research the potential migration to a computerized information management system to store service connection data.		to qualify for 6: Establish coherent procedures to ensure that policy for curb stop, meter installation and documentation is followed. Gain consensus within the water utility for the establishment of a computerized information management system.		to qualify for 8: Implement an electronic means of recordkeeping, typically via a customer information system, customer billing system, or Geographic Information System (GIS). Standardize the process to conduct field checks of a limited number of locations.		to qualify for 10: Link customer information management system and Geographic Information System (GIS), standardize process for field verification of data.		to maintain 10: Continue with standardization and random field validation to improve knowledge of service connection configurations and customer meter locations.
Average operating pressure:		Available records are poorly assembled and maintained paper records of supply pump characteristics and water distribution system operating conditions. Average pressure is guesstimated based upon this information and ground elevations from crude topographical maps. Widely varying distribution system pressures due to undulating terrain, high system head loss and weak/erratic pressure controls further compromise the validity of the average pressure calculation.	Limited telemetry monitoring of scattered pumping station and water storage tank sites provides some static pressure data, which is recorded in handwritten logbooks. Pressure data is gathered at individual sites only when low pressure complaints arise. Average pressure is determined by averaging relatively crude data, and is affected by significant variation in ground elevations, system head loss and gaps in pressure controls in the distribution system.	Conditions between 2 and 4	Effective pressure controls separate different pressure zones; moderate pressure variation across the system, occasional open boundary valves are discovered that breech pressure zones. Basic telemetry monitoring of the distribution system logs pressure data electronically. Pressure data gathered by gauges or dataloggers at fire hydrants or buildings when low pressure complaints arise, and during fire flow tests and system flushing. Reliable topographical data exists. Average pressure is calculated using this mix of data.	Conditions between 4 and 6	Reliable pressure controls separate distinct pressure zones; only very occasional open boundary valves are encountered that breech pressure zones. Well-covered telemetry monitoring of the distribution system (not just pumping at source treatment plants or wells) logs extensive pressure data electronically. Pressure gathered by gauges/dataloggers at fire hydrants and buildings when low pressure complaints arise, and during fire flow tests and system flushing. Average pressure is determined by using this mix of reliable data.	Conditions between 6 and 8	Well-managed, discrete pressure zones exist with generally predictable pressure fluctuations. A current full-scale SCADA System or similar realtime monitoring system exists to monitor the water distribution system and collect data, including real time pressure readings at representative sites across the system. The average system pressure is determined from reliable monitoring system data.	Conditions between 8 and 10	Well-managed pressure districts/zones, SCADA System and hydraulic model exist to give very precise pressure data across the water distribution system. Average system pressure is reliably calculated from extensive, reliable, and cross-checked data. Calculations are reported on an annual basis as a minimum.
Improvements to attain higher data grading for "Average Operating Pressure" component:		to qualify for 2: Employ pressure gauging and/or datalogging equipment to obtain pressure measurements from fire hydrants. Locate accurate topographical maps of service area in order to confirm ground elevations. Research pump data sheets to find pump pressure/flow characteristics	to qualify for 4: Formalize a procedure to use pressure gauging/datalogging equipment to gather pressure data during various system events such as low pressure complaints, or operational testing. Gather pump pressure and flow data at different flow regimes. Identify faulty pressure controls (pressure reducing valves, altitude valves, partially open boundary valves) and plan to properly configure pressure zones. Make all pressure data from these efforts available to generate system-wide average pressure.		to qualify for 6: Expand the use of pressure gauging/datalogging equipment to gather scattered pressure data at a representative set of sites, based upon pressure zones or areas. Utilize pump pressure and flow data to determine supply head entering each pressure zone or district. Correct any faulty pressure controls (pressure reducing valves, altitude valves, partially open boundary valves) to ensure properly configured pressure zones. Use expanded pressure dataset from these activities to generate system-wide average pressure.		to qualify for 8: Install a Supervisory Control and Data Acquisition (SCADA) System, or similar realtime monitoring system, to monitor system parameters and control operations. Set regular calibration schedule for instrumentation to insure data accuracy. Obtain accurate topographical data and utilize pressure data gathered from field surveys to provide extensive, reliable data for pressure averaging.		to qualify for 10: Annually, obtain a system-wide average pressure value from the hydraulic model of the distribution system that has been calibrated via field measurements in the water distribution system and confirmed in comparisons with SCADA System data.		to maintain 10: Continue to refine the hydraulic model of the distribution system and consider linking it with SCADA System for real-time pressure data calibration, and averaging.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
COST DATA											
Total annual cost of operating water system:		Incomplete paper records and lack of financial accounting documentation on many operating functions makes calculation of water system operating costs a pure guesstimate	Reasonably maintained, but incomplete, paper or electronic accounting provides data to estimate the major portion of water system operating costs.	Conditions between 2 and 4	Electronic, industry-standard cost accounting system in place. However, gaps in data are known to exist, periodic internal reviews are conducted but not a structured financial audit.	Conditions between 4 and 6	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited periodically by utility personnel, but not a Certified Public Accountant (CPA).	Conditions between 6 and 8	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited at least annually by utility personnel, and at least once every three years by third-party CPA.	Conditions between 8 and 10	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited annually by utility personnel and annually also by third-party CPA.
Improvements to attain higher data grading for "Total Annual Cost of Operating the Water System" component:		to qualify for 2: Gather available records, institute new financial accounting procedures to regularly collect and audit basic cost data of most important operations functions.	to qualify for 4: Implement an electronic cost accounting system, structured according to accounting standards for water utilities		to qualify for 6: Establish process for periodic internal audit of water system operating costs; identify cost data gaps and institute procedures for tracking these outstanding costs.		to qualify for 8: Standardize the process to conduct routine financial audit on an annual basis. Arrange for CPA audit of financial records at least once every three years.		to qualify for 10: Standardize the process to conduct a third-party financial audit by a CPA on an annual basis.		to maintain 10: Maintain program, stay abreast of expenses subject to erratic cost changes and long-term cost trend, and budget/track costs proactively
Customer retail unit cost (applied to Apparent Losses):	Customer population unmetered, and/or only a fixed fee is charged for consumption.	Antiquated, cumbersome water rate structure is used, with periodic historic amendments that were poorly documented and implemented; resulting in classes of customers being billed inconsistent charges. The actual composite billing rate likely differs significantly from the published water rate structure, but a lack of auditing leaves the degree of error indeterminate.	Dated, cumbersome water rate structure, not always employed consistently in actual billing operations. The actual composite billing rate is known to differ from the published water rate structure, and a reasonably accurate estimate of the degree of error is determined, allowing a composite billing rate to be quantified.	Conditions between 2 and 4	Straight-forward water rate structure in use, but not updated in several years. Billing operations reliably employ the rate structure. The composite billing rate is derived from a single customer class such as residential customer accounts, neglecting the effect of different rates from varying customer classes.	Conditions between 4 and 6	Clearly written, up-to-date water rate structure is in force and is applied reliably in billing operations. Composite customer rate is determined using a weighted average residential rate using volumes of water in each rate block.	Conditions between 6 and 8	Effective water rate structure is in force and is applied reliably in billing operations. Composite customer rate is determined using a weighted average composite consumption rate, which includes residential, commercial, industrial, institutional (CII), and any other distinct customer classes within the water rate structure.	Conditions between 8 and 10	Current, effective water rate structure is in force and applied reliably in billing operations. The rate structure and calculations of composite rate - which includes residential, commercial, industrial, institutional (CII), and other distinct customer classes - are reviewed by a third party knowledgeable in the M36 methodology at least once every five years.
Improvements to attain higher data grading for "Customer Retail Unit Cost" component:		to qualify for 2: Formalize the process to implement water rates, including a secure documentation procedure. Create a current, formal water rate document and gain approval from all stakeholders.	to qualify for 4: Review the water rate structure and update/formalize as needed. Assess billing operations to ensure that actual billing operations incorporate the established water rate structure.		to qualify for 6: Evaluate volume of water used in each usage block by residential users. Multiply volumes by full rate structure.	Launch effort to fully meter the customer population and charge rates based upon water volumes	to qualify for 8: Evaluate volume of water used in each usage block by all classifications of users. Multiply volumes by full rate structure.		to qualify for 10: Conduct a periodic third-party audit of water used in each usage block by all classifications of users. Multiply volumes by full rate structure.		to maintain 10: Keep water rate structure current in addressing the water utility's revenue needs. Update the calculation of the customer unit rate as new rate components, customer classes, or other components are modified.
Variable production cost (applied to Real Losses):	Note: if the water utility purchases/imports its entire water supply, then enter the unit purchase cost of the bulk water supply in the Reporting Worksheet with a grading of 10	Incomplete paper records and lack of documentation on primary operating functions (electric power and treatment costs most importantly) makes calculation of variable production costs a pure guesstimate	Reasonably maintained, but incomplete, paper or electronic accounting provides data to roughly estimate the basic operations costs (pumping power costs and treatment costs) and calculate a unit variable production cost.	Conditions between 2 and 4	Electronic, industry-standard cost accounting system in place. Electric power and treatment costs are reliably tracked and allow accurate weighted calculation of unit variable production costs based on these two inputs and water imported purchase costs (if applicable). All costs are audited internally on a periodic basis.	Conditions between 4 and 6	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Pertinent additional costs beyond power, treatment and water imported purchase costs (if applicable) such as liability, residuals management, wear and tear on equipment, impending expansion of supply, are included in the unit variable production cost, as applicable. The data is audited at least annually by utility personnel.	Conditions between 6 and 8	Reliable electronic, industry-standard cost accounting system in place, with all pertinent primary and secondary variable production and water imported purchase (if applicable) costs tracked. The data is audited at least annually by utility personnel, and at least once every three years by a third-party knowledgeable in the M36 methodology.	Conditions between 8 and 10	Either of two conditions can be met to obtain a grading of 10: 1) Third party CPA audit of all pertinent primary and secondary variable production and water imported purchase (if applicable) costs on an annual basis. or: 2) Water supply is entirely purchased as bulk water imported, and the unit purchase cost - including all applicable marginal supply costs - serves as the variable production cost. If all applicable marginal supply costs are not included in this figure, a grade of 10 should not be selected.
Improvements to attain higher data grading for "Variable Production Cost" component:		to qualify for 2: Gather available records, institute new procedures to regularly collect and audit basic cost data and most important operations functions.	to qualify for 4: Implement an electronic cost accounting system, structured according to accounting standards for water utilities		to qualify for 6: Formalize process for regular internal audits of production costs. Assess whether additional costs (liability, residuals management, equipment wear, impending infrastructure expansion) should be included to calculate a more representative variable production cost.		to qualify for 8: Formalize the accounting process to include direct cost components (power, treatment) as well as indirect cost components (liability, residuals management, etc.) Arrange to conduct audits by a knowledgable third-party at least once every three years.		to qualify for 10: Standardize the process to conduct a third-party financial audit by a CPA on an annual basis.		to maintain 10: Maintain program, stay abreast of expenses subject to erratic cost changes and budget/track costs proactively

APPENDIX H

2011 Technical Memorandum on SBx7-7 20x2020 GPCD Baseline Calculation & Water Use Target Method Selection

TECHNICAL MEMORANDUM

To: Rick Gomez

From: Harvey Gobas, PE

Date: June 1, 2011

Subject: 20x2020 Baseline Calculation & Water Use Target Method Selection

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According to the Department of Water Resources (DWR), a water supplier must define a continuous 10 or 15 year base period (baseline) for water use ending no earlier than December 31, 2004 and no later than December 31, 2010 that will be used to develop their per capita water use target for the year 2020 and an interim target for 2015. A water supplier who met at least 10 percent of its 2008 measured retail water demand through recycled water may use a 15-year baseline period; otherwise a supplier must use a 10-year baseline. The City of Adelanto did not use any recycled water to meet its 2008 water demand and, as a result, must use a 10-year baseline.

Table 1 shows the groundwater use within the City water service area. Since the City has no agricultural use, no recycled water use or any other source of water the groundwater use is the gross water use for purposes of determining the per capita consumption. The table also includes population of the water service area and per capita water use from fiscal year (FY) 1996 through FY 2010. Population data used herein is from the Department of Finance (DOF) and includes the entire water service area. Since water use has been trending downward recently even with increasing population, per capita use has been dropping. The most advantageous period for the City to use is the one generating the highest per capita use, making subsequent conservation easier to achieve. Therefore, the 10-year period from FY 1996 thru FY 2005 was determined to be the most advantageous and was used to calculate a baseline per capita water use average of 321.8 gallons per capita per day (GPCD) as shown in *Table 1*.

Table 1

City of Adelanto Base Daily Per Capita Use

Water Year	Ground-water [1] (AFY)	Gross Water Use [2] (AFY)	Gross Water Use (gal/day)	Water Service Area Population [3]	Annual/ Capita Use (GPCD)
1996	4,475	4,475	3,994,750	7,123	560.8
1997	4,396	4,396	3,924,229	8,433	465.3
1998	4,015	4,015	3,584,117	10,676	335.7
1999	4,336	4,336	3,870,668	12,708	304.6
2000	4,871	4,871	4,348,252	18,130	239.8
2001	5,402	5,402	4,822,266	18,284	263.7
2002	5,710	5,710	5,097,212	18,777	271.5
2003	5,714	5,714	5,100,783	19,447	262.3
2004	6,062	6,062	5,411,436	21,313	253.9
2005	6,795	6,795	6,065,772	23,338	259.9
2006	6,538	6,538	5,836,353	24,796	235.4
2007	4,653	4,653	4,153,648	27,007	153.8
2008	5,326	5,326	4,754,422	28,000	169.8
2009	5,477	5,477	4,889,217	28,221	173.2
2010	4,866	4,866	4,343,789	31,765	136.7
Baseline (Average FY 1996-2005)					321.8
Minimum Baseline (Average FY 2004-2008)					214.6

[1] Pumped Water is groundwater pumped from the City's active wells.

[2] Gross Water Use = Pumped Water

[3] Population is obtained from Department of Finance's (DOF) Table E-4: Population Estimates for California State and Counties. Population for 2000 is as of Census date (April 1st), all other years are January 1st DOF estimates. Per DOF's Press Release on April 29, 2011 the 2010 populations were revised to incorporate 2010 Census counts as the benchmark.

A water supplier must set a 2020 water use target and a 2015 interim target using one of the following four methods as defined further in Section 10608.20 of Senate Bill No. 7 (SBX7-7):

- Method 1: Eighty percent of the water supplier's baseline per capita water use
- Method 2: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscape area water use; and commercial, industrial, and institutional uses
- Method 3: Ninety-five percent of the applicable state hydrologic region target as stated in the State's April 30, 2009, draft 20x2020 Water Conservation Plan
- Method 4: A BMP Option based on standards that are consistent with the California Urban Water Conservation Council's (CUWCC) best management practices (BMPs).

Calculation of Minimum Targets

If the average base daily per capita water use is greater than 100 GPCD for a defined 5-year baseline period, the legislation's minimum water use reduction requirement must also be met as set in Section 10608.22 of Senate Bill No. 7 SBX7-7.

Per SBX7-7, the minimum water use reduction baseline period must end no earlier than December 31, 2007 and no later than December 31, 2010 and the minimum reduction shall be no less than 5 percent of this 5-year base daily per capita water use. A minimum water use reduction baseline period between FY 2004 through 2008 was selected to calculate the most advantageous 5-year minimum water use reduction target. As shown in *Table 1,* the minimum baseline water use for that period averages 214.6 GPCD. The minimum per capita water use target for 2020 would therefore be 203.9 GPCD (95% of 214.6).

Calculation of Targets Using Methods 1 – 4

Method 1: Using a baseline per capita average of 321.8 GPCD (shown in Table 1) the City of Adelanto 2020 target would be 257.4 GPCD (80% of 321.8). Since the target water use for Method 1 is greater than the one found using the legislation's minimum requirement criteria (203.9), the water target level needs to be reduced to the minimum target of 203.9 GPCD for 2020, if this method is selected.

Method 2: The City of Adelanto does not currently maintain records of lot size, irrigated landscaped area for each parcel, reference evapotranspiration for each parcel, etc. to split its residential, commercial, industrial, or institutional uses into inside and outside (landscape irrigation) uses. The use of Method 2 to calculate conservation targets is therefore not feasible.

Method 3: The City of Adelanto falls within the South Lahontan Region (Hydrologic Region 9). According to the State's April 30, 2009 draft 20x2020 Water Conservation Plan, the 2020 Target for Hydrologic Region 9 is 170 GPCD. Using Method 3, the City of Adelanto's 2020 water use target would be 161.5 GPCD (95% of 170). Since the target water use generated by Method 3 is less than the one found using the minimum requirement criteria (203.9), no further adjustments to this water use target would be required, if this method is selected.

Method 4: DWR recently released this method and a calculator for agencies wishing to use this BMP-based method. A default indoor residential water savings of 15 GPCD was assumed and the City of Adelantos's Public Water System Statistics Report for calendar year 2000 submitted to the Department of Water Resources (DWR) was referenced to obtain the Commercial, Industrial and Institutional (CII) water use consumption (647 AF). Using the midpoint of the baseline period (year 2000) and DWR's "SBX7-7 Provisional Method 4 Target Calculator" resulted in a 2020 water use target of 203.9 GPCD. Since the target water use for Method 4 is equal to the one found using the legislation's minimum requirement criteria (203.9), no further adjustments to this water use target would be required, if this method is selected.

Conclusion

The discussion and calculations above are summarized in *Table 2*.

Table 2
City of Adelanto
Water Use Target Summary (GPCD)

Method	2020
1	203.9
2	Not Applicable
3	161.5
4	203.9

As shown in *Table 2,* Method 1 and 3 results are the most favorable water use target level for the City of Adelanto, with the minimum 5-year water use reduction governing in Method 1. The 2015 interim target would then be 262.9 GPCD (mid-point between baseline of 321.8 and 2020 target of 203.9). It should be noted that the City has met this 2020 target consecutively for the past four years and the 2015 target the last eight years.

APPENDIX I

SB X7-7 Verification Form

SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent with Table 2-3*
NOTES:

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	5,326	Acre Feet
	2008 total volume of delivered recycled water	-	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	1996	
	Year ending baseline period range[3]	2005	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2004	
	Year ending baseline period range[4]	2008	

[1] If the 2008 recycled water percent is less than 10 percent, then the first baseline period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first baseline period is a continuous 10- to 15-year period. [2] The Water Code requires that the baseline period is between 10 and 15 years. However, DWR recognizes that some water suppliers may not have the minimum 10 years of baseline data.

[3] The ending year must be between December 31, 2004 and December 31, 2010.

[4] The ending year must be between December 31, 2007 and December 31, 2010.

NOTES:

SB X7-7 Table 2: Method for Population Estimates	
Method Used to Determine Population (may check more than one)	
☑	**1. Department of Finance** (DOF) DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
☐	**2. Persons-per-Connection Method**
☐	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	1996	7,123
Year 2	1997	8,433
Year 3	1998	10,676
Year 4	1999	12,708
Year 5	2000	18,130
Year 6	2001	18,284
Year 7	2003	18,777
Year 8	2003	19,447
Year 9	2004	21,313
Year 10	2005	23,338
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2004	21,313
Year 2	2005	23,338
Year 3	2006	24,796
Year 4	2007	27,007
Year 5	2008	28,000
2015 Compliance Year Population		
2015		33,080
NOTES:		

SB X7-7 Table 4: Annual Gross Water Use *								
Baseline Year *Fm SB X7-7 Table 3*		**Volume Into Distribution System** *This column will remain blank until SB X7-7 Table 4-A is completed.*	**Deductions**					**Annual Gross Water Use**
			Exported Water	**Change in Dist. System Storage (+/-)**	**Indirect Recycled Water** *This column will remain blank until SB X7-7 Table 4-B is completed.*	**Water Delivered for Agricultural Use**	**Process Water** *This column will remain blank until SB X7-7 Table 4-D is completed.*	
10 to 15 Year Baseline - Gross Water Use								
Year 1	1996	4,475	-	-	-	-	-	4,475
Year 2	1997	4,396	-	-	-	-	-	4,396
Year 3	1998	4,015	-	-	-	-	-	4,015
Year 4	1999	4,336	-	-	-	-	-	4,336
Year 5	2000	4,871	-	-	-	-	-	4,871
Year 6	2001	5,402	-	-	-	-	-	5,402
Year 7	2003	5,710	-	-	-	-	-	5,710
Year 8	2003	5,714	-	-	-	-	-	5,714
Year 9	2004	6,062	-	-	-	-	-	6,062
Year 10	2005	6,795	-	-	-	-	-	6,795
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**5,178**
5 Year Baseline - Gross Water Use								
Year 1	2004	6,062	-	-	-	-	-	6,062
Year 2	2005	6,795	-	-	-	-	-	6,795
Year 3	2006	6,538	-	-	-	-	-	6,538
Year 4	2007	4,653	-	-	-	-	-	4,653
Year 5	2008	5,326	-	-	-	-	-	5,326
5 year baseline average gross water use								**5,875**
2015 Compliance Year - Gross Water Use								
2015		4,049	-	-	-	-	-	**4,049**

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3

NOTES:

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)

Complete one table for each source.

Name of Source	Groundwater
This water source is:	
☑	The supplier's own water source
☐	A purchased or imported source

Baseline Year *Fm SB X7-7 Table 3*		Volume Entering Distribution System	Meter Error Adjustment* *Optional (+/-)*	Corrected Volume Entering Distribution System
10 to 15 Year Baseline - Water into Distribution System				
Year 1	1996	4,475	-	4,475
Year 2	1997	4,396	-	4,396
Year 3	1998	4,015	-	4,015
Year 4	1999	4,336	-	4,336
Year 5	2000	4,871	-	4,871
Year 6	2001	5,402	-	5,402
Year 7	2003	5,710	-	5,710
Year 8	2003	5,714	-	5,714
Year 9	2004	6,062	-	6,062
Year 10	2005	6,795	-	6,795
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2004	6,062	-	6,062
Year 2	2005	6,795	-	6,795
Year 3	2006	6,538	-	6,538
Year 4	2007	4,653	-	4,653
Year 5	2008	5,326	-	5,326
2015 Compliance Year - Water into Distribution System				
2015		4,049	-	4,049

** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Annual Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	1996	7,123	4,475	561
Year 2	1997	8,433	4,396	465
Year 3	1998	10,676	4,015	336
Year 4	1999	12,708	4,336	305
Year 5	2000	17,895	4,871	243
Year 6	2001	19,282	5,402	250
Year 7	2003	20,668	5,710	247
Year 8	2003	22,055	5,714	231
Year 9	2004	23,441	6,062	231
Year 10	2005	24,828	6,795	244
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**311**
5 Year Baseline GPCD				
Baseline Year *Fm SB X7-7 Table 3*		Service Area Population *Fm SB X7-7 Table 3*	Gross Water Use *Fm SB X7-7 Table 4*	Daily Per Capita Water Use
Year 1	2004	23,441	6,062	231
Year 2	2005	24,828	6,795	244
Year 3	2006	26,214	6,538	223
Year 4	2007	27,601	4,653	150
Year 5	2008	28,987	5,326	164
5 Year Average Baseline GPCD				**202**
2015 Compliance Year GPCD				
2015		33,080	4,049	**109**
NOTES:				

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	311
5 Year Baseline GPCD	202
2015 Compliance Year GPCD	109
NOTES:	

SB X7-7 Table 7: 2020 Target Method *Select Only One*		
Target Method		Supporting Documentation
☑	Method 1	SB X7-7 Table 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D *Contact DWR for these tables*
☐	Method 3	SB X7-7 Table 7-E
☐	Method 4	Method 4 Calculator
NOTES:		

SB X7-7 Table 7-A: Target Method 1 20% Reduction	
10-15 Year Baseline GPCD	**2020 Target GPCD**
311	**249**
NOTES:	

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target			
5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target[1]	Calculated 2020 Target[2]	**Confirmed 2020 Target**
202	192	249	**192**

[1] Maximum 2020 Target is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.
[2] 2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target.

NOTES:

SB X7-7 Table 8: 2015 Interim Target GPCD		
Confirmed 2020 Target *Fm SB X7-7 Table 7-F*	10-15 year Baseline GPCD *Fm SB X7-7 Table 5*	**2015 Interim Target GPCD**
192	311	**252**
NOTES:		

119	59.5	251.5

SB X7-7 Table 9: 2015 Compliance								
Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments *(in GPCD)*					2015 GPCD *(Adjusted if applicable)*	**Did Supplier Achieve Targeted Reduction for 2015?**
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD		
		Extraordinary Events	Weather Normalization	Economic Adjustment				
109	252	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	109	109	**YES**
NOTES:								

Appendix J

Mojave Basin Judgement

JUDGMENT AFTER TRIAL

JANUARY 10, 1996

MOJAVE BASIN AREA ADJUDICATION
CITY OF BARSTOW, ET AL V. CITY OF ADELANTO, ET AL
RIVERSIDE COUNTY SUPERIOR COURT CASE NO. 208568

CHAMBERS OF
VICTOR MICELI
JUDGE OF THE SUPERIOR COURT

Superior Court

STATE OF CALIFORNIA
COUNTY OF RIVERSIDE

COURTHOUSE
4050 MAIN STREET
RIVERSIDE, CALIFORNIA 92501

January 10, 1996

TO: ALL PARTIES LISTED ON THE ATTACHED MAILING LIST

FROM: E. MICHAEL KAISER, JUDGE

SUBJECT: CITY OF BARSTOW VS CITY OF ADELANTO, Case No.: 208568

The Judgment in the above-entitled case was signed on January 10, 1996. Please find attached the amended two pages of Exhibit B, Table B-1.

Please find attached two amended pages of Exhibit B, Table B-1.

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
SAN BERNARDINO CO SERVICE AREA 70J	1,005	0.8213	1,005	954	904	854	804
SAN BERNARDINO CO SERVICE AREA 70L	355	0.2901	355	337	319	301	284
SAN FILIPPO, JOSEPH & SHELLEY	35	0.0286	35	33	31	29	28
SILVER LAKES ASSOCIATION	3,987	3.2583	3,987	3,787	3,588	3,388	3,189
SOUTHDOWN, INC	1,519	1.2414	1,519	1,443	1,367	1,291	1,215
SOUTHERN CALIFORNIA WATER COMPANY	940	0.7682	940	893	846	799	752
SPRING VALLEY LAKE ASSOCIATION	3,056	2.4974	3,056	2,903	2,750	2,597	2,444
SPRING VALLEY LAKE COUNTRY CLUB	977	0.7984	977	928	879	830	781
STORM, RANDALL	62	0.0507	62	58	55	52	49
SUDMEIER, GLENN W	121	0.0989	121	114	108	102	96
SUMMIT VALLEY RANCH	452	0.3694	452	429	406	384	361
TATRO, RICHARD K & SANDRA A	280	0.2288	280	266	252	238	224
TATUM, JAMES B	829	0.6775	829	787	746	704	663
TAYLOR, ALLEN C / HAYMAKER RANCH	456	0.3727	456	433	410	387	364
THOMAS, S DALE	440	0.3596	440	418	396	374	352
THOMAS, WALTER	36	0.0294	36	34	32	30	28
THOMPSON, JAMES A	418	0.3416	418	397	376	355	334
THOMPSON, RODGER	76	0.0621	76	72	68	64	60
THRASHER, GARY	373	0.3048	373	354	335	317	298
THUNDERBIRD COUNTY WATER DISTRICT	118	0.0964	118	112	106	100	94
TURNER, ROBERT	70	0.0572	70	66	63	59	56
VAIL, JOSEPH B & PAULA E	126	0.1030	126	119	113	107	100
* VAN BURGER, CARL	710	0.5802	710	674	639	603	568
VAN LEEUWEN FAMILY TRUST	341	0.2787	341	323	306	289	272

* Durston Well, location 06N/04W-18F, APN 468-151-11 - water production right of 357 acre/feet, claimed by Durston/Van Burger/CVB Investments and Industrial Asphalt. Product right to be determined in a subsequent severed proceeding, jurisdiction reserved.

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT (PERCENT) [2]	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
AGCON, INC	0	0.0000	0	0	0	0	0
AGUAYO, JEANETTE L	212	0.3742	212	201	190	180	169
ATCHISON, TOPEKA, SANTA FE RAILWAY CO	120	0.2118	120	114	108	102	96
AVDEEF, THOMAS	34	0.0600	34	32	30	28	27
AZTEC FARM DEVELOPMENT COMPANY (Now, Virgil Gorman)	220	0.3883	220	209	198	187	176
BARNES, FAY - EXECUTOR OF ESTATE OF WAYNE BARNES	243	0.4289	243	230	218	206	194
BROMMER, MARVIN	361	0.6372	361	342	324	306	288
BURNS, RITA J & PAMELA E	16	0.0282	16	15	14	13	12
CHAFA, LARRY R	96	0.1694	96	91	86	81	76
CHOI, YONG IL & JOUNG AE	38	0.0671	38	36	34	32	30
CHRISTISON, JOEL	75	0.1324	75	71	67	63	60
COOK, KWON W	169	0.2983	169	160	152	143	135
DE VRIES, NEIL	3,800	6.7070	3,800	3,610	3,420	3,230	3,040
DESERT COMMUNITY BANK	156	0.2753	156	148	140	132	124
DURAN, FRANK T	50	0.0883	50	47	45	42	40
GAINES, JACK	117	0.2065	117	111	105	99	93
GESIRIECH, WAYNE	121	0.2136	121	114	108	102	96
GORMAN, VIRGIL	138	0.2436	138	131	124	117	110
GRIEDER, RAYMOND H & DORISANNE	30	0.0530	30	28	27	25	24
GRILL, NICHOLAS P & MILLIE D	21	0.0371	21	19	18	17	16
GROEN, CORNELIS	1,043	1.8409	1,043	990	938	886	834
HANIFY, DBA - WHITE BEAR RANCH	152	0.2683	152	144	136	129	121
HARMSEN, JAMES & RUTH ANN	1,522	2.6863	1,522	1,445	1,369	1,293	1,217
HARPER LAKE COMPANY	1,433	2.5293	1,433	1,361	1,289	1,218	1,146

Steven A. Figuero_, President
Latino's Unidos M.A.P.A. Victor Valley
P.O. Box 520
Victorville, CA 92393-0520

Arthur G. Kidman, Esq.
Douglas J. Evertz, Esq.
McCormick, Kidman & Behrens
3100 Bristol St., #290
Costa Mesa, CA 92626-3033

William J. Brunick, Esq.
Boyd L. Hill, Esq.
Brunick, Alvarez & Battersby
1839 Commercenter West
P.O. Box 6425
San Bernardino, CA 92412

James L. Markman, Esq.
William P. Curley, III, Esq.
Number One Civic Center Circle
P.O. Box 1059
Brea, CA 92622-1059

Arthur L. Littleworth, Esq.
Best, Best & Krieger
3750 University Ave., #400
Riverside, CA 92501

Frederick A. Fudacz, Esq.
John Ossiff, Esq.
445 So. Figueroa St., Floor 31
Los Angeles, CA 90071-1602

Steven B. Abbott, Esq.
Redwine & Sherrill
1950 Market St.
Riverside, CA 92501

Therese Exline Parker
P.O. Box 1318
Upland CA 91785-1318

Office of the Attorney General
Marilyn H. Levin, Dep.
300 So. Spring St.
Floor 11, North Tower
Los Angeles, CA 90004

Office of the Attorney General
Joseph Barbieri, Dep.
2101 Webster St., 12th Fl.
Oakland, CA 94612-3049

Edward C. Dygert, Esq.
Cox, Castle & Nicholson
2049 Century Park East
28th Floor
Los Angeles, CA 90067

Pryke Properties, Trustee
P.O. Box 400937
Hesperia, CA 92340-0937

Office of the County Counsel
of San Bernardino County
Paul M. St. John, Dep.
385 No. Arrowhead Ave.
San Bernardino, CA 92401

Thomas P. McGuire, Esq.
Monteleone & McCrory
10 Universal City Plaza, #2500
P.O. Box 7806
Universal City, CA 91608-7806

Robert E. Dougherty, Esq.
Eric S. Vail, Esq.
Covington & Crowe
1131 West 6th St., #300
Ontario, CA 91762

Michael Duane Davis, Esq.
Gresham, Varner, Savage
& Nolan
14011 Park Ave., #140
Victorville, CA 92392

Nino J. Mascolo, Esq.
So. Cal. Edison Co.
2244 Walnut Grove Ave.
P.O. Box 800
Rosemead, CA 91770

Calvin R. House, Esq.
Lisa R. Klein, Esq.
Fulbright & Jaworski
865 So. Figueroa St., Fl. 29
Los Angeles, CA 90017-2571

Mark B. Salas
205 No. Acacia, #D
Fullerton, CA 92631

Joseph B. Vail
16993 Abby Lane
Victorville, CA 92392

R. Zaiden Corrado, APC
By: Robert Corrado
420 N. Montebello Blvd. #204
Montebello, CA 90640

(SPACE BELOW FOR FILING STAMP ONLY)

BRUNICK, ALVAREZ & BATTERSBY
PROFESSIONAL LAW CORPORATION
1839 COMMERCENTER WEST
POST OFFICE BOX 6425
SAN BERNARDINO, CALIFORNIA 92412
TELEPHONE: (909) 889-8301 824-0623

William J. Brunick, (Bar No. 46289)
Boyd L. Hill, (Bar No. 140435)

Attorneys for Cross-Complainant MOJAVE WATER AGENCY

FILED
RIVERSIDE COUNTY
JAN 10 1996
ARTHUR A. SHAW, CLERK
By Y.A. Burns Y.A. Burns Deputy

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF RIVERSIDE

CITY OF BARSTOW, et al, Plaintiff, v. CITY OF ADELANTO, et al, Defendant.	CASE NO. 208568 ASSIGNED TO JUDGE KAISER DEPT.4 FOR ALL PURPOSES JUDGMENT AFTER TRIAL
MOJAVE WATER AGENCY, Cross-complainant, v. ANDERSON, RONALD H. et al, Cross-defendants.	

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Exhibit "A" - Map entitled, "Map showing Mojave Water Agency, Mojave River, Mojave Basin Area and Hydrologic Subareas and Limits of Adjudicated Area Together with Geologic and Other Pertinent Features."

Exhibit "B" - Tables entitled, "Table B-1: Table Showing Base Annual Production, Base Annual Production Right of Each Producer Within Each Subarea, and Free Production Allowance for Subareas for First Five Years of the Judgment" and "Table B-2: Table Showing Total Water Production for Aquaculture and Recreational Lake Purposes."

Exhibit "C" - Engineering Appendix.

Exhibit "D" - Time Schedules.

Exhibit "E" - List of Producers and Their Designees.

Exhibit "F" - Transfers of Base Annual Production Rights.

Exhibit "G" - Subarea Obligations.

Exhibit "H" - Biological Resource Mitigation.

Exhibit "I" - Map Showing Potential Groundwater Recharge Areas

I. INTRODUCTION

A. The Complaint. The original complaint herein was filed by the City of Barstow and Southern California Water Company (collectively "Plaintiffs") in San Bernardino Superior Court, North Desert District, on May 30, 1990 as Case No. BCV6672, and transferred to Riverside County Superior Court on November 27, 1990. Plaintiffs allege that the cumulative water Production upstream of the City of Barstow Overdrafted the Mojave River system, and request an average Annual flow of 30,000 acre-feet of surface water to the City of Barstow area. The complaint also includes a request for a writ of mandate to require the Mojave Water Agency ("MWA") to act pursuant to its statutory authority to obtain and provide Supplemental Water for use within the Mojave Basin Area.

B. The MWA Cross-Complaint. On July 26, 1991, the MWA filed its first amended cross-complaint in this case. The MWA first amended cross-complaint and its ROE amendments name Producers who collectively claim substantially all rights of water use within the Mojave Basin Area, including Parties downstream of the City of Barstow. The MWA cross-complaint, as currently amended, requests a declaration that the available native water supply to the Mojave Basin Area (not including water imported from the California State Water Project) is inadequate to meet the demands of the combined Parties and requests a determination of the water rights of whatever nature within the MWA boundaries and the Mojave Basin Area. The MWA has named as Parties several hundred Producers within the Basin Area.

///

C. The Arc Las Flores Cross-Complaint. On July 3, 1991, Arc Las Flores filed a cross-complaint for declaratory relief seeking a declaration of water rights of certain named cross-defendants and a declaration that the appropriative, overlying and riparian rights of Arc Las Flores be determined to be prior and paramount to any rights of the Plaintiffs and other appropriators.

D. Stipulation and Trial. On October 16, 1991, the Court ordered a litigation standstill. The purpose of the standstill was to give the parties time to negotiate a settlement and develop a solution to the overdraft existing in the Mojave River Basin.

A committee of engineers and attorneys, representing a variety of water users and interests throughout the Mojave River Basin, was created to develop a physical solution to the water shortage problem. The work of the committee resulted in a stipulated interlocutory order and judgment, which was entered by the court on September 23, 1993.

Several non-stipulating parties requested a trial. On April 20, 1994, the Court issued a memorandum setting forth the trial issues. This cause came on regularly for trial on February 6, 1995, and was tried in Department 4 of the above-entitled Court, the Honorable E. Michael Kaiser, Judge, Presiding, without a jury. Oral and documentary evidence was introduced on behalf of the respective parties and the cause was argued and submitted for decision.

///

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///

II. DECREE

NOW, THEREFORE, IT IS ORDERED, ADJUDGED AND DECREED:

A. JURISDICTION, PARTIES, DEFINITIONS.

1. Jurisdiction and Parties.

a. Jurisdiction. This Court has jurisdiction to enter Judgment declaring and adjudicating the rights to reasonable and beneficial use of water by the Parties in the Mojave Basin Area pursuant to Article X, Section 2 of the California Constitution. This Judgment constitutes an adjudication of water rights of the Mojave Basin Area pursuant to Section 37 of Chapter 2146 of Statutes of 1959 ("the MWA Act").

b. Parties. All Parties to the MWA cross-complaint are included in this Judgment. The MWA has notified those Persons claiming any right, title or interest to the natural waters within the Mojave Basin Area to make claims. Such notice has been given: 1) in conformity with the notice requirements of Water Code §§ 2500 et seq.; 2) pursuant to Section 37 of the MWA Act; and 3) pursuant to order of this Court. Subsequently, all Producers making claims have been or will be included as Parties. The defaults of certain Parties have been entered, and certain named cross-defendants to the MWA cross-complaint who are not Producers have been dismissed. All named Parties who have not been dismissed have appeared herein or have been given adequate opportunity to appear herein. The Court has jurisdiction of the subject matter of this action and of the Parties hereto.

c. Minimal Producers. There are numerous Minimal Producers in the Basin Area and their number is expected to increase in the future. In order to minimize the cost of

administering this Judgment and to assure that every Person producing water in the Basin Area participates fairly in the Physical Solution, MWA shall:

i. within one Year following entry of this Judgment, prepare a report to the Court: 1) setting forth the identity and verified Base Annual Production of each Minimal Producer in each Subarea of the Basin Area; and 2) recommending a proposed system of Minimal Producer Assessments. The system of Minimal Producer Assessments shall achieve an equitable allocation of the costs of the Physical Solution that are attributable to Production of verified Base Annual Production amounts by Minimal Producers in each Subarea to and among such Minimal Producers. Minimal Producer Assessments need not be the same for existing Minimal Producers as for future Minimal Producers.

ii. within one Year following entry of this Judgment, prepare a report to the Court setting forth a proposed program to be undertaken by MWA, pursuant to its statutory authority, to implement the proposed system of Minimal Producer Assessments. The Court may order MWA to implement the proposed program or, if MWA's statutory authority is inadequate to enable implementation, or if either the proposed program or the proposed system of Minimal Producer Assessments is unacceptable to the Court, the Court may then order MWA either to implement an alternative program or system, or in the alternative, to name all Minimal Producers as Parties to this litigation and to serve them for the purpose of adjudicating their water rights.

Any Minimal Producer whose Annual Production exceeds ten (10) acre-feet in any Year following the date of entry of Judgment shall be made a Party pursuant to Paragraph 12 and shall be subject to Administrative, Replacement Water, Makeup Water and Biological Resources Assessments. Any Minimal Producer who produced during the 1986-1990 period may become a Party pursuant to Paragraph 40 with a Base Annual Production Right based on such Minimal Producer's verified Base Annual Production. To account properly for aggregate Production by Minimal Producers in each Subarea, Table B-1 of Exhibit B shall include an estimated aggregate amount of Base Annual Production by all Minimal Producers in each Subarea. The Base Annual Production of any Minimal Producer who becomes a Party shall be deducted from the aggregate amount and assigned to such Minimal Producer.

2. Physical and Legal Complexity. The physical and legal issues of the case as framed by the complaint and cross-complaints are extremely complex. Production of more than 1,000 Persons producing water in the Basin Area has been ascertained. In excess of 1,000 Persons have been served. The water supply and water rights of the entire Mojave Basin Area and its hydrologic Subareas extending over 4000 square miles have been brought into issue. Most types and natures of water right known to California law are at issue in the case. Engineering studies by the Parties, jointly and severally, leading toward adjudication of these rights and a Physical Solution, have required the expenditure of over two Years' time and hundreds of thousands of dollars.

3. Need for a Declaration of Rights and Obligations and for Physical Solution. A Physical Solution for the Mojave Basin

Area based upon a declaration of water rights and a formula for Intra- and Inter-Subarea allocation of rights and obligations is necessary to implement the mandate of Article X, Section 2 of the California Constitution and California water policy. Such Physical Solution requires the definition of the individual rights of all Producers within the Basin Area in a manner which will equitably allocate the natural water supplies and which will provide for equitable sharing of costs for Supplemental Water. Nontributary supplemental sources of water are or will be available in amounts, which when combined with water conservation, water reclamation, water transfers, and improved conveyance and distribution methods within the Basin Area, will be sufficient in quantity and quality to assure implementation of a Physical Solution. Sufficient information and data are known to formulate a reasonable and just allocation of existing water supplies as between the hydrologic Subareas within the Basin Area and as among the water users within each Subarea. Such Physical Solution will allow the public water supply agencies and individual water users within each hydrologic Subarea to proceed with orderly water resource planning and development. It will be necessary for MWA to construct conveyance facilities to implement the Physical Solution. Absent the construction of conveyance facilities, some Subareas may be deprived of an equitable share of the benefits made possible by the Physical Solution. Accordingly, this Physical Solution mandates the acquisition or construction of conveyance facilities for importation and equitable distribution of Supplemental Water to the respective Subareas. Such construction is dependent on the availability of appropriate financing, and any such financing

assessed to the Parties will be based upon benefit to the Parties in accordance with the MWA Act.

4. Definitions. As used in this judgment, the following terms shall have the meanings herein set forth:

a. Afton - The United States Geological Survey gauging station "Mojave River at Afton, CA."

b. Annual or Year - As used in this Judgment refers to the Annual period beginning October 1 and ending September 30 of the following Year.

c. Aquaculture Water - Water so identified in Exhibit "B". Such water may be used only for fish breeding and rearing. The Annual Consumptive Use of such water in acre-feet is equal to the water surface area, in acres, of the fish rearing facilities multiplied by seven (feet).

d. Assessments - Those Assessments levied and collected pursuant to this judgment including Replacement Water, Makeup Water, Administrative and Biological Resource Assessments.

e. Barstow - The United States Geological Survey Gauging Station "Mojave River at Barstow, CA."

f. Base Annual Production - The verified maximum Year Production, in acre-feet, for each Producer for the five Year Period 1986-1990 as set forth in Table B-1 of Exhibit "B", except where otherwise noted therein. The maximum Year Production for each Producer was verified based on one or more of the following: flow meter readings, electrical power

or diesel usage records or estimated applied water duty. The Base Annual Production for recreational lakes in the Baja Subarea and for Aquaculture shall be equal either to the area of water surface multiplied by seven feet or to verified Production, whichever is less. The five Year period 1986-1990 shall also be the time period for which Base Annual Production for Minimal Producers shall be calculated.

g. Base Annual Production Right - The relative Annual right of each Producer to the Free Production Allowance within a given Subarea, expressed as a percentage of the aggregate of all Producers' Base Annual Production in the Subarea. The percentage for each Producer is calculated by multiplying that Producer's Base Annual Production in a Subarea times one hundred (100) and dividing the result by the aggregate Base Annual Production for all Producers in the Subarea. The percentage shall be rounded off to the nearest one ten-thousandth of one per cent.

h. Base Flow - That portion of the total surface flow measured Annually at Lower Narrows which remains after subtracting Storm Flow.

i. Carry Over Right - The right of a Producer to delay and accumulate the Production of such Producer's share of a Subarea Free Production Allowance until

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and only until the following Year free of any Replacement Water Assessment.

j. Consumption or Consumptive Use - The permanent removal of water from the Mojave Basin Area through evaporation or evapo-transpiration. The Consumptive Use rates resulting from particular types of water use are identified in Paragraph 2 of Exhibit "F".

k. Free Production Allowance - The total amount of water, and any Producer's share thereof, that may be Produced from a Subarea each Year free of any Replacement Obligation.

l. Groundwater - Water beneath the surface of the ground and within the zone of saturation; i.e., below the existing water table, whether or not flowing through known and definite channels.

m. Harper Lake Basin - That portion of the Centro Subarea identified as such on Exhibit "A".

n. Lower Narrows - The United States Geological Survey gauging station "Mojave River near Victorville, CA."

o. Makeup Water - Water needed to satisfy a Minimum Subarea Obligation.

p. Makeup Obligation - The obligation of a Subarea to pay for Makeup Water to satisfy its Subarea Obligation.

q. Minimal Producer - Any Person whose Base Annual Production, as verified by MWA is not greater than

ten (10) acre-feet. A Person designated as a Minimal Producer whose Annual Production exceeds ten (10) acre-feet in any Year following the date of entry of Judgment is no longer a Minimal Producer.

r. Minimum Subarea Obligation - The minimum Annual amount of water a Subarea is obligated to provide to an adjoining downstream Subarea or the Transition Zone or, in the case of the Baja Subarea, the minimum Annual Subsurface Flow at the MWA eastern boundary toward Afton in any Year, as set forth in Exhibit "G".

s. Mojave Basin Area or Basin Area - The area shown on Exhibit "A" that lies within the boundaries of the line labelled "Limits of Adjudicated Area" which generally includes the area tributary to the Mojave River and its tributaries except for such area not included within the Mojave Water Agency's jurisdiction.

t. MWA - Cross complainant Mojave Water Agency.

u. Overdraft - A condition wherein the current total Annual Consumptive Use of water in the Mojave Basin Area or any of its Subareas exceeds the long term average Annual natural water supply to the Basin Area or Subarea.

v. Party (Parties) - Any Person(s) named in this action who has intervened in this case or has

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become subject to this Judgment either through stipulation, default, trial or otherwise.

w. Person(s) - Any natural person, firm, association, organization, joint venture, partnership, business, trust, corporation, or public entity.

x. Produce - To pump or divert water.

y. Producer(s) - A Person, other than a Minimal Producer, who Produces water.

z. Production - Annual amount of water produced, stated in acre-feet of water.

aa. Production Safe Yield - The highest average Annual Amount of water that can be produced from a Subarea: (1) over a sequence of years that is representative of long-term average annual natural water supply to the Subarea net of long-term average annual natural outflow from the Subarea, (2) under given patterns of Production, applied water, return flows and Consumptive Use, and (3) without resulting in a long-term net reduction of groundwater in storage in the Subarea.

bb. Purpose of Use - The broad category of type of water use including but not limited to municipal, irrigation, industrial, aquaculture, and lakes purposes. A change in Purpose of Use includes any reallocation of water among mixed or sequential uses, excluding direct reuse of municipal wastewater.

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cc. Recirculated Water - Water that is Produced but not consumed by the Parties listed in Table B-2 of Exhibit "B" and then returned either to the Mojave River or to the Groundwater basin underlying the place of use.

dd. Replacement Obligation - The obligation of a Producer to pay for Replacement Water for Production from a Subarea in any Year in excess of the sum of such Producer's share of that Year's Free Production Allowance for the Subarea plus any Production pursuant to a Carry Over Right.

ee. Replacement Water - Water purchased by Watermaster or otherwise provided to satisfy a Replacement Obligation.

ff. Responsible Party - The Person designated by a Party as the Person responsible for purposes of filing reports and receiving notices pursuant to the provisions of this Judgment.

gg. Stored Water - Water held in storage pursuant to a Storage Agreement with Watermaster.

hh. Storm Flow - That portion of the total surface flow originating from precipitation and runoff without having first percolated to Groundwater storage in the zone of saturation and passing a particular point of reckoning, as determined annually by the Watermaster.

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ii. Subareas - The five Subareas of the Mojave Basin Area -- Este, Oeste, Alto, Centro and Baja -- as shown on Exhibit "A".

jj. Subarea Obligation - The average Annual amount of water that a Subarea is obligated to provide to an adjoining downstream Subarea or the Transition Zone or, in the case of the Baja Subarea, the average Annual Subsurface Flow toward Afton at the MWA eastern boundary as set forth in Exhibit "G".

kk. Subsurface Flow - Groundwater which flows beneath the earth's surface.

ll. Supplemental Water - Water imported to the Basin Area from outside the Basin Area, water that would otherwise be lost from the Basin Area but which is captured and made available for use in the Basin Area, or any Producer's share of Free Production Allowance that is not Produced and is acquired by Watermaster pursuant to this Judgment.

mm. Transition Zone - The portion of the Alto Subarea, shown on Exhibit "A", that lies generally between the Lower Narrows and the Helendale Fault.

nn. Watermaster - The Person(s) appointed by the Court to administer the provisions of this Judgment.

5. Exhibits. The following exhibits are attached to this Judgment and made a part hereof.

Exhibit "A" - Map entitled, "Map showing Mojave Water Agency, Mojave River, Mojave Basin Area and Hydrologic Subareas and

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Limits of Adjudicated Area Together with Geologic and Other Pertinent Features."

Exhibit "B" - Table entitled, "Table B-1: Table Showing Base Annual Production and Base Annual Production Right of Each Producer Within Each Subarea, and Free Production Allowances for Subareas for First Five Years after entry of the Interlocutory Judgment" and "Table B-2: Table Showing Total Water Production for Aquaculture and Recreational Lake Purposes."

Exhibit "C" - Engineering Appendix.

Exhibit "D" - Time Schedules.

Exhibit "E" - List of Producers and Their Designees.

Exhibit "F" - Transfers of Base Annual Production Rights.

Exhibit "G" - Subarea Obligations.

Exhibit "H" - Biological Resource Mitigation.

Exhibit "I" - Map Showing Potential Groundwater Recharge Areas

B. DECLARATION OF HYDROLOGIC CONDITIONS.

6. Mojave Basin Area as Common Source of Supply. The area shown on Exhibit "A" as the Mojave Basin Area is comprised of five Subareas. The waters derived from the Mojave River and its tributaries constitute a common source of supply of the five Subareas and of the Persons producing therefrom.

7. Existence of Overdraft. In each and every Year, for a period in excess of five (5) years prior to the May 30, 1990 filing date of Plaintiffs' Complaint, the Mojave Basin Area and each of its respective Subareas have been and are in a state of Overdraft, and it is hereby found that there is no water available

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for Production from the Basin Area or any Subarea therein except pursuant to this Judgment.

C. DECLARATION OF RIGHTS AND OBLIGATIONS.

8. Production Rights of the Parties. The Base Annual Production and Base Annual Production Right of each Party are declared as set forth in Table B-1 of Exhibit "B". Certain Parties also have the right to continue to Produce Recirculated Water in the amounts set forth in Table B-2 of Exhibit "B", subject to the following:

a. Aquaculture. Two of the Producers listed in Table B-2 of Exhibit "B", California Department of Fish and Game Mojave River Fish Hatchery (Hatchery) and Jess Ranch Water Company (Jess), Produce Recirculated Water for Aquaculture. The Hatchery and Jess or their successors or assignees shall have the right to continue to Produce up to the amounts listed in Table B-2 of Exhibit "B" as Recirculated Water for Aquaculture on the property where it was used in the Year for which Base Annual Production was verified. Production of such amount of Recirculated water by Jess shall be free of any Replacement Water Assessments, Makeup Water Assessments or Administrative Assessments but shall be subject to Biological Resources Assessments and each Jess well producing Recirculated Water shall be subject to an Annual administrative fee equal to the lowest Annual fee paid to MWA by a Minimal Producer. Neither the Hatchery nor Jess Recirculated Water may be transferred or used for any other purpose or transferred for use on any other property, except as provided in Paragraph 7 of Exhibit "F" for the Hatchery. Any Production of Recirculated Water by Jess in excess of the amount shown in Table B-2 shall be subject to all

Assessments. Production of Recirculated Water by the Hatchery will be subject to the rules set forth in Paragraph 7 of Exhibit "F". All Jess Aquaculture Recirculated Water shall be discharged immediately and directly to the Mojave River.

b. Camp Cady. One Producer listed in Table B-2 of Exhibit "B", California Department of Fish and Game-Camp Cady (Camp Cady), Produces Recirculated Water for Lakes containing Tui Chub, an endangered species of fish. Camp Cady or its successors or assignees shall have the right to continue to Produce up to the amount listed in Table-B-2 of Exhibit "B" as Recirculated Water at Camp Cady. Production of each amount of Recirculated water shall be free of any Assessments. Camp Cady Recirculated Water may not be transferred or used for any other purpose or transferred for use on any other property. Any Production of Recirculated Water by Camp Cady in excess of the amount shown in Table B-2 of Exhibit "B" shall be subject to all Assessments except Biological Resource Assessments. All Camp Cady Recirculated Water shall be allowed to percolate immediately and directly to the Groundwater basin underlying Camp Cady.

c. Recreational Lakes in Baja Subarea. All Producers listed in Table B-2 of Exhibit "B" except the Hatchery, Jess and Camp Cady Produce Recirculated Water for recreational lakes in the Baja Subarea. Such Producers or their successors or assignees shall have the right to continue to Produce up to the amounts identified in Table B-2 of Exhibit "B" as Recirculated Water for use in recreational lakes on the property where it was used in the Year for which Base Annual Production was verified, free of any Replacement Water Assessments, Makeup Water

Assessments, or Administrative Assessments, but such Production shall be subject to any Biological Resource Assessment. Each well producing such Recirculated Water shall be subject to an Annual administrative fee equal to the lowest Annual fee paid by a Minimal Producer. Recirculated Water cannot be transferred or used for any other purpose. All recreational lake Recirculated Water shall be allowed to percolate immediately and directly to the Groundwater basin underlying the recreational lake.

9. MWA Obligations. The Physical Solution is intended to provide for delivery and equitable distribution to the respective Subareas by MWA of the best quality of Supplemental Water reasonably available. MWA shall develop conveyance or other facilities to deliver this Supplemental Water to the areas depicted in Exhibit "I," unless prevented by forces outside its reasonable control such as an inability to secure financing consistent with sound municipal financing practices and standards.

a. Secure Supplemental Water. MWA, separate and apart from its duties as the initial Watermaster designated under this Judgment, shall exercise its authority under Sections 1.5 and 15 of the MWA Act to pursue promptly, continuously and diligently all reasonable sources to secure Supplemental Water as necessary to fully implement the provisions of this Judgment.

b. Supplemental Water Prices. The MWA shall establish fair and equitable prices for Supplemental Water delivered to the Watermaster under this Judgment.

c. Supplemental Water Delivery Plan. Not later than September 30, 1996, MWA shall prepare a report on potential alternative facilities or methods to deliver Supplemental Water to

the areas shown on Exhibit "I." The report shall include, for each alternative, a development time schedule, a summary of cost estimates, an analysis of the relative benefits to Producers in each Subarea and an analysis of alternative methods of financing and cost allocation, including any state or federal sources of funding that may be available.

d. Water Delivery Cost Allocation. The report required by subdivision (c) above shall recommend methods of financing and cost allocation that are based on benefits to be received. MWA's cost allocation plan shall be subject to Court review as provided in subdivision (f) below to verify that costs are allocated fairly and according to benefits to be received. The MWA financing and cost allocation plan may include a mix of revenue sources including the following:

(1) Developer or connection fees to the extent MWA can demonstrate a nexus, as required by law, between the fees and the impact of the development upon the water resources of the Mojave Basin Area and each subarea thereof;

(2) Other methods of financing available to MWA, including but not limited to property based taxes, assessments or standby charges;

(3) Water sales revenues, but only to the extent other sources are not available or appropriate, and in no event shall the water sales price to cover facility

capital costs exceed a rate equal to fifty percent of the variable cost rate charged to MWA under its contract for water delivery from the California State Water Project;

e. Legislative Changes. MWA shall seek promptly to have enacted amendments to the MWA Act (Water Code Appendix, Part 97) that allow MWA to implement any methods of governmental financing available to any public entity in California.

f. Court Review and Determination of Benefit. Not later than September 30, 1996, MWA shall submit its report to the Court in a noticed motion pursuant to Paragraph 36. The report shall set forth MWA's recommendations as to the following: (1) which alternatives should be implemented; (2) methods of cost allocation for the recommended alternatives; (3) financing for the recommended alternatives; and (4) a time schedule to complete the recommended alternatives. The Court may approve or reject the recommendations. The Court may further order the use of alternatives and time schedules or it may order additional studies and resubmittals, as it may deem proper.

10. Priority and Determination of Production Rights. The water rights involved herein are of differing types and commenced at different times. Many of the rights involved are devoted to public uses. The Declaration of Water Rights that is part of the judgment and the Physical Solution decreed herein takes into consideration the competing priorities which have been asserted in addition to the equitable principles applicable to apportionment of water in this situation. The following factors

have been considered in the formulation of each Producer's Base Annual Production Right:

a. The Mojave Basin Area and each of its hydrologic Subareas have continuously for many Years been in a state of system-wide Overdraft;

b. All Producers have contributed to the Overdraft;

c. None of the priorities asserted by any of the Producers is without dispute;

d. Under the complex scheme of California water law, the allocation of water and rights mechanically based upon the asserted priorities would be extremely difficult, if not impossible, and would not result in the most equitable apportionment of water;

e. Such mechanical allocation would, in fact, impose undue hardship on many Parties;

f. There is a need for conserving and making maximum beneficial use of the water resources of the State;

g. The economy of the Mojave Basin Area has to a great extent been established on the basis of the existing Production;

h. The Judgment and Physical Solution take into consideration the unique physical and climatic conditions of the Mojave Basin Area, the Consumptive Use of water in the several sections of the Basin, the character and rate of return flows, the extent of established uses, the availability of storage water, the relative benefits and detriments between upstream areas and downstream areas if a limitation is imposed on one and not the

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other, and the need to protect public interest and public trust concerns.

In consideration of the foregoing factors, and in accordance with the terms and conditions of this Judgment, the Parties are estopped and barred from asserting special priorities or preferences.

11. Exercise of Carry Over Rights. The first water Produced by a Producer during any Year shall be deemed to be an exercise of any Carry Over Right. Such Carry Over Right may be transferred in accordance with Exhibit "F".

12. Production Only Pursuant to Judgment. This Judgment, and the Physical Solution decreed herein, addresses all Production within the Mojave Basin Area. Because of the existence of Overdraft, any Production outside the framework of this Judgment and Physical Solution will contribute to an increased Overdraft, potentially damage the Mojave Basin Area and public interests in the Basin Area, injure the rights of all Parties, and interfere with the Physical Solution. Watermaster shall bring an action or a motion to enjoin any Production that is not pursuant to the terms of this Judgment.

13. Declaration of Subarea Rights and Obligations. In the aggregate, Producers within certain Subareas have rights, as against those in adjoining upstream Subareas, to receive average Annual water supplies and, in any one Year, to receive minimum Annual water supplies equal to the amounts set forth in Exhibit "G", in addition to any Storm Flows. In turn, in the aggregate, Producers within certain Subareas have an obligation to provide to adjoining downstream Subareas such average Annual water supplies in

the amounts and in the manner set forth in Exhibit "G". In any one Year, Producers within certain Subareas have an obligation to provide to adjoining downstream Subareas such minimum Annual water supplies in the amounts and in the manner set forth in Exhibit "G". The Producers in the Baja Subarea have an obligation to provide average and minimum Subsurface Flows toward Afton at the MWA eastern boundary equal to the amounts shown in Exhibit "G". Producers in each of the Subareas have rights in the aggregate, as against each adjoining downstream Subarea or, in the case of the Baja Subarea, as against flows at the MWA eastern boundary toward Afton, to divert, pump, extract, conserve, and use all surface water and Groundwater supplies originating therein or accruing thereto, and so long as the adjoining downstream Subarea Obligations are satisfied under this Judgment and there is compliance with all of its provisions. Watermaster shall maintain a continuing account of the status of each Subarea's compliance with its Subarea Obligation, including any cumulative credits or debits and any requirement for providing Makeup Water. The accounting and determinations relative to Subarea Obligations shall be made in accordance with procedures set forth in Exhibit "G".

III. INJUNCTION

14. Injunction Against Unauthorized Production. Each and every Party, its officers, agents, employees, successors, and assigns, is ENJOINED AND RESTRAINED from Producing water from the Basin Area except pursuant to the provisions of the Physical Solution in this Judgment.

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15. Injunction Re Change in Purpose of Use Without Notice Thereof to Watermaster. Each and every Party, its officers, agents, employees, successors, and assigns, is ENJOINED AND RESTRAINED from changing its Purpose of Use at any time without first notifying Watermaster of the intended change.

16. Injunction Against Unauthorized Recharge. Each and every Party, its officers, agents, employees, successors and assigns, is ENJOINED AND RESTRAINED from claiming any right to recapture Water that has been recharged in the Basin Area except pursuant to a Storage Agreement with Watermaster. This provision does not prohibit Parties from importing Supplemental Water into the Basin Area for direct use.

17. Injunction Against Transportation from Mojave Basin Area. Except upon further order of the Court, each and every Party, its officers, agents, employees, successors and assigns, is ENJOINED AND RESTRAINED from transporting water hereafter Produced from the Basin Area to areas outside the Basin Area.

18. Injunction Against Diverting Storm Flows. No Party may undertake or cause the construction of any project that will directly reduce the amount of Storm Flow that would otherwise go through the naturally occurring hydrologic regime to a downstream Subarea or that will reduce the surface area over which Storm Flow currently occurs by alteration to the bed of the Mojave River. This paragraph shall not prevent any flood control agency or municipality from taking such emergency action as may be necessary to protect the physical safety of its residents and its structures from flooding. Any such action shall be done in a manner that will minimize any reduction in the quantity of Storm Flows.

IV. CONTINUING JURISDICTION

19. Jurisdiction Reserved. Full jurisdiction, power and authority are retained by and reserved to the Court for purposes of enabling the Court upon the application of any Party, by a motion noticed in accordance with the notice procedures of Paragraph 36 hereof, to make such further or supplemental order or directions as may be necessary or appropriate for interim operation before the Physical Solution is fully operative, or for interpretation, enforcement or carrying out of this Judgement, and to modify, amend or amplify any of the provisions of this Judgment or to add to the provisions thereof consistent with the rights herein decreed; provided, that nothing in this paragraph shall authorize either a reduction of the Base Annual Production Right of any Party, except in accordance with the rules set forth in Exhibit "F", or a reduction of the Base Flow portion of any Subarea Obligation.

V. Physical Solution

A. GENERAL

20. Purpose and Objective. The Court hereby declares and decrees that the Physical Solution herein contained: 1) is a fair and equitable basis for satisfaction of all water rights in the Mojave Basin Area; 2) is in furtherance of the mandate of the State Constitution and the water policy of the State of California; and 3) takes into account applicable public trust interests; and therefore adopts and orders the Parties to comply with the Physical Solution. As noted in Paragraph 3 of this Judgment, the declaration of rights and obligations of the Parties and Subareas is a necessary component of this Physical Solution. The purpose of

the Physical Solution is to establish a legal and practical means for making the maximum reasonable beneficial use of the waters of the Basin Area by providing for the long-term conjunctive utilization of all water available thereto to meet the reasonable beneficial use requirements of water users therein.

21. Need for Flexibility. It is essential that this Physical Solution provide maximum flexibility and adaptability in order that the Court may be free to use existing and future technological, social, institutional and economic options in order to maximize reasonable beneficial use of the waters of the Basin Area. To that end, the Court's retained jurisdiction may be utilized where appropriate, to supplement the Physical Solution.

22. General Pattern of Operations. The Producers will be divided into five Subareas for purposes of administration. The Subarea rights and obligations are herein decreed. A fundamental premise of the Physical Solution is that all Parties will be allowed, subject to this Judgment, to Produce sufficient water to meet their reasonable beneficial use requirements. To the extent that Production by a Producer in any Subarea exceeds such Producer's share of the Free Production Allowance of that Subarea, Watermaster will provide Replacement Water to replace such excess Production according to the methods set forth herein. To the extent that any Subarea incurs a Makeup Obligation, Watermaster will provide Supplemental Water to satisfy such Makeup Obligation according to the methods set forth herein. For the initial five (5) full Years after entry of this Judgment (including any interlocutory Judgment), the Free Production Allowance for each Subarea shall be set as the amount of water equal to the following

percentages of the aggregate Base Annual Production for that Subarea:

	Judgment Year	Percentage
1993-1994	First Full Year	100
1994-1995	Second Full Year	95
1995-1996	Third Full Year	90
1996-1997	Fourth Full Year	85
1997-1998	Fifth Full Year	80

The extent of Overdraft now varies between Subareas and the reasonableness of any physical solution as applied to each Producer depends in part upon such Producer's foreseeable needs and the present and future availability of water within the Subarea in which each Producer is located. The Physical Solution described in this Judgment in part generally contemplates (i) initially allowing significant unassessed production on a substantially uniform basis for all Producers and Subareas and (ii) a phasing in of the monetary obligations necessary to obtain Supplemental Water. The above two provisions will affect each Subarea differently, may not be sufficient to ultimately eliminate the condition of Overdraft in each Subarea and could result in increased Overdraft within a Subarea. Any adverse impact to any Subarea caused by the implementation of the provisions shall be the responsibility of the Producers in each such Subarea.

B. ADMINISTRATION.

23. Administration by Watermaster. Watermaster shall administer and enforce the provisions of the Judgment and any subsequent instructions or orders of this Court.

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(a) Standard of Performance. Watermaster shall, in carrying out its duties, powers and responsibilities herein, act in an impartial manner without favor or prejudice to any Subarea, Producer, Party or Purpose of Use.

(b) Removal of Watermaster. Full jurisdiction, power and authority are retained and reserved by the Court for the purpose of enabling the Court on its own motion, or upon application of any Party, and upon notice in accordance with the notice procedures of paragraph 36 hereof, and after hearing thereon, to remove any appointed Watermaster and substitute a new Watermaster in its place. The Court shall find good cause for the removal of Watermaster upon a showing that Watermaster has failed to perform its duties, powers and responsibilities in an impartial manner, or has otherwise failed to act in the manner consistent with the provisions set forth in this Judgment or subsequent order of the Court.

(c) MWA Appointed as Initial Watermaster. The MWA is hereby appointed, until further order of the Court, as Watermaster to administer and enforce the provisions of this Judgment and any subsequent orders of this Court issued in the performance of its continuing jurisdiction. In carrying out this appointment, MWA shall segregate and separately exercise in all respects the Watermaster powers delegated by the Court under this Judgment from MWA's statutory powers. All funds received, held, and disbursed by MWA as Watermaster shall be by way of separate Watermaster accounts, subject to separate accounting and auditing. Meetings and hearings held by the MWA Board of Directors when acting as Watermaster shall be noticed and conducted separately from MWA

meetings. All Watermaster staff and consultant functions shall be separate and distinct from MWA staff and consultant functions; provided, however, that pursuant to duly adopted Watermaster rules, which shall be subject to review according to Paragraph 36 hereof, Watermaster staff and consultant functions may be accomplished by MWA staff and consultants, subject to strict time and cost accounting principles so that Watermaster functions, and the Assessments provided under this Judgment, do not subsidize, and are not subsidized by, MWA functions. Subject to these principles, MWA shall implement practicable cost efficiencies through consolidation of Watermaster and MWA staff and consultant functions.

24. Powers and Duties. Subject to the continuing supervision and control of the Court, Watermaster shall have and may exercise the following express powers, and shall perform the following duties, together with any specific powers, authority and duties granted or imposed elsewhere in this Judgement or hereafter ordered or authorized by the Court in the exercise of its continuing jurisdiction:

a. Rules and Regulations. To adopt any and all appropriate rules and regulations for conduct pursuant to this Judgment after public hearing. Notice of hearing and a copy of the proposed rules and regulations, and any amendments thereof, shall be mailed to all Parties thirty days prior to the date of the hearing thereon.

b. Employment of Experts and Agents. To employ such administrative personnel, engineering, legal, accounting, or other specialty services and consulting assistants as may be deemed appropriate in carrying out the terms of this Judgment.

c. Makeup and Replacement Obligations. To determine the Makeup Obligations for each Subarea and Replacement Obligations for each Producer and each Subarea, pursuant to the terms of the Judgment.

d. Measuring Devices, etc. To adopt rules and regulations regarding determination of amounts of Production and installation of individual water meters. The rules and regulations shall provide for approved devices or methods to measure or estimate Production. Producers who meter Production on the date of entry of this Judgment shall continue to meter Production. Thereafter, Producers who do not meter Production on the effective date of entry of this Judgment may be required by Watermaster rules and regulations to install water meters upon a showing that then employed measurement devices or methods do not accurately determine actual Production. The rules and regulations shall require that within three Years after the date of entry of this Judgment, any Producer who provides piped water for human Consumption to more than five service connections shall have installed an individual water meter on each service connection.

e. Hydrologic Data Collection. To install, operate and maintain such wells, measuring devices and/or meters necessary to monitor stream flow, precipitation and groundwater levels and to obtain such other data as may be necessary to carry out the provisions of this Judgment, including a study of the Basin Area phreatophyte consumptive use.

f. Assessments. To set, levy and collect all Assessments specified herein.

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g. Purchase of and Recharge with Supplemental Water. In accordance with Paragraph 27, to the extent Supplemental Water is available and is reasonably needed for Replacement Water or Makeup Water, to use Replacement Water Assessment proceeds to purchase Replacement Water, and to use Makeup Water Assessment proceeds to purchase Makeup Water and to have such Replacement Water and Makeup Water provided to the appropriate Subarea as soon as practicable. Watermaster may prepurchase Supplemental Water and apply subsequent Assessments towards the costs of such prepurchases.

h. Water Quality. To take all reasonable steps to assist and encourage appropriate regulatory agencies to enforce reasonable water quality regulations affecting the Basin Area, including regulation of solid and liquid waste disposal.

i. Notice List. To maintain a current list of Responsible Parties to receive notice hereunder.

j. Annual Administrative Budget. To prepare a proposed administrative budget for each Year, hold hearings thereon, and adopt an administrative budget according to the time schedule set forth in Exhibit "D". The administrative budget shall set forth budgeted items and Administrative Assessments in sufficient detail to show the allocation of the expense among the Producers. Following the adoption of the budget, expenditures within budgeted items may thereafter be made by Watermaster in the exercise of powers herein granted, as a matter of course.

k. Annual Report to Court.

(1) To file an Annual report with this Court not later than April 1 of each Year beginning April 1 following the

first full Year after entry of Judgment. Prior to filing the Annual report with the Court, Watermaster shall notify all Parties that a draft of the report is available for review and shall provide notice of a hearing to receive comments and recommendations for changes in the report. The public hearing shall be conducted on the same date and at the same place as the hearings required by Paragraphs 3 and 4 of Exhibit "D". The notice of hearing may include such summary of the draft report as Watermaster may deem appropriate. Watermaster shall also distribute the report to the Parties requesting copies.

(2) The Annual report shall include an Annual fiscal report of the preceding Year's operation and shall include details as to operation of each of the Subareas and an audit of all Assessments and expenditures pursuant to this Physical Solution and a review of Watermaster activities pursuant to this Judgment. The Annual report shall include a compilation of at least the following:

Determinations and data required by:

i) Paragraph 24(c) (Makeup and Replacement Obligations)

ii) Paragraph 24(e) (Hydrologic Data Collection)

iii) Paragraph 24(g) (Purchase of and Recharge with Supplemental Water)

iv) Paragraph 24(i) (Notice List)

Rules and regulations adopted pursuant to:

v) Paragraph 24(a) (Rules and Regulations)

vi) Paragraph 24(d) (Measuring Devices, etc.)

vii) Paragraph 24(s) (Storage Agreements)

Reports required by:

viii) Paragraph 24(j) (Annual Administrative Budget)

ix) Paragraph 24(n) (Transfers)

x) Paragraph 24(o) (Free Production Allowance)

xi) Paragraph 24(p) (Production Reports)

xii) Exhibit "D" (Prior Year Report)

xiii) Exhibit "F" (Transfers of Base Annual Production Rights)

xiv) Exhibit "G" (Status of Subarea Obligation)

xv) Exhibit "H" (Biological Resource Mitigation)

l. Investment of Funds. To hold and invest any funds in investments authorized from time to time for public agencies in the State of California.

m. Borrowing. To borrow in anticipation of receipt of Assessment proceeds in an amount not to exceed the Annual amount of Assessments levied but uncollected.

n. Transfers. To prepare on an Annual basis and maintain a report or record of any transfer of Base Annual Production Rights. Such report or record shall be available for inspection by any Party upon reasonable notice to the Watermaster.

o. Free Production Allowance. Not later than the end of the 1997-1998 Water Year, and Annually thereafter, to recommend in the Watermaster Annual Report an adjustment, if needed, to the Free Production Allowance for any Subarea. In making its recommendation, Watermaster shall be guided by the factors set forth in Exhibit "C", including but not limited to an annual calculation of the change of water in storage. The Annual report shall include all assumptions and calculations relied upon in making its recommendations. Following the 1997-1998 Water Year,

or any time thereafter, Watermaster shall obtain prior Court approval for any increase or reduction of any Subarea's Free Production Allowance. In no event shall a reduction in any Year for a Subarea exceed five percent of the aggregate Base Annual Production of that Subarea. In the event Watermaster recommends in its report to the Court that the Free Production Allowance for any Subarea may need to be increased or reduced, the Court shall conduct a hearing, after notice given by Watermaster according to paragraph 36, upon Watermaster's recommendations and may order such changes in Subarea Free Production Allowance. The most recent Subarea Free Production Allowances shall remain in effect until revised according to this Paragraph 24(o).

p. Production Reports. To require each Producer to file with Watermaster, pursuant to procedures and time schedules to be established by Watermaster, a report on a form to be prescribed by Watermaster showing the total Production of such Party for each reporting period rounded off to the nearest tenth of an acre foot, and such additional information and supporting documentation as Watermaster may require.

q. Production Adjustment for Change in Purpose of Use. If Watermaster determines, using the Consumptive Use rates set forth in Exhibit "F", that a new Purpose of Use of any Producer's Production for any Year has resulted in a higher rate of Consumption than the rate applicable to the original Purpose of Use of that Producer's Production in the Year for which Base Annual Production was determined, Watermaster shall use a multiplier (1) to adjust upward such Production for the purpose of determining the Producer's Replacement Water Assessment and, (2) to adjust upward

the Free Production Allowance portion of such Production for the purpose of determining the Producer's Makeup Water Assessment. The multiplier shall be determined by dividing the number of acre feet of Consumption that occurred under the new Purpose of Use by the number of acre feet of Consumption that would have occurred under the original Purpose of Use for the same Production.

r. Reallocation of Base Annual Production Rights. To reallocate annually the Base Annual Production Rights in each Subarea to reflect any permanent transfers of such Rights among Parties.

s. Storage Agreements. To enter into Storage Agreements with any Party in order to accommodate the acquisition of Supplemental Water. Watermaster may not enter into Storage Agreements with non-Parties unless such non-Parties become subject to the provisions of this Judgment and the jurisdiction of the Court. Such Storage Agreements shall by their terms preclude operations which will have a substantial adverse impact on any Producer. If a Party pursuant to a Storage Agreement has provided for predelivery or postdelivery of Replacement Water for the Party's use, Watermaster shall at the Party's request credit such water to the Party's Replacement Obligation. Watermaster shall adopt uniformly applicable rules for Storage Agreements. Watermaster shall calculate additions, extractions and losses of water stored under Storage Agreements and maintain an Annual account of all such water.

t. Subarea Advisory Committee Meetings. To meet on a regular basis and at least semi-annually with the Subarea Advisory Committees to review Watermaster activities pursuant to

this Judgment and to receive advisory recommendations from the Subarea Advisory Committees.

u. Unauthorized Production. To bring such action or motion as is necessary to enjoin unauthorized Production as provided in Paragraph 12 hereinabove.

v. Meetings and Records. To ensure that all meetings and hearings by Watermaster shall be noticed and conducted according to then current requirements of the Ralph M. Brown Act, Government Code Sections 54950, et seq. Watermaster files and records shall be available to any person according to the provisions of the Public Records Act, Government Code §§ 6200 et seq.

w. Data, Estimates and Procedures. To rely on and use the best available records and data to support the implementation of this Judgment. Where actual records of data are not available, Watermaster shall rely on and use sound scientific and engineering estimates. Watermaster may use preliminary records of measurements, and, if revisions are subsequently made, Watermaster may reflect such revisions in subsequent accounting. Exhibit "C" sets forth methods and procedures for determining surface flow components. Watermaster shall use either the same procedures or procedures that will yield results of equal or greater accuracy.

x. Biological Resource Mitigation. To implement the Biological Resource Mitigation measures set forth in Exhibit "H" herein.

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C. ASSESSMENTS

25. Purpose. Watermaster shall levy and collect Assessments from the Parties based upon Production in accordance with the time schedules set forth in Exhibit "D". Watermaster shall levy and collect such Assessments as follows:

a. Administrative Assessments. Administrative Assessments to fund the Administrative Budget adopted by the Watermaster pursuant to Paragraph 24(j) shall be levied uniformly against each acre foot of Production. A Producer who does not Produce in a given Year shall pay an Administrative Assessment in amount equal to the lowest MWA assessment for Minimal Producers for that Year.

b. Replacement Water Assessments. Replacement Water Assessments shall be levied against each Producer on account of such Producer's Production, after any adjustment pursuant to Paragraph 24(q), in excess of such Producer's share of the Free Production Allowance in each Subarea during the prior Year.

c. Makeup Water Assessments. Makeup Water Assessments shall be levied against each Producer in each Subarea on account of each acre-foot of Production therein which does not bear a Replacement Assessment hereunder, after any adjustment pursuant to Paragraph 24(q), to pay all necessary costs of satisfying the Makeup Obligation, if any, of that Subarea.

d. Biological Resource Assessment. To establish and, to the extent needed, to maintain the Biological Resource Trust Fund balance at one million dollars (in 1993 dollars) pursuant to Paragraph 24(x) and Exhibit "H", a Biological Resource Assessment in an amount not to exceed fifty cents (in 1993 dollars)

for each acre-feet of Production shall be levied uniformly against each producer except the California Department of Fish and Game.

e. MWA Assessment of Minimal Producers. The MWA shall identify and assess Minimal Producers through its own administrative procedures, and not acting as Watermaster.

26. Procedure. Each Party hereto is ordered to pay the Assessments herein provided for, which shall be levied and collected in accordance with the procedures and schedules set forth in Exhibit "D". Any Assessment which becomes delinquent, as defined in Paragraph 7 of Exhibit "D", shall bear interest at the then current San Bernardino County property tax delinquency rate Said interest rate shall be applicable to any said delinquent Assessment from the due date thereof until paid. Such delinquent Assessment, together with interest thereon, costs of suit, attorneys fees and reasonable costs of collection, may be collected pursuant to motion giving notice to the delinquent Party only, or Order to Show Cause proceeding, or such other lawful proceeding as may be instituted by the Watermaster; and shall, if provided for in the MWA Act, constitute a lien on the property of the Party as of the same time and in the same manner as does the tax lien securing County property taxes. The Watermaster shall Annually certify a list of all such unpaid delinquent Assessments to the MWA (in accordance with applicable provisions of the MWA Act). The MWA (in accordance with applicable provisions of the MWA Act) shall include the names of those Parties and the amounts of the liens in its list to the County Assessor's Office in the same manner and at the same time as it does its administrative assessments. MWA shall account for receipt of all collections of Assessments collected pursuant to

this Judgment, and shall pay such amounts collected pursuant to this Judgment to the Watermaster. The Watermaster shall also have the ability to enjoin production of those Persons who do not pay Assessments pursuant to this Judgment.

27. Availability of Supplemental Water. All Replacement and Makeup Water Assessments collected by the Watermaster shall be used to acquire Supplemental Water from MWA. Watermaster shall determine when to request Supplemental Water from MWA and shall determine the amount of Supplemental Water to be requested. MWA shall use its best efforts to acquire as much Supplemental Water as possible in a timely manner. If MWA encounters delays in the acquisition of Supplemental Water which, due to cost increases, results in collected assessment proceeds being insufficient to purchase all Supplemental Water for which the Assessments were made, MWA shall purchase as much water as the proceeds will allow when the water becomes available. If available Supplemental Water is insufficient to meet all Makeup and Replacement Water obligations, Watermaster shall allocate the Supplemental Water for delivery to the Subareas on an equitable and practicable basis pursuant to duly adopted Watermaster rules and regulations, giving preference to: First, Transition Zone Replacement Water Obligations as set forth in Exhibit "G"; Second, Makeup Water Obligations; and Third, other Replacement Water Obligations. MWA may acquire Supplemental Water at any time. MWA shall be entitled to enter into a Storage Agreement with Watermaster to store water MWA acquires prior to being paid to do so by Watermaster. Such water, including such water acquired and stored prior to the date of this Judgment or prior to the entry of

a Storage Agreement, may later be used to satisfy MWA's duty under this paragraph.

28. Use of Replacement Water Assessment Proceeds and Makeup Water Assessment Proceeds. The Proceeds of Replacement Water Assessments and any interest accrued thereon shall only be used for the purchase of Replacement Water for that Subarea from which they were collected. In addition, the proceeds of Replacement Water Assessments collected on account of Production in the Transition Zone, except as provided in Exhibit "G", shall only be used for the purchase of Replacement Water for the Transition Zone, and the proceeds of Replacement Water Assessments collected on account of Production in that portion of the Baja Subarea downstream of the Calico-Newberry fault shall only be used for the purchase of Replacement Water for that portion of the Baja Subarea downstream of the Calico-Newberry fault. The proceeds of Makeup Water Assessments and any interest accrued thereon shall only be used for the purchase of Makeup Water to satisfy the Makeup Obligation for which they are collected.

29. MWA Annual Report to the Watermaster. MWA shall Produce and deliver to Watermaster an Annual written report regarding actions of MWA required by the terms of this Judgment. The report shall contain: 1) a summary of the actions taken by MWA in identifying and assessing Minimal Producers, including a report of Assessments made and collected; 2) a summary of other MWA activities in collecting Assessment on behalf of Watermaster; 3) a report of water purchases and water distribution for the previous Year; 4) actions taken to implement its Regional Water Management Plan, including actions relating to conveyance facilities referred

to in this Judgment. The MWA report will be provided to Watermaster not less than 30 days prior to the Annual Watermaster report to the Court required by this Judgment.

D. SUBAREA ADVISORY COMMITTEES.

30. Authorization. The Producers in each of the five Subareas are hereby authorized and directed to cause committees of Producer representatives to be organized and to act as Subarea Advisory Committees.

31. Composition and Election. Each Subarea Advisory Committee shall consist of five (5) Persons who shall be called advisors. In the election of advisors, every Party shall be entitled to one vote for every acre-foot of Base Annual Production for that Party in that particular Subarea. Parties may cumulate their votes and give one candidate a number of votes equal to the number of advisors to be elected multiplied by the number of votes to which the Party is normally entitled, or distribute the Party's votes on the same principle among as many candidates as the Party thinks fit. In any election of advisors, the candidates receiving the highest number of affirmative votes of the Parties are elected. Elections shall be held upon entry of this Judgment and thereafter every third year. In the event a vacancy arises, a temporary advisor shall be appointed by unanimous decision of the other four advisors to continue in office until the next scheduled election. The California Department of Fish and Game shall serve as a permanent ex-officio member of the Alto and Baja Subarea Advisory Committees. Rules and regulations regarding organization, meetings and other activities shall be at the discretion of the individual

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Subarea Advisory Committees, except that all meetings of the committees shall be open to the public.

32. Compensation. The Subarea Advisory Committee members shall serve without compensation.

33. Powers and Functions. The Subarea Advisory Committee for each Subarea shall act in an advisory capacity only and shall have the duty to study, review and make recommendations on all discretionary determinations made or to be made hereunder by Watermaster which may affect that Subarea.

E. TRANSFERABILITY.

34. Assignment, Transfer, etc. of Rights. In order to further the purposes of this Judgment and Physical Solution, any Base Annual Production Right, or any portion thereof, may be sold, assigned, transferred, licensed or leased pursuant to the rules and procedures set forth in Exhibit "F".

F. MISCELLANEOUS PROVISIONS.

35. Water Quality. Nothing in this Judgment shall be interpreted as relieving any Party of its responsibilities to comply with state or federal laws for the protection of water quality or the provisions of any permits, standards, requirements, or orders promulgated thereunder.

36. Review Procedures. Any action, decision, rule or procedure of Watermaster pursuant to this Judgment shall be subject to review by the Court on its own motion or on timely motion by any Party, as follows:

a. Effective Date of Watermaster Action. Any order, decision or action of Watermaster pursuant to this Judgment on noticed specific agenda items shall be deemed to have occurred

on the date of the order, decision or action.

b. Notice of Motion. Any Party, may, by a regularly noticed motion, petition the Court for review of Watermaster's action or decision pursuant to this Judgment. The motion shall be deemed to be filed when a copy, conformed as filed with the Court, has been delivered to Watermaster together with the service fee established by Watermaster sufficient to cover the cost to photocopy and mail the motion to each Party. Watermaster shall prepare copies and mail a copy of the motion to each Party or its designee according to the official service list which shall be maintained by Watermaster according to Paragraph 37. A Party's obligation to serve notice of a motion upon the Parties is deemed to be satisfied by filing the motion as provided herein. Unless ordered by the Court, any such petition shall not operate to stay the effect of any Watermaster action or decision which is challenged.

c. Time for Motion. A motion to review any Watermaster action or decision shall be filed within ninety (90) days after such Watermaster action or decision, except that motions to review Watermaster Assessments hereunder shall be filed within thirty (30) days of mailing of notice of the Assessment.

d. De Novo Nature of Proceeding. Upon filing of a petition to review Watermaster action, the Watermaster shall notify the Parties of a date when the Court will take evidence and hear argument. The Court's review shall be de novo and the Watermaster decision or action shall have no evidentiary weight in such proceeding.

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e. Decision. The decision of the Court in such proceeding shall be an appealable Supplemental Order in this case. When the same is final, it shall be binding upon Watermaster and the Parties.

f. Payment of Assessments. Payment of Assessments levied by Watermaster hereunder shall be made pursuant to the time schedule in Exhibit "D"; notwithstanding any motion for review of Watermaster actions, decisions, rules or procedures, including review of Watermaster Assessments.

37. Designation of Address for Notice and Service. Each Party shall designate the name and address to be used for purposes of all subsequent notices and service herein, either by its endorsement on the Stipulation for Judgment or by a separate designation to be filed within thirty (30) days after Judgment has been entered. Said designation may be changed from time to time by filing a written notice of such change with Watermaster. Any Party desiring to be relieved of receiving notices of Watermaster activity may file a waiver of notice on a form to be provided by Watermaster. Watermaster shall maintain at all times a current list of Parties to whom notices are to be sent and their addresses for purposes of service. Watermaster shall also maintain a full current list of names and addresses of all Parties or their successors, as filed herein. Copies of such lists shall be available to any Person. If no designation is made, a Party's designee shall be deemed to be, in order of priority: i) the Party's attorney of record; ii) if the Party does not have an attorney of record, the Party itself at the address on the Watermaster list.

38. Service of Documents. Delivery to or service upon any Party by Watermaster, by any other Party, or by the Court, of any document required to be served upon or delivered to a Party under or pursuant to the Judgment shall be deemed made if made by Deposit thereof (or by copy thereof) in the mail, first class, postage prepaid, addressed to the designee of the Party and at the address shown in the latest designation filed by that Party.

39. No Abandonment of Rights. It is in the interest of reasonable beneficial use of the Basin Area and its water supply that no Party be encouraged to take and use more water in any Year than is actually required. Failure to Produce all of the water to which a Party is entitled hereunder shall not, in and of itself, be deemed or constitute an abandonment of such Party's right, in whole or in part.

40. Intervention After Judgment. Any person who is not a Party or successor to a Party and who proposes to Produce water from the Basin Area may seek to become a Party to this Judgment through a Stipulation for Intervention entered into with Watermaster. Watermaster may execute said Stipulation on behalf of the other Parties herein but such Stipulation shall not preclude a Party from opposing such Intervention at the time of the Court hearing thereon. Said Stipulation for Intervention must thereupon be filed with the Court, which will consider an order confirming said intervention following thirty (30) days' notice to the Parties. Thereafter, if approved by the Court, such intervenor shall be a Party bound by this Judgment and entitled to the rights and privileges accorded under the Physical Solution herein.

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41. Recordation of Notice. MWA shall within sixty (60) days following entry of this Judgment record in the Office of the County Recorder of the County of San Bernardino a notice substantially complying with the notice content requirements set forth in Section 2529 of the California Water Code.

42. Judgment Binding on Successors, etc. Subject to specific provisions hereinbefore contained, this Judgment and all provisions thereof are applicable to and binding upon and inure to the benefit of not only the Parties to this action, but as well to their respective heirs, executors, administrators, successors, assigns, lessees, licensees and to the agents, employees and attorneys in fact of any such Persons.

43. Costs. No Party stipulating to this Judgment shall recover any costs or attorneys fees in this proceeding from another stipulating Party.

44. Entry of Judgment. The Clerk shall enter this Judgment.

Dated: JAN 1 0 1996

E. MICHAEL KAISER

E. Michael Kaiser, Judge
Superior Court of the State
of California for the
County of Riverside

EXHIBIT A

MAP OF MOJAVE BASIN AREA

[INDEX MAP AND DETAIL SHEET CONSISTING OF 42 1" = 4,000' SCALE MAPS COVERING THE BASIN AREA; THE MAP IS ON DISPLAY AT THE OFFICE OF THE MOJAVE WATER AGENCY, 22450 HEADQUARTERS, APPLE VALLEY, CA 92307 AND ON FILE WITH THE COURT]

EXHIBIT B

PRODUCTION TABLES

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TABLE B-1: TABLE SHOWING BASE ANNUAL PRODUCTION AND BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN EACH SUBAREA AND FREE PRODUCTION ALLOWANCES FOR EACH SUBAREA FOR THE FIRST FIVE YEARS AFTER ENTRY OF THE INTERLOCUTORY JUDGMENT

TABLE B-2: TABLE SHOWING TOTAL VERIFIED PRODUCTION, BASE ANNUAL PRODUCTION AND RECIRCULATED WATER PRODUCTION FOR AQUACULTURE AND FOR RECREATIONAL LAKES

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
ABSHIRE, DAVID V	24	0.1093	24	22	21	20	19
ANDERSON, ROSS C & BETTY J	34	0.1548	34	32	30	28	27
BAR H MUTUAL WATER COMPANY	53	0.2414	53	50	47	45	42
BELL, CHUCK	494	2.2497	494	469	444	419	395
BURNS, BOBBY J & EVELYN J	1,300	5.9204	1,300	1,235	1,170	1,105	1,040
CASA COLINA FOUNDATION	90	0.4099	90	85	81	76	72
CENTER WATER CO	40	0.1822	40	38	36	34	32
CLUB VIEW PARTNERS	1,276	5.8111	1,276	1,212	1,148	1,084	1,020
CROSS, LAWRENCE E	23	0.1047	23	21	20	19	18
CRYSTAL HILLS WATER COMPANY	194	0.8835	194	184	174	164	155
DAHLQUIST, GEORGE R	594	2.7052	594	564	534	504	475
DELPERDANG, ROBERT H	56	0.2550	56	53	50	47	44
DESERT DAWN MUTUAL WATER COMPANY	15	0.0683	15	14	13	12	12
GAETA, TRINIDAD	512	2.3317	512	486	460	435	409
GAYJIKIAN, SAMUEL & HAZEL	102	0.4645	102	96	91	86	81
GRACETOWN INVESTMENT CO - JETCO PROP FUND	752	3.4247	752	714	676	639	601
GUBLER, HANS	30	0.1366	30	28	27	25	24
HAL-DOR LTD	23	0.1047	23	21	20	19	18
HANDLEY, DON R & MARY ANN	73	0.3325	73	69	65	62	58
HART, MERRILL W	473	2.1541	473	449	425	402	378
HERT, SCOTT	276	1.2569	276	262	248	234	220
HI-GRADE MATERIALS	442	2.0129	442	419	397	375	353
HITCHIN LUCERNE, INC	16	0.0729	16	15	14	13	12
JAMS RANCH	28	0.1275	28	26	25	23	22

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~~03/03/93~~
~~04/10/93~~
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09/25/95

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
JUBILEE MUTUAL WATER COMPANY	142	0.6467	142	134	127	120	113
JUNIPER RIVIERA COUNTY WATER DISTRICT	37	0.1685	37	35	33	31	29
LEE, DOO HWAN	78	0.3552	78	74	70	66	62
LOPEZ, BALTAZAR	385	1.7533	385	365	346	327	308
LUA, ANTONIO	348	1.5848	348	330	313	295	278
LUCERNE VALLEY MUTUAL WATER COMPANY	54	0.2459	54	51	48	45	43
LUCERNE VALLEY PARTNERS	1,213	5.5242	1,213	1,152	1,091	1,031	970
LUCERNE VISTA WATER CO	21	0.0956	21	19	18	17	16
MITSUBISHI CEMENT CORPORATION	1,299	5.9158	1,299	1,234	1,169	1,104	1,039
MONACO INVESTMENT COMPANY	70	0.3188	70	66	63	59	56
MOSS, LAWRENCE W & HELEN J	43	0.1958	43	40	38	36	34
PARK, CHANHO	597	2.7188	597	567	537	507	477
PARK, JEONG, IL & HEA JA	96	0.4372	96	91	86	81	76
PEREZ, EVA	247	1.1249	247	234	222	209	197
PETTIGREW, DAN	1,422	6.4760	1,422	1,350	1,279	1,208	1,137
PETTIGREW, HOWARD L	1,500	6.8312	1,500	1,425	1,350	1,275	1,200
PLUESS-STAUFER CALIFORNIA INC	23	0.1047	23	21	20	19	18
REED, MIKE	58	0.2641	58	55	52	49	46
ROGERS, ROY	1,449	6.5990	1,449	1,376	1,304	1,231	1,159
SAN BERNARDINO CO SERVICE AREA 29	21	0.0956	21	19	18	17	16
SEALS, LAWRENCE	113	0.5146	113	107	101	96	90
SON'S RANCH	140	0.6376	140	133	126	119	112
SOUTHERN CALIFORNIA WATER COMPANY	178	0.8106	178	169	160	151	142
SPECIALTY MINERALS, INC	42	0.1913	42	39	37	35	33

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA	BASE ANNUAL [1] PRODUCTION	BASE ANNUAL [2] PRODUCTION RIGHT	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
PRODUCER	(ACRE-FEET)	(PERCENT)	FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
SPILLMAN, JAMES R & NANCY J	23	0.1047	23	21	20	19	18
STEWART WATER COMPANY	54	0.2459	54	51	48	45	43
STRINGER, W EDWARD	573	2.6095	573	544	515	487	458
THE CUSHENBURY TRUST, C/O SPECIALTY MINERALS, INC	10	0.0455	10	9	9	8	8
TURNER, LOYD & CAROL	77	0.3507	77	73	69	65	61
VISOSKY, JOSEPH F JR	1,120	5.1006	1,120	1,064	1,008	952	896
WEISER, SIDNEY & RAQUEL	90	0.4099	90	85	81	76	72
WILLOW WELLS MUTUAL WATER COMPANY	30	0.1366	30	28	27	25	24

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ESTE SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
MINIMAL PRODUCER POOL	2,000	9.1083	2,000	1,900	1,800	1,700	1,600
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	1,485	6.7629					
ESTE SUBAREA TOTALS =	21,958	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN OBSTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

OBSTE SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT (PERCENT) [2]	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
AEROCHEM, INC	660	5.3645	660	627	594	561	528
BROWN, DOUG & SUE	46	0.3739	46	43	41	39	36
CHAMISAL MUTUAL	96	0.7803	96	91	86	81	76
DAVIS, PAUL	19	0.1544	19	18	17	16	15
DOSSEY, D A	14	0.1138	14	13	12	11	11
MEADOWBROOK DAIRY	2,335	18.9791	2,335	2,218	2,101	1,984	1,868
RESSEGUE, JOHN & BILL	259	2.1052	259	246	233	220	207
SAN BERNARDINO CO SERVICE AREA 70G	110	0.8941	110	104	99	93	88
SAN BERNARDINO CO SERVICE AREA 70L	1,306	10.6153	1,306	1,240	1,175	1,110	1,044
THORESON, ROBERT F & A KATHLEEN	40	0.3251	40	38	36	34	32
TROEGER, RICHARD H	112	0.9103	112	106	100	95	89
VAN DAM BROTHERS	1,860	15.1183	1,860	1,767	1,674	1,581	1,488

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~~01/20/93~~
~~03/03/93~~
~~04/18/93~~
~~04/28/93~~
09/25/95

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN OESTE SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

OESTE SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
MINIMAL PRODUCER POOL	1,500	12.1921	1,500	1,425	1,350	1,275	1,200
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	3,946	32.0735					
OESTE SUBAREA TOTALS =	12,303	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT (PERCENT) [2]	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
ABBOND, EDWARD & GRACE	28	0.0229	28	26	25	23	22
ABBOTT, LEONARD C	284	0.2321	284	269	255	241	227
ADELANTO, CITY OF	1,573	1.2855	1,573	1,494	1,415	1,337	1,258
ADELANTO, CITY OF - GEORGE A F B	3,433	2.8055	3,433	3,261	3,089	2,918	2,746
AGCON, INC	384	0.3138	384	364	345	326	307
APPLE VALLEY COUNTRY CLUB	709	0.5794	709	673	638	602	567
APPLE VALLEY DEVELOPMENT	724	0.5917	724	687	651	615	579
APPLE VALLEY FOOTHILL CO WATER DISTRICT	167	0.1365	167	158	150	141	133
APPLE VALLEY HEIGHTS COUNTY WATER DISTRICT	125	0.1022	125	118	112	106	100
APPLE VALLEY RANCHOS WATER COMPANY	13,022	10.6419	13,022	12,370	11,719	11,068	10,417
APPLE VALLEY RECREATION & PARKS	45	0.0368	45	42	40	38	36
APPLE VALLEY VIEW MUTUAL WATER CO	36	0.0294	36	34	32	30	28
APPLE VALLEY, TOWN OF	298	0.2435	298	283	268	253	238
ARC LAS FLORES	6,331	5.1739	6,331	6,014	5,697	5,381	5,064
BACA, ENRIQUE	74	0.0605	74	70	66	62	59
BALDY MESA WATER DISTRICT	1,495	1.2218	1,495	1,420	1,345	1,270	1,196
BASS, NEWTON T	514	0.4201	514	488	462	436	411
BASTIANON, REMO	77	0.0629	77	73	69	65	61
BASURA, STEVE	25	0.0204	25	23	22	21	20
BEINSCHROTH, A J	90	0.0736	90	85	81	76	72
BOYCE, KENNETH & WILLA	102	0.0834	102	96	91	86	81
BROWN, BOBBY G & VALERIA R	42	0.0343	42	39	37	35	33
BURNS, ULYSSES & ANNIE L	164	0.1340	164	155	147	139	131
CARDOZO, MANUEL & MARIA	909	0.7429	909	863	818	772	727

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
CDFG - MOJAVE NARROWS REGIONAL PARK	2,107	1.7219	2,107	2,001	1,896	1,790	1,685
CDFG - MOJAVE RIVER FISH HATCHERY	20	0.0163	20	19	18	17	16
CLARK, KENNETH R	223	0.1822	223	211	200	189	178
CLEAR VIEW FARMS	501	0.4094	501	475	450	425	400
COPELAND, ET AL (C/O DON W. LITTLE)	175	0.1430	175	166	157	148	140
CRAMER, MARGARET MUIR	280	0.2288	280	266	252	238	224
CUNNINGHAM, WILLIAM	29	0.0237	29	27	26	24	23
DEXTER, CLAIR F	175	0.1430	175	166	157	148	140
DEXTER, J P	515	0.4209	515	489	463	437	412
DIBERNARDO, JOHN	203	0.1659	203	192	182	172	162
DOLCH, ROBERT & JUDY	426	0.3481	426	404	383	362	340
DOMBROWSKI, MICHAEL W & SUSAN M	19	0.0155	19	18	17	16	15
DOWSE, PHILIP	20	0.0163	20	19	18	17	16
EVENSON, EDWIN H & JOYCELAINE	70	0.0572	70	66	63	59	56
FISHER, DOLORES DR	48	0.0392	48	45	43	40	38
FISHER, JEROME	633	0.5173	633	601	569	538	506
FITZWATER, R E	291	0.2378	291	276	261	247	232
GARCIA, SONIA L	288	0.2354	288	273	259	244	230
GOMEZ, CIRIL - LIVING TRUST	330	0.2697	330	313	297	280	264
GREEN ACRES ESTATES	25	0.0204	25	23	22	21	20
GULBRANSON, MERLIN	163	0.1332	163	154	146	138	130
HELENDALE SCHOOL DISTRICT	18	0.0147	18	17	16	15	14
HESPERIA GOLF AND COUNTRY CLUB	678	0.5541	678	644	610	576	542
HESPERIA WATER DISTRICT	12,213	9.9808	12,213	11,602	10,991	10,381	9,770

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
HI-GRADE MATERIALS	149	0.1218	149	141	134	126	119
HODGE, STANLEY W	67	0.0548	67	63	60	56	53
HOLWAY, ROBERT	88	0.0719	88	83	79	74	70
HRUBIK, THOMAS A	3,862	3.1561	3,862	3,668	3,475	3,282	3,089
INDUSTRIAL ASPHALT	109	0.0891	109	103	98	92	87
JESS RANCH WATER COMPANY	7,480	6.1129	7,480	7,106	6,732	6,358	5,984
JOHNSON, LARRY & CARLEAN	82	0.0670	82	77	73	69	65
JOHNSON, RONALD	31	0.0253	31	29	27	26	24
JOHNSTON, HARRIET AND LARRY W	127	0.1038	127	120	114	107	101
KEMPER CAMPBELL RANCH	473	0.3865	473	449	425	402	378
LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT	658	0.5377	658	625	592	559	526
LAWSON, ERNEST & BARBARA	15	0.0123	15	14	13	12	12
LENHERT, RONALD & TONI	37	0.0302	37	35	33	31	29
LEWIS HOMES OF CALIFORNIA	1,693	1.3836	1,693	1,608	1,523	1,439	1,354
LONGMAN, JACK	115	0.0940	115	109	103	97	92
LOUNSBURY, J PETER & CAROLYN	208	0.1700	208	197	187	176	166
LOW, ROBERT	399	0.3261	399	379	359	339	319
LUCKEY, MANLEY J	800	0.6538	800	760	720	680	640
LUTH, KEN	27	0.0221	27	25	24	22	21
MARIANA RANCHOS COUNTY WATER DISTRICT	245	0.2002	245	232	220	208	196
MCCALL, REX	44	0.0360	44	41	39	37	35
MCINNIS, WILLIAM S	30	0.0245	30	28	27	25	24
MITCHELL, ROBIN & JUDITH	36	0.0294	36	34	32	30	28
MURPHY, BERNARD H	25	0.0204	25	23	22	21	20

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
MURPHY, BERNARD TRUST	162	0.1324	162	153	145	137	129
MURPHY, KENNETH	42	0.0343	42	39	37	35	33
MUTUAL FUNDING CORP	101	0.0825	101	95	90	85	80
NAVAJO MUTUAL WATER CO	88	0.0719	88	83	79	74	70
NUNN, DONALD & PEARL	66	0.0539	66	62	59	56	52
O'BRYANT, ROBERT C & BARBARA	107	0.0874	107	101	96	90	85
ORMSBY, HARRY G	386	0.3154	386	366	347	328	308
PALISADES RANCH	824	0.6734	824	782	741	700	659
PARKER, DAVID E	37	0.0302	37	35	33	31	29
PEARL, ALICE	147	0.1201	147	139	132	124	117
PEARSON, DERYL B	22	0.0180	22	20	19	18	17
PERRY, THOMAS A	35	0.0286	35	33	31	29	28
PETTIS TRUST	126	0.1030	126	119	113	107	100
PHENIX PROPERTIES LTD	652	0.5328	652	619	586	554	521
PITTMAN, LEROY W	148	0.1209	148	140	133	125	118
POLICH, LEE & DONNA	65	0.0531	65	61	58	55	52
RANCHERITOS MUTUAL WATER CO	169	0.1381	169	160	152	143	135
RIVERSIDE CEMENT CO - ORO GRANDE PLANT	3,452	2.8211	3,452	3,279	3,106	2,934	2,761
ROGERS, ROY (ORO GRANDE RANCH)	115	0.0940	115	109	103	97	92
RUDMAN, ROBERT T	300	0.2452	300	285	270	255	240
RUE RANCH	30	0.0245	30	28	27	25	24
SAN BERNARDINO CO SERVICE AREA 42	465	0.3800	465	441	418	395	372
SAN BERNARDINO CO SERVICE AREA 64	3,822	3.1234	3,822	3,630	3,439	3,248	3,057
SAN BERNARDINO CO SERVICE AREA 70C	2,346	1.9172	2,346	2,228	2,111	1,994	1,876

~~12/10/92~~
~~01/20/93~~
~~03/02/93~~
~~04/18/93~~
~~04/20/93~~
09/25/95

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA PRODUCER	BASE ANNUAL [1] PRODUCTION (ACRE-FEET)	BASE ANNUAL [2] PRODUCTION RIGHT (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
SAN BERNARDINO CO SERVICE AREA 70J	1,005	0.8213	1,005	954	904	854	804
SAN BERNARDINO CO SERVICE AREA 70L	355	0.2901	355	337	319	301	284
SAN FILIPPO, JOSEPH & SHELLEY	35	0.0286	35	33	31	29	28
SILVER LAKES ASSOCIATION	3,987	3.2583	3,987	3,787	3,588	3,388	3,189
SOUTHDOWN, INC	1,519	1.2414	1,519	1,443	1,367	1,291	1,215
SOUTHERN CALIFORNIA WATER COMPANY	940	0.7682	940	893	846	799	752
SPRING VALLEY LAKE ASSOCIATION	3,056	2.4974	3,056	2,903	2,750	2,597	2,444
SPRING VALLEY LAKE COUNTRY CLUB	977	0.7984	977	928	879	830	781
STORM, RANDALL	62	0.0507	62	58	55	52	49
SUDMEIER, GLENN W	121	0.0989	121	114	108	102	96
SUMMIT VALLEY RANCH	452	0.3694	452	429	406	384	361
TATRO, RICHARD K & SANDRA A	280	0.2288	280	266	252	238	224
TATUM, JAMES B	829	0.6775	829	787	746	704	663
TAYLOR, ALLEN C / HAYMAKER RANCH	456	0.3727	456	433	410	387	364
THOMAS, S DALE	440	0.3596	440	418	396	374	352
THOMAS, WALTER	36	0.0294	36	34	32	30	28
THOMPSON, JAMES A	418	0.3416	418	397	376	355	334
THOMPSON, RODGER	76	0.0621	76	72	68	64	60
THRASHER, GARY	373	0.3048	373	354	335	317	298
THUNDERBIRD COUNTY WATER DISTRICT	118	0.0964	118	112	106	100	94
TURNER, ROBERT	70	0.0572	70	66	63	59	56
VAIL, JOSEPH B & PAULA E	126	0.1030	126	119	113	107	100
VAN BURGER, CARL	710	0.5802	710	674	639	603	568
VAN LEEUWEN FAMILY TRUST	341	0.2787	341	323	306	289	272

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA	BASE ANNUAL [1] PRODUCTION	BASE ANNUAL [2] PRODUCTION RIGHT	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
PRODUCER	(ACRE-FEET)	(PERCENT)	FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
VANNI, MIKE	54	0.0441	54	51	48	45	43
VICTOR VALLEY COMMUNITY COLLEGE DIST	240	0.1961	240	228	216	204	192
VICTOR VALLEY WATER DISTRICT	13,354	10.9133	13,354	12,686	12,018	11,350	10,683
VICTORVILLE, CITY OF	12	0.0098	12	11	10	10	9
VOGLER, ALBERT H	132	0.1079	132	125	118	112	105
WACKEEN, CAESAR	1,635	1.3362	1,635	1,553	1,471	1,389	1,308
WAKULA, JOHN	291	0.2378	291	276	261	247	232
WARD, KEN & BARBARA	65	0.0531	65	61	58	55	52
WEBER, DAVE	80	0.0654	80	76	72	68	64
WEST, CAROLYN & SMITH, RICHARD	24	0.0196	24	22	21	20	19
WEST, HOWARD & SUZY	72	0.0588	72	68	64	61	57
WHITTINGHAM, RICHARD V	15	0.0123	15	14	13	12	12
YEAGER, E L - CONSTRUCTION COMPANY INC	34	0.0278	34	32	30	28	27

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN ALTO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

ALTO SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
MINIMAL PRODUCER POOL	4,000	3.2689	4,000	3,800	3,600	3,400	3,200
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	4,967	4.0592					
ALTO SUBAREA TOTALS =	122,365	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
AGCON, INC	0	0.0000	0	0	0	0	0
AGUAYO, JEANETTE L	212	0.3742	212	201	190	180	169
ATCHISON, TOPEKA, SANTA FE RAILWAY CO	120	0.2118	120	114	108	102	96
AVDEEF, THOMAS	34	0.0600	34	32	30	28	27
AZTEC FARM DEVELOPMENT COMPANY	220	0.3883	220	209	198	187	176
BARNES, FAY - EXECUTOR OF ESTATE OF WAYNE BARNES	243	0.4289	243	230	218	206	194
BROMMER, MARVIN	361	0.6372	361	342	324	306	288
BURNS, RITA J & PAMELA E	16	0.0282	16	15	14	13	12
CHAFA, LARRY R	96	0.1694	96	91	86	81	76
CHOI, YONG IL & JOUNG AE	38	0.0671	38	36	34	32	30
CHRISTISON, JOEL	75	0.1324	75	71	67	63	60
COOK, KWON W	169	0.2983	169	160	152	143	135
DE VRIES, NEIL	3,800	6.7070	3,800	3,610	3,420	3,230	3,040
DESERT COMMUNITY BANK	156	0.2753	156	148	140	132	124
DURAN, FRANK T	50	0.0883	50	47	45	42	40
GAINES, JACK	117	0.2065	117	111	105	99	93
GESIRIECH, WAYNE	121	0.2136	121	114	108	102	96
GORMAN, VIRGIL	138	0.2436	138	131	124	117	110
GRIEDER, RAYMOND H & DORISANNE	30	0.0530	30	28	27	25	24
GRILL, NICHOLAS P & MILLIE D	21	0.0371	21	19	18	17	16
GROEN, CORNELIS	1,043	1.8409	1,043	990	938	886	834
HANIFY, DBA - WHITE BEAR RANCH	152	0.2683	152	144	136	129	121
HARMSEN, JAMES & RUTH ANN	1,522	2.6863	1,522	1,445	1,369	1,293	1,217
HARPER LAKE COMPANY	1,433	2.5293	1,433	1,361	1,289	1,218	1,146

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
HI DESERT MUTUAL WATER CO	34	0.0600	34	32	30	28	27
HILEMAN, KATHERINE	19	0.0335	19	18	17	16	15
HILL, MELVIN	2,335	4.1213	2,335	2,218	2,101	1,984	1,868
HOY, MIKE	632	1.1155	632	600	568	537	505
JORDAN, RAYMOND	460	0.8119	460	437	414	391	368
JUSTICE, CHRIS	421	0.7431	421	399	378	357	336
KING, GENEVIEVE E	69	0.1218	69	65	62	58	55
LEE, SEPOONG ETAL & WOO POONG	77	0.1359	77	73	69	65	61
LEYERLY, GENEVA	65	0.1147	65	61	58	55	52
LEYERLY, RICHARD	862	1.5214	862	818	775	732	689
LUDINGTON, JAMES E & JO ANN	58	0.1024	58	55	52	49	46
LYON, LOUIS & ERIKA	130	0.2295	130	123	117	110	104
MARTIN, LENDELL	14	0.0247	14	13	12	11	11
MCCOLLUM, CHARLES L	347	0.6125	347	329	312	294	277
MEAD, G C	90	0.1589	90	85	81	76	72
MEYERS, LONNIE	27	0.0477	27	25	24	22	21
MITCHELL, CHARLES A	201	0.3548	201	190	180	170	160
MOFFITT, THOMAS R & EDITH I	62	0.1094	62	58	55	52	49
MOST, MILTON W	9,660	17.0500	9,660	9,177	8,694	8,211	7,728
NELSON, MILDRED L	52	0.0918	52	49	46	44	41
NEWBERRY SPRINGS COMPANY, INC	2,489	4.3931	2,489	2,364	2,240	2,115	1,991
OHAI, REYNOLDS & DOROTHY	137	0.2418	137	130	123	116	109
OROPEZA, JOSE M	190	0.3354	190	180	171	161	152
OSTERKAMP, GEROLD	260	0.4589	260	247	234	221	208

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
OWL ROCK PRODUCTS COMPANY	466	0.8225	466	442	419	396	372
PG & E	1,657	2.9246	1,657	1,574	1,491	1,408	1,325
REDDY, BOMMI V & KARUNA V	24	0.0424	24	22	21	20	19
ROWLAND, JAMES & HELEN	22	0.0388	22	20	19	18	17
RUISCH, DALE W	650	1.1473	650	617	585	552	520
SHIRKEY, ALAN G & MARY E	35	0.0618	35	33	31	29	28
SMITH, ROBERT A	43	0.0759	43	40	38	36	34
SOPPELAND, WAYNE	783	1.3820	783	743	704	665	626
SOUTHERN CALIFORNIA WATER COMPANY	11,309	19.9605	11,309	10,743	10,178	9,612	9,047
SPINK, WALTHALL	44	0.0777	44	41	39	37	35
ST CHARLES, DONALD B	609	1.0749	609	578	548	517	487
SUN 'N SKY COUNTRY CLUB	337	0.5948	337	320	303	286	269
TALLAKSON, WILLIAM V	17	0.0300	17	16	15	14	13
TILLEMA, HAROLD	874	1.5426	874	830	786	742	699
VAN DAM, ELDERT & SUSAN	722	1.2743	722	685	649	613	577
VAN LEEUWEN, JOHN	1,922	3.3923	1,922	1,825	1,729	1,633	1,537
VAN VLIET, HENDRIKA	820	1.4473	820	779	738	697	656
VANHOY, LUTHER C	23	0.0406	23	21	20	19	18
VERNOLA, PAT	3,116	5.4998	3,116	2,960	2,804	2,648	2,492
VISSER, ANNIE	91	0.1606	91	86	81	77	72
YANG, YOUNG MO	371	0.6548	371	352	333	315	296
YKEMA HARMSEN DAIRY	1,000	1.7650	1,000	950	900	850	800

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN CENTRO SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

CENTRO SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
MINIMAL PRODUCER POOL	2,000	3.5300	2,000	1,900	1,800	1,700	1,600
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	864	1.5250					
CENTRO SUBAREA TOTALS =	56,657	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA / PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
			FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
AKE, CHARLES J & MARJORIE M	23	0.0333	23	21	20	19	18
ANGERER, ROBERT J & PEGGY	24	0.0347	24	22	21	20	19
ANTELOPE VALLEY DAIRY	5,430	7.8597	5,430	5,158	4,887	4,615	4,344
ARGUELLES, ALFREDO	1,047	1.5155	1,047	994	942	889	837
ATCHISON, TOPEKA, SANTA FE RAILWAY CO	80	0.1158	80	76	72	68	64
BAGLEY, ROY	20	0.0289	20	19	18	17	16
BALDERRAMA, ALFRED & LINDA	250	0.3619	250	237	225	212	200
BALL, DAVID P	81	0.1172	81	76	72	68	64
BARAK, RICHARD	132	0.1911	132	125	118	112	105
BARBER, JAMES B	167	0.2417	167	158	150	141	133
BARSTOW CALICO K O A	24	0.0347	24	22	21	20	19
BAUR, KARL & RITA	26	0.0376	26	24	23	22	20
BEDINGFIELD, LYNDELL & CHARLENE	56	0.0811	56	53	50	47	44
BENTON, PHILIP G	35	0.0507	35	33	31	29	28
BORGOGNO, STEVEN & LILLIAN B	1,844	2.6691	1,844	1,751	1,659	1,567	1,475
BOWMAN, EDWIN L	31	0.0449	31	29	27	26	24
BROWN, RONALD A	1,080	1.5632	1,080	1,026	972	918	864
BROWY, ORVILLE & LOUISE	33	0.0478	33	31	29	28	26
BRUINS, NICHOLAS	29	0.0420	29	27	26	24	23
CALICO LAKES HOMEOWNERS ASSOCIATION	1,031	1.4923	1,031	979	927	876	824
CALIF DEPT OF TRANSPORTATION	71	0.1028	71	67	63	60	56
CAMPBELL, M A & DIANNE	22	0.0318	22	20	19	18	17
CARTER, JOHN THOMAS	746	1.0798	746	708	671	634	596
CDFG - CAMP CADY	14	0.0203	14	13	12	11	11

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
CHANG, TIMOTHY & JANE	18	0.0261	18	17	16	15	14
CHASTAIN, W C	100	0.1447	100	95	90	85	80
CHEYENNE LAKE, INC	122	0.1766	122	115	109	103	97
CHIAO MEI DEVELOPMENT	451	0.6528	451	428	405	383	360
CHO BROTHERS RANCH	758	1.0972	758	720	682	644	606
CHUANG, MARSHAL	70	0.1013	70	66	63	59	56
CONNER, WILLIAM H	25	0.0362	25	23	22	21	20
COOL WATER RANCH	76	0.1100	76	72	68	64	60
CRYSTAL LAKES PROPERTY OWNERS ASSOCIATION	447	0.6470	447	424	402	379	357
DAGGETT COMMUNITY SERVICES DISTRICT	235	0.3402	235	223	211	199	188
DALJO CORPORATION	31	0.0449	31	29	27	26	24
DAVIS, RONALD & DONNA	53	0.0767	53	50	47	45	42
DE JONG, ALAN L	1,648	2.3854	1,648	1,565	1,483	1,400	1,318
DENNISON, QUENTIN D	29	0.0420	29	27	26	24	23
DESERT LAKES CORPORATION - (LAKE DOLORES)	483	0.6991	483	458	434	410	386
DOCIMO, DONALD P & PATRICIA J	23	0.0333	23	21	20	19	18
DONALDSON, JERRY & BEVERLY	90	0.1303	90	85	81	76	72
ELLISON, SUSAN	15	0.0217	15	14	13	12	12
EVKHANIAN, JAMES H	110	0.1592	110	104	99	93	88
FAWCETT, EDWARD C	20	0.0289	20	19	18	17	16
FELIX, ALAN E & CAROL L	36	0.0521	36	34	32	30	28
FERRO, DENNIS & NORMA	32	0.0463	32	30	28	27	25
FRIEND, JOSEPH & DEBORAH	60	0.0868	60	57	54	51	48
FUNDAMENTAL CHRISTIAN ENDEAVOR	285	0.4125	285	270	256	242	228

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA	BASE ANNUAL [1] PRODUCTION	BASE ANNUAL [2] PRODUCTION RIGHT	FREE PRODUCTION ALLOWANCES (ACRE-FEET)				
PRODUCER	(ACRE-FEET)	(PERCENT)	FIRST YEAR	SECOND [3] YEAR	THIRD [3] YEAR	FOURTH [3] YEAR	FIFTH [3] YEAR
GARCIA, DANIEL	23	0.0333	23	21	20	19	18
GOLD, HAROLD	249	0.3604	249	236	224	211	199
GRAVES, CHESTER B	32	0.0463	32	30	28	27	25
HAIGH, WHILLDYN & MARGARET	32	0.0463	32	30	28	27	25
HALL, LARRY	23	0.0333	23	21	20	19	18
HARALIK, BESS & ROBERT	27	0.0391	27	25	24	22	21
HARDESTY, LESLIE E & BECKY J	47	0.0680	47	44	42	39	37
HARESON, NICHOLAS & MARY	30	0.0434	30	28	27	25	24
HARTER FARMS	1,083	1.5676	1,083	1,028	974	920	866
HARTER, JOE & SUE	738	1.0682	738	701	664	627	590
HARTLEY, LONNIE	19	0.0275	19	18	17	16	15
HARVEY, FRANK	38	0.0550	38	36	34	32	30
HENDLEY, RICK & BARBARA	48	0.0695	48	45	43	40	38
HIETT, PATRICIA J	16	0.0232	16	15	14	13	12
HILARIDES, FRANK	1,210	1.7514	1,210	1,149	1,089	1,028	968
HOLLISTER, ROBERT H & RUTH M	44	0.0637	44	41	39	37	35
HONG, PAUL B & MAY	95	0.1375	95	90	85	80	76
HORTON'S CHILDREN'S TRUST	106	0.1534	106	100	95	90	84
HORTON, JOHN MD	183	0.2649	183	173	164	155	146
HOSKING, JOHN W & JEAN	94	0.1361	94	89	84	79	75
HUBBARD, ESTER & MIZUNO, ARLEAN	28	0.0405	28	26	25	23	22
HUNT, RALPH M & LILLIAN F	31	0.0449	31	29	27	26	24
HUTCHISON, WILLIAM O	901	1.3042	901	855	810	765	720
HYATT, JAMES & BRENDA	210	0.3040	210	199	189	178	168

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT (PERCENT) [2]	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
IRVIN, BERTRAND W	29	0.0420	29	27	26	24	23
J V A AIR INC	54	0.0782	54	51	48	45	43
JACKSON, RAY	20	0.0289	20	19	18	17	16
JOHNSON, JAMES R	247	0.3575	247	234	222	209	197
JUSTICE, CHRIS	6	0.0087	6	5	5	5	4
KAPLAN, ABRAHAM M	76	0.1100	76	72	68	64	60
KASNER, ROBERT	1,001	1.4489	1,001	950	900	850	800
KATCHER, AUGUST M & MARCELINE	23	0.0333	23	21	20	19	18
KEMP, ROBERT & ROSE	32	0.0463	32	30	28	27	25
KIEL, MARY	34	0.0492	34	32	30	28	27
KIM, JOON HO	764	1.1059	764	725	687	649	611
KOSHAREK, JOHN & JOANNE	54	0.0782	54	51	48	45	43
LAKE JODIE PROPERTY OWNERS ASSOCIATION	254	0.3677	254	241	228	215	203
LAKE WAIKIKI	98	0.1419	98	93	88	83	78
LAKE WAINANI OWNERS ASSOCIATION	202	0.2924	202	191	181	171	161
LANGLEY, MICHAEL R	20	0.0289	20	19	18	17	16
LAWRENCE, WILLIAM W	45	0.0651	45	42	40	38	36
LEE, MOON & OKBEA	49	0.0709	49	46	44	41	39
LEE, VIN JANG T	630	0.9119	630	598	567	535	504
LESHIN, CONNIE & SOL	1,416	2.0496	1,416	1,345	1,274	1,203	1,132
LESHIN, SOL	1,997	2.8906	1,997	1,897	1,797	1,697	1,597
LEVINE, DR LESLIE	1,637	2.3695	1,637	1,555	1,473	1,391	1,309
LONG, BALLARD	35	0.0507	35	33	31	29	28
M BIRD CONSTRUCTION	41	0.0593	41	38	36	34	32

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
MAHJOUBI, AFSAR S	63	0.0912	63	59	56	53	50
MALIN, LILY	54	0.0782	54	51	48	45	43
MALONEY, JANICE	36	0.0521	36	34	32	30	28
MARCROFT, JAMES A & JOAN	38	0.0550	38	36	34	32	30
MARSHALL, CHARLES	20	0.0289	20	19	18	17	16
MAYBERRY, DONALD J	41	0.0593	41	38	36	34	32
MILBRAT, IRVING	73	0.1057	73	69	65	62	58
MITCHELL, CHARLOTTE	115	0.1665	115	109	103	97	92
MITCHELL, JAMES L & CHERYL A	155	0.2244	155	147	139	131	124
MOORE, WAYNE G & JULIA H	103	0.1491	103	97	92	87	82
MORRIS, KARL	304	0.4400	304	288	273	258	243
MULLIGAN, ROBERT & INEZ	35	0.0507	35	33	31	29	28
NEWBERRY COMMUNITY SERVICE DIST	23	0.0333	23	21	20	19	18
NU VIEW DEVELOPMENT, INC	2,899	4.1962	2,899	2,754	2,609	2,464	2,319
O F D L INC	109	0.1578	109	103	98	92	87
O'KEEFE, SARAH-LEE & JOKE E	50	0.0724	50	47	45	42	40
P & H ENGINEERING & DEV CORP	667	0.9654	667	633	600	566	533
PARKER, GEORGE R	144	0.2084	144	136	129	122	115
PATHFINDER INVESTORS	472	0.6832	472	448	424	401	377
PAYAN, PAUL	32	0.0463	32	30	28	27	25
PERKO, BERT K	132	0.1911	132	125	118	112	105
PITTS, JOE	30	0.0434	30	28	27	25	24
POHL, ANDREAS & CATHLYN	17	0.0246	17	16	15	14	13
POLAND, JOHN R & SANDRA M	92	0.1332	92	87	82	78	73

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
PRICE, ALAN E	37	0.0536	37	35	33	31	29
PRICE, DONALD	42	0.0608	42	39	37	35	33
PUCKHABER, WILLIAM F TRUST	63	0.0912	63	59	56	53	50
PURCIO, THOMAS F & PATRICIA A	80	0.1158	80	76	72	68	64
RANDOLPH, JOAN E	24	0.0347	24	22	21	20	19
REEVES, RICHARD	230	0.3329	230	218	207	195	184
RICE, DANIEL & MARY	121	0.1751	121	114	108	102	96
RICE, HENRY C & DIANA	24	0.0347	24	22	21	20	19
RIEGER, WALTER M	62	0.0897	62	58	55	52	49
RIKUO CORPORATION	1,517	2.1958	1,517	1,441	1,365	1,289	1,213
ROSSI, JAMES L & NAOMI I	614	0.8887	614	583	552	521	491
ROTEX CONSTRUCTION COMPANY	2,529	3.6606	2,529	2,402	2,276	2,149	2,023
SAN BERNARDINO COUNTY BARSTOW - DAGGETT AIRPORT	168	0.2432	168	159	151	142	134
SANTUCCI, ANTONIO & WILSA	30	0.0434	30	28	27	25	24
SCOGGINS, JERRY	105	0.1520	105	99	94	89	84
SHEPPARD, THOMAS & GLORIA	217	0.3141	217	206	195	184	173
SHORT, CHARLES & MARGARET	54	0.0782	54	51	48	45	43
SHORT, JEFF	30	0.0434	30	28	27	25	24
SILVER VALLEY RANCH, INC	109	0.1578	109	103	98	92	87
SMITH, WILLIAM E	19	0.0275	19	18	17	16	15
SNYDER, KRYL K & ROUTH, RICHARD J	64	0.0926	64	60	57	54	51
SOUTHERN CALIFORNIA EDISON CO - AGRICULTURE	5,858	8.4792	5,858	5,565	5,272	4,979	4,686
SOUTHERN CALIFORNIA EDISON CO - INDUSTRIAL	4,565	6.6076	4,565	4,336	4,108	3,880	3,652
SOUTHERN CALIFORNIA GAS COMPANY	98	0.1419	98	93	88	83	78

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
ST ANTONY COPTIC ORTHODOX MONASTERY	130	0.1882	130	123	117	110	104
STEWART, STANLEY & PATRICIA	27	0.0391	27	25	24	22	21
SUGA, TAKEAKI	154	0.2229	154	146	138	130	123
SUNDOWN LAKES, INC	168	0.2432	168	159	151	142	134
SWARTZ, ROBERT & IRENE	50	0.0724	50	47	45	42	40
TAPIE, RAYMOND & MURIEL	18	0.0261	18	17	16	15	14
TAYLOR, TOM	503	0.7281	503	477	452	427	402
THAYER, SHARON	58	0.0840	58	55	52	49	46
THE 160 NEWBERRY RANCH CALIFORNIA, LTD	1,033	1.4952	1,033	981	929	878	826
TRIPLE H PARTNERSHIP	993	1.4373	993	943	893	844	794
UNION PACIFIC RAILROAD COMPANY	249	0.3604	249	236	224	211	199
VAN BASTELAAR, ALPHONSE	78	0.1129	78	74	70	66	62
VAN DIEST, CORNELIUS	934	1.3519	934	887	840	793	747
VAN LEEUWEN, JOHN	1,084	1.5690	1,084	1,029	975	921	867
VANDER DUSSEN, AGNES	1,792	2.5938	1,792	1,702	1,612	1,523	1,433
VAUGHT, ROBERT E & KAREN M	43	0.0622	43	40	38	36	34
VERNOLA, PAT	1,310	1.8962	1,310	1,244	1,179	1,113	1,048
WARD, ERNEST & LAURA	38	0.0550	38	36	34	32	30
WARD, RONNY H	130	0.1882	130	123	117	110	104
WEBER, F R & JUNELL	96	0.1390	96	91	86	81	76
WEBSTER, THOMAS M & PATRICIA J	24	0.0347	24	22	21	20	19
WEIDKNECHT, ARTHUR J & PEGGY A	79	0.1143	79	75	71	67	63
WESTERN HORIZON ASSOCIATES INC	1,188	1.7196	1,188	1,128	1,069	1,009	950
WESTERN ROCK PRODUCTS	31	0.0449	31	29	27	26	24

EXHIBIT B

TABLE B-1

TABLE SHOWING BASE ANNUAL PRODUCTION AND
BASE ANNUAL PRODUCTION RIGHT OF EACH PRODUCER WITHIN BAJA SUBAREA
TOGETHER WITH FREE PRODUCTION ALLOWANCES
FOR FIRST FIVE YEARS OF THE JUDGMENT

BAJA SUBAREA PRODUCER	BASE ANNUAL PRODUCTION [1] (ACRE-FEET)	BASE ANNUAL PRODUCTION RIGHT [2] (PERCENT)	FREE PRODUCTION ALLOWANCES (ACRE-FEET) FIRST YEAR	SECOND YEAR [3]	THIRD YEAR [3]	FOURTH YEAR [3]	FIFTH YEAR [3]
WET SET, INC	129	0.1867	129	122	116	109	103
WITTE, E DANIEL	27	0.0391	27	25	24	22	21
WLSR INC	133	0.1925	133	126	119	113	106
WORSEY, REVAE	29	0.0420	29	27	26	24	23
YARD, BETTY	26	0.0376	26	24	23	22	20
YERMO WATER COMPANY	453	0.6557	453	430	407	385	362
YOUNG, KEITH O - (DESERT TURF)	312	0.4516	312	296	280	265	249
MINIMAL PRODUCER POOL	3,500	5.0661	3,500	3,325	3,150	2,975	2,800
UNIDENTIFIED/UNVERIFIED PRODUCER POOL	320	0.4632					
BAJA SUBAREA TOTALS =	69,087	100					

1 Base Annual Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records, site inspection, land use estimates from 1987 and 1989 aerial photography and responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production Right expressed as a percentage of the Total Base Annual Production.

3 Values based on production ramp down of five percent (5%) per year. Free Production Allowance for the fifth year is equal to eighty percent (80%) of the Base Annual Production.

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
ALTO SUBAREA

PRODUCER	TOTAL WATER [1] PRODUCTION	BASE ANNUAL [2] PRODUCTION	RECIRCULATED [3] WATER
	(ACRE-FEET)		
CDFG - MOJAVE RIVER FISH HATCHERY	10,678	20	10,658
JESS RANCH WATER COMPANY	18,625	7,480	11,145
ALTO SUBAREA TOTALS =	29,303	7,500	21,803

Total Water Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records; James C. Hanson site inspection; land use estimates from 1989 aerial photography; responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production as shown on Table B-1.

3 Amount shown is the difference between the Total Water Production and the Base Annual Production.

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
BAJA SUBAREA

PRODUCER	TOTAL WATER PRODUCTION [1]	BASE ANNUAL PRODUCTION [2]	RECIRCULATED WATER [3]
	(ACRE-FEET)		
BROWY, ORVILLE & LOUISE	210	33	177
CALICO LAKES HOMEOWNERS ASSOCIATION	2,513	1,031	1,482
CDFG - CAMP CADY	102	14	88
CHEYENNE LAKE, INC	638	122	516
CRYSTAL LAKES PROPERTY OWNERS ASSOCIATION	6,575	447	6,128
DESERT LAKES CORPORATION - (LAKE DOLORES)	928	483	445
FUNDAMENTAL CHRISTIAN ENDEAVOR	440	285	155
HORTON'S CHILDREN'S TRUST	1,291	106	1,185
HORTON, JOHN MD	672	183	489
KIEL, MARY	188	34	154
LAKE JODIE PROPERTY OWNERS ASSOCIATION	2,805	254	2,551
LAKE WAIKIKI	400	98	302
LAKE WAINANI OWNERS ASSOCIATION	1,420	202	1,218
LEE, MOON & OKBEA	171	49	122
O F D L INC	434	109	325
RICE, DANIEL & MARY	614	121	493
SCOGGINS, JERRY	922	105	817
SILVER VALLEY RANCH, INC	455	109	346
SMITH, WILLIAM E	153	19	134
SUNDOWN LAKES, INC	1,109	168	941
TAPIE, RAYMOND & MURIEL	108	18	90
THAYER, SHARON	159	58	101
WET SET, INC	441	129	312
WLSR INC	678	133	545

EXHIBIT B
TABLE B-2
TABLE SHOWING TOTAL WATER PRODUCTION
FOR AQUACULTURE AND RECREATIONAL LAKE PURPOSES
BAJA SUBAREA

PRODUCER	TOTAL WATER PRODUCTION [1]	BASE ANNUAL PRODUCTION [2]	RECIRCULATED WATER [3]
	(ACRE-FEET)		
BAJA SUBAREA TOTALS =	23,426	4,310	19,116

1 Total Water Production is the reported maximum year production for each producer for the five year period 1986-1990. These values reflect the maximum production determined by one or more of the following: Southern California Edison records; James C. Hanson site inspection; land use estimates from 1989 aerial photography; responses to special interrogatories. All values are subject to change if additional information is made available, or if any value reported herein is found to be in error.

2 Base Annual Production as shown on Table B-1.

3 Amount shown is the difference between the Total Water Production and the Base Annual Production.

EXHIBIT C

ENGINEERING APPENDIX

CONTENTS

A. ADJUSTMENT OF FREE PRODUCTION ALLOWANCES

B. DETERMINATION OF SURFACE FLOW COMPONENTS

TABLE C-1: MOJAVE BASIN AREA ADJUDICATION SUBAREA HYDROLOGICAL INVENTORY BASED ON LONG-TERM AVERAGE NATURAL WATER SUPPLY AND OUTFLOW AND CURRENT YEAR IMPORTS AND CONSUMPTIVE USE

EXHIBIT C

ENGINEERING APPENDIX

The purpose of this Engineering Appendix is to establish the basis for measurements, calculations and determinations required in the operation of the Physical Solution.

A. Adjustment of Free Production Allowances. In the preparation of the report required by Paragraph 24 (o) of this Judgment, the Watermaster shall take into account all available pertinent hydrologic data and estimates, including at least the factors, or changes in the factors, shown in the attached Table C-1, "MOJAVE BASIN AREA ADJUDICATION SUBAREA HYDROLOGICAL INVENTORY BASED ON LONG-TERM AVERAGE NATURAL WATER SUPPLY AND OUTFLOW AND CURRENT YEAR IMPORTS AND CONSUMPTIVE USE," and changes in storage as determined by well levels, the factors listed in Paragraph 2(a) of Exhibit "H", and other pertinent data. The numbers for each of the factors for each Subarea shown in Table C-1 are Sample Numbers only, and are not intended to be used in determining actual water supply, Consumptive Use and outflow, or Free Production Allowance of the Subareas.

B. Determination of Surface Flow Components. The procedures used to determine the historical surface flow components of the Mojave River at various locations are summarized below.

1. Determination of Surface Flow Components at Lower Narrows. Since the records available for the discharge of the Mojave River at Lower Narrows only provide data on the total amount of surface flow and since Storm Flow occurs during and following periods of rainfall, it was necessary to determine what portion of

total measured surface flow at Lower Narrows was Storm Flow and what portion was Base Flow.

The Parties in reaching the physical solution provided for in the Judgment, used certain procedures to separate the Storm Flow and Base Flow components of the total measured surface flow at Lower Narrows. Hydrographs of the mean daily discharge at Lower Narrows were plotted for the Year under consideration together with corresponding rainfall data obtained from the National Oceanic and Atmospheric Administration (NOAA) for Lake Arrowhead. Hydrographs were also plotted for the combined flow of West Fork Mojave River and Deep Creek which together with the Lake Arrowhead precipitation data served as a guide for interpreting those periods during which Storm Flow was likely to have occurred at Lower Narrows.

Other factors considered included:

* Occurrences of Storm Flow at Barstow and Afton Canyon,
* Precipitation at Victorville and Barstow,
* Consideration of the time of Year and temperature, &
* Shape of hydrographs for Years having similar Base Flow characteristics.

Based on interpretation of all of the foregoing information, the flows occurring on those days during which Storm Flow most likely occurred were "scalped" by projecting an estimated Base Flow Curve through the Storm Flow Period. The Base Flow component of the total monthly flow was then determined as follows:

a. For those periods during which there was obviously no Storm Flow, the entire recorded mean daily flows were assumed to be Base Flow.

b. For the remaining Storm Flow periods, the Base Flow component was taken as the area under the Base Flow Curve, except that for those days within the Storm Flow period when the actual mean daily discharge is less than the amount indicated by the Base Flow Scalping Curves, then the actual recorded amount is used.

2. Determination of Surface Flow Components at Waterman Fault. The total amount of surface flow passing the Waterman Fault (under current riverbed conditions) is considered to be Storm Flow and can be estimated from the Storm Flow passing the USGS gauging station Mojave River at Barstow. The following table was developed to provide a method for estimating flow at Waterman Fault:

Storm Flow At Barstow Gage[1] (Acre-Feet)	Estimated Surface Flow at Waterman Fault (Acre-Feet)
2,000	0
10,000	6,200
20,000	14,300
30,000	22,600
40,000	31,400
50,000	40,500
60,000	49,200
70,000	58,400
80,000	67,800
90,000	76,800
100.000	85,400

[1]From Recorded Flow at USGS Gaging Station Mojave River at Barstow. Relationship is based on single storm events. More than one storm event separated by more than five day of zero flow will be considered as separate storms.

3. Determination of Surface Flow Components at Afton. Records available for the discharge of the Mojave River at Afton, California, provide data on the total mount of surface flow and since storm runoff occurs during and immediately following a major storm event in the watershed area tributary to the Baja Basin below Barstow or in the event of large Storm Flows at Barstow which reach Afton, it was necessary to determine what portion of the total measured surface flow at Afton is Storm Flow and what portion of Base Flow.

The Parties, in reaching the physical solution provided for in the Judgment, used certain procedures to separate the Storm Flow and Base Flow components of the total measured surface flow at Afton. Hydrographs of the mean daily discharge at Afton were plotted for the water Year under consideration. In the absence of Storm Flow, the Base Flow curve at Afton was generally a relatively constant amount. Storm Flows were evidenced by sharp spikes or abrupt departures from the antecedent Base Flow and a fairly rapid return to pre-storm Base Flow Condition. The hydrograph of flows at Barstow served as a guide for identifying those periods during which Storm Flow was likely to have occurred at Afton.

Based on interpretation of all of the foregoing information, the flows occurring on those days during which Storm Flow most likely occurred were "scalped" by projecting an estimated Base Flow Curve through the Storm Flow Period. The Base Flow component of the total monthly flow was then determined as follows:

a. For those periods during which there is obviously no Storm Flow, the entire recorded mean daily flows were assumed to be Base Flow.

b. For the remaining Storm Flow periods, the Base Flow component was taken as the area under the Base Flow Curve except that for those days within the Storm Flow period when the actual mean daily discharge was less than the amount indicated by the Base Flow Scalping Curves, then the actual recorded amount was used.

4. Engineers' Work Papers. These procedures are reflected in the Work Papers of the Engineers, copies of which are filed with the Watermaster.

TABLE C-1
Mojave Basin Area Adjudication
Subarea Hydrological Inventory Based On
Long-Term Average Natural Water Supply and Outflow
and Current Year Imports and Consumptive Use
(All Amounts in Acre-Feet)

	Este	Oeste	Alto	Centro	Baja	Basin Totals
WATER SUPPLY						
Surface Water Inflow						
Gaged	0	0	65,000	0	0	65,000
Ungaged	1,700	1,500	3,000	37,300 [1]	14,300 [2]	6,500 [3]
Subsurface Inflow	0	0	1,000	2,000	1,200	0 [4]
Deep Percolation of Precipitation	0	0	3,500	0	100	3,600
Imports						
Lake Arrowhead CSD	0	0	1,500	0	0	1,500
Big Bear ARWWA	2,000	0	0	0	0	2,000
TOTAL	3,700	1,500	74,000	39,300	15,600	78,600
CONSUMPTIVE USE AND OUTFLOW						
Surface Water Outflow						
Gaged	0	0	0	0	8,200	8,200
Ungaged	0	0	37,300 [1]	14,000 [5]	0	0
Subsurface Outflow	200	800	2,000	1,200	0	0
Consumptive Use						
Agriculture	6,800	2,900	16,300	20,300	30,200	76,500
Urban	1,900	1,200	36,300	9,500	9,700	58,600
Phreatophytes	0	0	5,100	900	1,500	7,500 [6]
Exports	0	0	0	0	0	0
TOTAL	8,900	4,900	97,000	45,900	49,600	150,800
Surplus / (Deficit)	(5,200)	(3,400)	(23,000)	(6,600)	(34,000)	(72,200)
Total Estimated Production (Current Year) [7]	15,700	7,600	98,900	46,500	54,300	223,000
PRODUCTION SAFE YIELD (Current Year) [7]	10,500	4,200	75,900	39,900	20,300	150,800

SAMPLE CALCULATIONS

[1] Estimated from reported flows at USGS gaging station, Mojave River at Victorville Narrows.

[2] Includes 14,000 acre-feet of Mojave River surface flow across the Waterman Fault estimated from reported flows at USGS gaging station, Mojave River at Barstow, and 300 acre-feet of local surface inflow from Kane Wash.

[3] Represents the sum of Este (1,700 af), Oeste (1,500 af), Alto (3,000 af) and Baja (300 af from Kane Wash).

[4] Inter subarea subsurface flows do not accrue to the total basin water supply.

[5] Estimated from reported flows at USGS gaging station, Mojave River at Barstow.

[6] Estimated by Bookman-Edmonston.

[7] For purposes of this Table, the current year is 1990.

EXHIBIT D

TIME SCHEDULES

EXHIBIT D

TIME SCHEDULES

1. Prior Year Report. Annually not later than February 1 Watermaster shall provide to each Party a report covering the prior Year and setting forth at least the following:

a. Each Producer's Replacement Water Assessment, including any surcharges, based on rates applicable during the prior Year.

b. Each Producer's Makeup Water Assessment, based on rates applicable during the prior water Year.

2. MWA Supplemental Water Rates. Annually, not later than December 1, MWA shall set the rates per acre foot to be charged for Supplemental Water for the following Year, and shall project the rates for the following two Years.

3. Budget and Assessment Rates. Annually, not later than February 1, Watermaster shall provide to all Parties its proposal for its Administrative Budget, Administrative Assessment Rates, Replacement Water Rates, and Makeup Water Rates for the next ensuing Year and its rate projections for the next two (2) years. No later than March 1 of each Year, the Watermaster shall hold a public hearing to receive comments from Parties as to its proposal. Not later than April 1 of each Year, Watermaster shall adopt its final Budget and assessment rates for the next ensuing Year, and shall notify all Parties of its final Budget and Assessments rates within fifteen (15) days of adoption.

4. Free Production Allowance Adjustment. In any Year that Watermaster prepares a report pursuant to Paragraph 24 (o) of this Judgment that includes a recommendation for an adjustment of a Free

Production Allowance, Watermaster shall notify all Parties as to its recommendation not later than February 1, shall hold a public hearing thereon not later than March 1, and shall submit any such recommendation, which may be revised pursuant to the public hearing, to the Court not later than April 1.

5. Payment of Administrative Assessments and Biological Resource Assessments. Each Producer shall submit quarterly along with the Production report required by Paragraph 24 (p) an Administrative Assessment payment in an amount equal to the current Year Administrative Assessment Rate multiplied times the acre-feet of water Produced during the quarter and a Biological Resource Assessment payment in an amount equal to the current Year Biological Resource Assessment Rate multiplied times the acre-feet of water Produced during the quarter.

6. Payment of Replacement Water Assessments and Makeup Water Assessments. Replacement Water Assessments and Makeup Water Assessments for the prior Year shall be due and payable on July 1.

7. Delinquency of Assessments. Any assessment payable pursuant to this Judgment shall be deemed delinquent: i) if paid in Person, if not paid within five (5) days of the date due; ii) if paid by electronic funds transfer, if not paid within three (3) banking days of the date due; or iii) if paid by any other means, if not paid within ten (10) days of the date due. "Payment" shall occur when good and sufficient funds have been received by the Watermaster. Any assessment shall also be deemed delinquent in the event that any attempted payment is by funds that are not good and sufficient.

EXHIBIT E

LIST OF PRODUCERS AND THEIR DESIGNEES

EXHIBIT E

PRODUCER	DESIGNEE
ABBOND, EDWARD & GRACE	Same
ABBOTT, LEONARD C	Therese E. Parker, Esq.
ABSHIRE, DAVID V	Same
ADELANTO, CITY OF	Michael B. Jackson, Esq.
ADELANTO, CITY OF/GEORGE AFB	
AEROCHEM, INC	James Heiser, Esq.
AGCON, INC	Robert E. Hove
AGCON, INC.	Robert E. Hove
AGUAYO, JEANETTE L.	Same
AKE, CHARLES J & MARJORIE M	Same
ANDERSON, ROSS C & BETTY J	Same
ANGERER, ROBERT J & PEGGY	Same
ANTELOPE VALLEY DAIRY	Dick Van Dam
APPLE VALLEY COUNTRY CLUB	Terry Caldwell, Esq.
APPLE VALLEY DEVELOPMENT	Same
APPLE VALLEY FOOTHILL CO WATER	Doreen Ryssel
APPLE VALLEY HEIGHTS CO. WATER	Elizabeth Hanna, Esq.
APPLE VALLEY RANCHOS WATER	Fredric Fudacz, Esq.
APPLE VALLEY REC. & PARKS	Elizabeth Hanna, Esq.
APPLE VALLEY VIEW MUTUAL WATER CO.	Joseph Saltmeris, Esq.
APPLE VALLEY, TOWN OF	Sandra Dunn, Esq.
ARC LAS FLORES	William De Wolfe, Esq.
ARGUELLES, ALFREDO	Therese Parker, Esq.
ATCHISON, TOPEKA, SANTA FE	Curtis Ballantyne, Esq.
ATCHISON, TOPEKA, SANTA FE	Curtis Ballantyne, Esq.
AVDEEF, THOMAS & LUCILLE	Same
AZTEC FARM DEVELOPMENT CO	Al Jackson
BACA, ENRIQUE	Same
BAGLEY, ROY	Same
BALDERRAMA, ALFRED & LINDA	Same
BALDY MESA WATER DISTRICT	William Smillie

PRODUCER	DESIGNEE
BALL, DAVID P	Same
BAR H MUTUAL WATER COMPANY	Paul Nelson, President
BARAK, RICHARD	Therese Parker, Esq.
BARBER, JAMES B	Same
BARNES, FAY	Kirtland Mahlum, Esq.
BARSTOW CALICO K O A	Robert L. Moore
BASS, NEWTON T	Barbara Davisson, Business Manager
BASTIANON, REMO	Same
BASURA, STEVE	Same
BAUR, KARL & RITA	Same
BEDINGFIELD, LYNDELL&CHARLENE	Same
BEINSCHROTH, A J	Same
BELL, CHUCK	Therese Parker, Esq.
BENTON, PHILIP G	Same
BORGOGNO, STEVEN & LILLIAN	Same
BOWMAN, EDWIN L	Same
BOYCE, KENNETH & WILLA	Same
BROMMER, MARVIN	Same
BROWN, BOBBY G & VALERIA R	Same
BROWN, DOUG & SUE	Same
BROWN, RONALD A	Same
BROWY, ORVILLE & LOUISE	Same
BRUINS, NICHOLAS	Same
BURNS, BOBBY J & EVELYN J	Therese Parker, Esq.
BURNS, RITA J & PAMELA E	Same
BURNS, ANNIE L	Same
CALICO LAKES HOMEOWNERS	Billy Wyckoff
CALIF DEPT OF TRANSPORTATION	Alexander De Vorkin, Esq.
CAMPBELL, M A & DIANNE	Same
CARDOZO, MANUEL & MARIA	Robert Dougherty, Esq.
CARTER, JOHN THOMAS	Therese Parker, Esq.
CASA COLINA FOUNDATION	Charles E. Schwartz
CDFG - CAMP CADY	Marilyn Levin, Esq.

PRODUCER	DESIGNEE
CDFG - MOJAVE NARROWS REG.	Marilyn Levin, Esq.
CDFG - MOJAVE RIVER FISH	Marilyn Levin, Esq.
CENTER WATER CO	Morgan Daniels
CHAFA, LARRY R	Same
CHAMISAL MUTUAL	Earl D. McCool
CHANG, TIMOTHY & JANE	Same
CHASTAIN, W C	Same
CHEYENNE LAKE, INC	Michael Hayes
CHIAO MEI DEVELOPMENT	Maple Sia
CHO BROTHERS RANCH	Chung Cho Gong
CHOI, YONG IL & JOUNG AE	Same
CHRISTISON, JOEL	Same
CHUANG, MARSHAL	Therese Parker, Esq.
CLARK, KENNETH R	Same
CLEAR VIEW FARMS	Terry Caldwell, Esq.
CLUB VIEW PARTNERS	Manoucher Sarbaz
CONNER, WILLIAM H	Same
COOK, KWON W	Same
COOL WATER RANCH	Paul Henderson, Esq.
COPELAND, ETAL	Don W. Little
CRAMER, MARGARET MUIR	Terry Caldwell, Esq.
CROSS, LAWRENCE E & SHARON I	Same
CRYSTAL HILLS WATER COMPANY	Same
CRYSTAL LAKES PROPERTY OWNERS	Russell Khouri
CUNNINGHAM, WILLIAM	Same
DAGGETT COMMUNITY SERVICES	Lawrence Alf, CSD Chairman
DAHLQUIST, GEORGE R	Therese Parker, Esq.
DALJO CORPORATION	George Rubsch
DAVIS, Paul	Same
DAVIS, RONALD & DONNA	Same
DEJONG, ALAN L	Therese Parker, Esq.
DELPERDANG, ROBERT H	Same
DENNISON, QUENTIN c/o Clegg, Frizell & Joke	Same

PRODUCER	DESIGNEE
DESERT DAWN MUTUAL WATER COMPANY	Same
DESERT LAKES CORPORATION - (LAKE DOLORES)	Terry Christianson
DESERT COMMUNITY BANK	Same
DEVRIES, NEIL	Robert Dougherty, Esq.
DEXTER, CLAIR F	Same
DEXTER, J P	Same
DIBERNARDO, JOHN	Same
DOCIMO, DONALD P & PATRICIA J	Terry Caldwell, Esq.
DOLCH, ROBERT & JUDY	Same
DOMBROWSKI, MICHAEL W & SUSAN M	Same
DONALDSON, JERRY & BEVERLY	Same
DOSSEY, D A	Same
DOWSE, PHILIP	Same
DURAN, FRANK T	Therese Parker, Esq.
ELLISON, SUSAN	Same
EVENSON, EDWIN H & JOYCELAINE	Same
EVKHANIAN, JAMES H & PHYLLIA	Same
FAWCETT, EDWARD C	Same
FELIX, ALAN E & CAROL L	Same
FERRO, DENNIS & NORMA	Same
FISHER, DR DOLORES	Same
FISHER, JEROME	Same
FITZWATER, R E	Robert Dougherty, Esq.
FRIEND, JOSEPH & DEBORAH	Same
FUNDAMENTAL CHRISTIAN ENDEAVOR	Betty Brock
GAETA, TRINIDAD C/O BLUE BEAD FARMS	Therese Parker, Esq.
GAINES, JACK & MARY	Same
GARCIA, DANIEL	Same
GARCIA, SONIA L	Same
GAYJIKIAN, SAMUEL & HAZEL	Same
GESIRIECH, WAYNE	Therese Parker, Esq.
GILBERT, HERBERT & BERNICE	Same
GOLD, HAROLD	Therese Parker, Esq.

PRODUCER	DESIGNEE
GOMEZ, CIRIL - LIVING TRUST	Therese Parker, Esq.
GORMAN, VIRGIL	Robert Dougherty, Esq.
GRACETOWN INVESTMENT CO - JETCO PROP FUND	Same
GRAVES, CHESTER B	Same
GREEN ACRES ESTATES	Susan Zutavern
GRIEDER, RAYMOND H & DORISANNE	Same
GRILL, NICHOLAS P & MILLIE D	Therese Parker, Esq.
GROEN, CORNELIUS	Robert Dougherty, Esq.
GUBLER, HANS	Same
GULBRANSON, MERLIN	Therese Parker, Esq.
HAIGH, WHILLDYN & MARGARET	Same
HAL-DOR LTD	Russ Jones, Owner
HALL, LARRY	Same
HANDLEY, DON R & MARY ANN	Same
HANIFY, DBA - WHITE BEAR RANCH	Same
HARALIK, BESS & ROBERT	Same
HARDESTY, LESLIE E & BECKY J	Same
HARESON, NICHOLAS & MARY	Same
HARPER LAKE CO;UC OPERATING/HARPER DRY LAKE	David J. Cooper, Esq.
HART, MERRILL W	Same
HARTER FARMS	Richard Slivikin, Esq.
HARTER, JOE & SUE	Richard Slivikin, Esq.
HARTLEY, LONNIE	Same
HARVEY, FRANK	Same
HELENDALE SCHOOL DISTRICT	Patricia Bristol
HENDLEY, RICK & BARBARA	Same
HERT, SCOTT	Therese Parker, Esq.
HESPERIA GOLF AND COUNTRY CLUB	Michael Davis, Esq.
HESPERIA WATER DISTRICT	James Markman, Esq.
HI DESERT MUTUAL WATER CO	Stanley Derryberry
HI-GRADE MATERIALS	Robert E. Hove
HI-GRADE MATERIALS CO.	Robert E. Hove
HIETT, HARRY L & PATRICIA J	Same

PRODUCER	DESIGNEE
HILARIDES, FRANK	Same
HILEMAN, KATHERINE	Same
HILL, MELVIN	Therese Parker, Esq.
HITCHIN LUCERNE, INC	Same
HODGE, STANLEY W	Same
HOLLISTER, ROBERT H & RUTH M	Same
HOLWAY, ROBERT	Same
HONG, PAUL B & MAY	Same
HORTON'S CHILDREN'S TRUST	John W. Horton, M.D.
HORTON, JOHN MD	Same
HOSKING, JOHN W & JEAN	Same
HOY, MIKE	Therese Parker, Esq.
HRUBIK, THOMAS A	Dan McKinney, Esq.
HUBBARD, ESTER & MIZUNO, ARLEAN	Same
HUNT, RALPH M & LILLIAN F	Same
HUTCHISON, WILLIAM O	Same
HYATT, JAMES & BRENDA	Same
INDUSTRIAL ASPHALT	Martha Guy, Esq.
IRVIN, BERTRAND W	Same
JACKSON, RAY	Same
JAMS RANCH	Melvin Finklestein
JESS RANCH WATER COMPANY	Calvin House, Esq.
JOHNSON, JAMES R	Same
JOHNSON, LARRY & CARLEAN	Same
JOHNSON, RONALD	Same
JOHNSTON, HARRIET AND LARRY W	Same
JORDAN, RAYMOND	Same
JUBILEE MUTUAL WATER COMPANY	Ray Clark
JUNIPER RIVIERA COUNTY WATER DISTRICT	William Smillie
JUSTICE, CHRIS	Same
JUSTICE, CHRIS	Same
J V A AIR INC	Jim Anders
KAPLAN, ABRAHAM M	Same

PRODUCER	DESIGNEE
KASNER, ROBERT	Same
KATCHER, AUGUST M & MARCELINE	Same
KEMP, ROBERT & ROSE	Same
KEMPER CAMPBELL RANCH	Steve Abbott
KIEL, MARY	Same
KIM, JOON HO	Same
KING, GENEVIEVE E	Same
KOSHAREK, JOHN & JOANN	Same
LAKE ARROWHEAD COMMUNITY SERVICES DISTRICT	Steve Abbott, Esq.
LAKE JODIE PROPERTY OWNERS ASSOCIATION	Same
LAKE WAIKIKI	Virginia Cahill, Esq.
LAKE WAINANI OWNERS ASSOCIATION	Same
LANGLEY, MICHAEL R & SHARON	Same
LAWRENCE, WILLIAM W	Same
LAWSON, ERNEST & BARBARA	Same
LEE, DOO HWAN	Same
LEE, MOON & OKBEA	Same
LEE, SEPOONG ETAL & WOO POONG	Same
LEE PHD, VIN JANG T C/O ARCHIBEK, ERIC&SANDI	Same
LENHERT, RONALD & TONI	Same
LESHIN, CONNIE & SOL	Same
LESHIN, SOL	Same
LEVINE, DR LESLIE	Therese Parker, Esq.
LEWIS HOMES OF CALIFORNIA	Kenneth P. Corhan, Esq.
LEYERLY, GENEVA	Robert Dougherty, Esq.
LEYERLY, RICHARD	Robert Dougherty, Esq.
LINT, GORDON	Same
LONG, BALLARD	Same
LONGMAN, JACK	Same
LOPEZ, BALTAZAR	Same
LOUNSBURY, J PETER & CAROLYN	Therese Parker, Esq.
LOW, ROBERT	Same
LUA, ANTONIO	Same

PRODUCER	DESIGNEE
LUCERNE VALLEY MUTUAL WATER COMPANY	Alice Feese
LUCERNE VALLEY PARTNERS	Manoucher Sarbaz
LUCERNE VISTA WATER CO	Thomas Stavros, Director
LUCKEY, MANLEY J	Terry Caldwell, Esq.
LUDINGTON, JAMES E & JO ANN	Same
LUTH, KEN	Therese Parker, Esq.
LYON, LOUIS & ERIKA	Same
MAHJOUBI, AFSAR S	Same
MALIN, LILY	Same
MALONEY, JANICE	Same
MARCROFT, JAMES A & JOAN	Same
MARIANA RANCHOS COUNTY WATER DISTRICT	Gary Shelton
MARSHALL, CHARLES	Same
MARTIN, LENDELL	Same
MAYBERRY, DONALD J & SANDRA D	Same
M BIRD CONSTRUCTION	Same
MCCALL, REX	Same
MCCOLLUM, CHARLES L	Same
MCINNIS, WILLIAM S	Same
MEAD, G C	Therese Parker, Esq.
MEADOWBROOK DAIRY	Same
MEYERS, LONNIE	Same
MILBRAT, IRVING & DIXIE	Same
MITCHELL, CHARLES A	Same
MITCHELL, CHARLOTTE	Same
MITCHELL, JAMES L & CHERYL A	Same
MITCHELL, ROBIN & JUDITH	Same
MITSUBISHI CEMENT CORPORATION	Michael Davis, Esq.
MOFFITT, THOMAS R & EDITH I	Same
MONACO INVESTMENT COMPANY	Manoucher Sarbaz
MOORE, WAYNE G & JULIA H	Same
MORRIS, JULIA V	Same
MOSS, LAWRENCE W & HELEN J	Same

PRODUCER	DESIGNEE
MOST, MILTON W	Therese Parker, Esq.
MULLIGAN, ROBERT & INEZ	Same
MURPHY, BERNARD H	Same
MURPHY, BERNARD TRUST	Same
MURPHY, KENNETH	Same
MUTUAL FUNDING CORP	Ron Yee-Dong, President
NAVAJO MUTUAL WATER CO	James Hanson
NELSON, MILDRED L	Same
NEWBERRY COMMUNITY SERVICE DIST	Vicki Morris
NEWBERRY SPRINGS COMPANY	Ed Dygert, Esq.
NUNN, DONALD & PEARL	Paul Henderson, Esq.
NU VIEW DEVELOPMENT, INC	Richard Slivkin, Esq.
O'BRYANT, ROBERT C & BARBARA	Same
O F D L INC	Virginia Cahill, Esq.
OHAI, REYNOLDS & DOROTHY	Same
O'KEEFE, SARAH-LEE & JOKE E	Same
ORMSBY, HARRY G	Same
OROPEZA, JOSE M	Same
OSTERKAMP, GEROLD	Robert Dougherty, Esq.
OWL ROCK PRODUCTS COMPANY	Vince Dommarito, Area Manager
P & H ENGINEERING & DEV CORP	Same
PALISADES RANCH	Robert Dougherty, Esq.
PARK, CHANHO	Same
PARK, HEA JA & JEONG IL	Same
PARKER, DAVID E	Same
PARKER, GEORGE R	Therese Parker, Esq.
PATHFINDER INVESTORS	Same
PAYAN, PAUL	Same
PEARL, ALICE	Same
BORUFF, PAUL & LINDA; PEARSON, DERYL B	Same
PEREZ, EVA	Therese Parker, Esq.
PERKO, BERT K	Same
PERRY, THOMAS A	Same

PRODUCER	DESIGNEE
PETTIGREW, DAN	Therese Parker, Esq.
PETTIGREW, HOWARD L	Therese Parker, Esq.
PETTIS FAMILY TRUST	Therese Parker, Esq.
P G & E	Robert Rickett, Esq.
PHENIX PROPERTIES LTD	Elizabeth Taylor, Manager
PITTMAN, LEROY W	Same
PITTS, JOE & STELLA	Same
PLUESS-STAUFER CALIFORNIA INC	David Aladjem, Esq.
POHL, ANDREAS & CATHLYN	Same
POLAND, JOHN R & SANDRA M	Same
POLICH, LEE & DONNA	Same
PRICE, ALAN E	Same
PRICE, DONALD & RUTH	Same
PUCKHABER TRUST, WILLIAM F	Same
PURCIO, THOMAS F & PATRICIA A	Same
RANCHERITOS MUTUAL WATER CO	Same
RANDOLPH, JOAN E	Therese Parker, Esq.
REDDY, BOMMI V & KARUNA V	Same
REED, MIKE	Same
REEVES, RICHARD	Same
RESSEQUE, JOHN & BILL	Same
RICE, DANIEL & MARY	Same
RICE, HENRY C & DIANA	Same
RIEGER, WALTER M	Same
RIKUO CORPORATION	Joseph Deering, Jr., Esq.
RIVERSIDE CEMENT CO - ORO GRANDE PLANT	Warren P. Felger, Esq.
ROGERS, ROY	Terry Caldwell, Esq.
ROGERS, ROY (ORO GRANDE RANCH)	Terry Caldwell, Esq.
ROSSI, JAMES L & NAOMI I	Same
ROTEX CONSTRUCTION COMPANY	Yong Cho
ROWLAND, JAMES & HELEN	Same
RUDMAN, ROBERT T	Terry Caldwell, Esq.
RUE RANCH	Joe Zack Feltz, President

PRODUCER	DESIGNEE
RUISCH, DALE W	Same
SAN BERNARDINO CSA #29	William Smillie
SAN BERNARDINO CSA #42	William Smillie
SAN BERNARDINO CSA #64	William Smillie
SAN BERNARDINO CSA #70C	William Smillie
SAN BERNARDINO CSA #70G	William Smillie
SAN BERNARDINO CSA #70J	William Smillie
SAN BERNARDINO CSA #70L	William Smillie
SAN BERNARDINO CO. BARSTOW-DAGGETT AIRPORT	William Smillie
SAN FILIPPO, JOSEPH & SHELLEY	Same
SANTUCCI, ANTONIO & WILSA	Same
SAN BERNARDINO CSA #70L	William Smillie
SCOGGINS, JERRY	Same
SEALS, LAWRENCE	Same
SHEPPARD, THOMAS & GLORIA	Same
SHIRKEY, ALAN G & MARY E	Same
SHORT, CHARLES & MARGARET	Therese Parker, Esq.
SHORT, JEFF	Same
SILVER LAKES ASSOCIATION	Michael Davis, Esq.
SILVER VALLEY RANCH, INC	Richard A. Ruben, Esq.
SMITH, ROBERT A	Therese Parker, Esq.
SMITH, WILLIAM E	Same
SNYDER, KRYL K & ROUTH, RICHARD J	Terry Caldwell, Esq.
SON'S RANCH	Therese Parker, Esq.
SOPPELAND, WAYNE	Terry Caldwell, Esq.
SOUTHERN CALIFORNIA EDISON CO - AGRICULTURE	Douglas Ditonto, Esq.
SOUTHERN CALIFORNIA EDISON CO - INDUSTRIAL	Douglas Ditonto, Esq.
SOUTHERN CALIFORNIA GAS COMPANY	Jane Goichman, Esq.
SOUTHERN CALIFORNIA WATER CO	Arthur Kidman, Esq.
SOUTHDOWN, INC.	Steve Abbott, Esq.
SOUTHERN CALIFORNIA WATER CO	Arthur Kidman, Esq.
SOUTHERN CALIFORNIA WATER CO	Arthur Kidman, Esq.
SPECIALTY MINERALS, INC	Michael Davis

PRODUCER	DESIGNEE
SPILLMAN, JAMES R & NANCY J	Same
SPINK, WALTHALL	Same
SPRING VALLEY LAKE ASSOCIATION	Thomas Bunn, III, Esq.
SPRING VALLEY LAKE COUNTRY CLUB	Richard Opper, Esq.
ST ANTHONY COPTIC ORTHODOX MONASTERY	Mike Stiller, Esq/Karas (Bishop)
DONALD B ST CHARLES, ATTY AT LAW	Same
STEWART WATER COMPANY	Isidro Baca
STEWART, STANLEY & PATRICIA	Therese Parker, Esq.
STORM, RANDALL	Same
STRINGER, W EDWARD	Therese Parker, Esq.
SUDMEIER, GLENN W	Same
SUGA, TAKEAKI	Same
SUMMIT VALLEY RANCH	Michael Davis, Esq.
SUNDOWN LAKES, INC	Thomas Hargraves
SUN & SKY COUNTRY CLUB	Everett Hughes
SWARTZ, ROBERT & IRENE	Same
TALLAKSON, WILLIAM V & ELIZABETH A	Same
TAPIE, RAYMOND & MURIEL	Same
TATUM, JAMES B	Same
TATRO, RICHARD K. & SANDRA A.	Same
TAYLOR, ALLEN C / HAYMAKER RANCH	Same
TAYLOR, TOM	Therese Parker, Esq.
THAYER, SHARON	Same
THE 160 NEWBERRY RANCH CALIFORNIA, LTD	Therese Parker, Esq.
THE CUSHENBURY TRUST, C/O SPECIALTY MINERALS	Michael Davis, Esq.
THOMAS FARMS	Therese Parker, Esq.
THOMAS, WALTER	Same
THOMPSON, JAMES A	Therese Parker, Esq.
THOMPSON, RODGER	Same
THORESON, ROBERT F & A KATHLEEN	Same
THRASHER, GARY	Same
THUNDERBIRD COUNTY WATER DISTRICT	Peter Taylor, General Manager
TILLEMA, HAROLD	Same

PRODUCER	DESIGNEE
TRIPLE H PARTNERSHIP	Ronald A. Van Blarcom, Esq.
TROEGER FAMILY TRUST, RICHARD H	Rollin N. Rauschl, Esq.
TURNER, LOYD & CAROL	Same
TURNER, ROBERT	Same
UNION PACIFIC RAILROAD COMPANY	Jim Barclay
VAIL, JOSEPH B & PAULA E	Same
VAN BASTELAAR, ALPHONSE	Same
VAN DAM BROTHERS	Same
VAN DAM, ELDERT & SUSAN	Same
VAN DIEST, CORNELIUS	Therese Parker, Esq.
VAN LEEUWEN FAMILY TRUST	Therese Parker, Esq.
VAN LEEUWEN, JOHN	Robert Dougherty, Esq.
VAN VLIET, HENDRIKA	Robert Dougherty, Esq.
VANDER DUSSEN, ED	Steve Tyler, Esq.
VANHOY, LUTHER C & ROBERTA L	Same
VANNI, MIKE	Tom O'Donnell
VAN BURGER, CARL c\o CVB INVESTMENT	Same
VAUGHT, ROBERT E. & KAREN M.	Same
VERNOLA, PAT	Robert Dougherty, Esq.
VERNOLA, PAT	Robert Dougherty, Esq.
VICTOR VALLEY COMMUNITY COLLEGE DIST	W. W. Miller, Esq.
VICTOR VALLEY WATER DISTRICT	Thomas McGuire, Esq.
VICTORVILLE, CITY OF	Thomas McGuire, Esq.
VISOSKY JR, JOSEPH F	Same
VISSER, ANNIE	Same
VOGLER, ALBERT H	Therese Parker, Esq.
WACKEEN, CAESAR	Jack W. Evarone, Esq.
WAKULA, JOHN & HELEN	Same
WARD, KEN & BARBARA	Same
WARD, RONNY H	Same
WEBER, DAVE	Same
WEBER, F R & JUNELL	Same
WEBSTER, THOMAS M & PATRICIA J	Same

PRODUCER	DESIGNEE
WEIDKNECHT, ARTHUR J & PEGGY A	Same
WEISER, SIDNEY & RAQUEL	Same
WEST, CAROLYN & SMITH, RICHARD	Same
WEST, HOWARD & SUZY	Same
WESTERN HORIZON ASSOCIATES INC	Ernest Leff, Esq.
WESTERN ROCK PRODUCTS	Kathleen Daprato
WET SET, INC	Thomas Ferruzzo, Esq.
WHITTINGHAM, RICHARD V	Same
WILLOW WELLS MUTUAL WATER COMPANY	Richard A. Joh
WITTE, E DANIEL & MARCIA	Same
WLSR INC	Steve Winfield
WOO, CHEN C/O ASTER DUCK CO	Same
WORSEY, JOSEPH A & REVAE	Same
YANG, YOUNG MO	Same
YARD, WILLIAM & BETTY	Same
YEAGER, E L - CONSTRUCTION COMPANY INC	Roger Luebs, Esq.
YERMO WATER COMPANY	Donald Walker
YKEMA HARMSEN DAIRY	Therese Parker. Esq.
YKEMA TRUST	Therese Parker, Esq.
YOUNG, KEITH O - (DESERT TURF)	Therese Parker, Esq.

EXHIBIT F

TRANSFERS OF BASE ANNUAL PRODUCTION RIGHTS.

EXHIBIT F

TRANSFERS OF BASE ANNUAL PRODUCTION RIGHTS

1. Transferability. Any Base Annual Production Right, including any Carryover Right (Right) or any portion thereof may be sold, assigned, transferred, licensed or leased subject to the rules set forth in this Exhibit "F".

2. Consumptive Use Adjustments. A transferred Right shall be adjusted so as not to cause an increased Consumptive Use of water. For either inter Subarea or intra Subarea transfers, if the transferee's Consumptive Use of water Produced under the transferred Right would be at a higher rate than that of transferor, the transferred Right shall be reduced by Watermaster to a level that equalizes the Consumptive Use to that of transferor. Any such adjustments by Watermaster shall be made using the following Consumptive Use rates. If a transfer would cause the same or a decreased Consumptive Use, no adjustment shall be made.

Type of Water Use	Consumptive Use Rate
Municipal	50%
Irrigation	50%
Industrial	case by case
Lakes or Aquaculture	surface acres x 7 ft.

For mixed or sequential uses of water excluding direct reuse of municipal wastewater, the total acre-feet of Consumptive Use shall be the sum of Consumptive Uses for each use.

3. Notice to Watermaster. No transfer shall become operable until the Parties to the transfer have jointly notified Watermaster of the terms and conditions of the transfer, the price to be paid by the transferee, the name of the Responsible Party and the name of the Person who will pay any applicable Assessments. Intra-Subarea transfers shall not require Watermaster authorization after giving notice. No inter-Subarea transfer shall become operable until authorized by Watermaster after giving notice. Watermaster shall authorize such transfers in the order of the date of notice, provided that funds are available as set forth in Paragraph 4 of this Exhibit "F".

4. Inter Subarea Transfers of Rights. A Party's Right in a (Source) Subarea may be transferred (by lease only) to a Party in another (Use) Subarea provided that in any Year the resulting unconsumed water in the Source Subarea due to all such transfers shall not be greater than the Replacement Water requirement of the Source Subarea in the preceding Year. Watermaster shall replace the resulting Consumptive Use in the Use Subarea that is attributable to the transfer, utilizing Replacement Water Assessments from the Source Subarea.

5. Transfers to Meet Replacement Water or Makeup Water Obligations. Watermaster may use Assessment proceeds to purchase or lease Rights in a Subarea in order to obtain water to meet an Obligation. The water so obtained shall be equal to the Consumptive Use portion of the transferred and unproduced Rights. No such purchases of leases of Rights in the Harper Lake Basin may be used to satisfy Obligations in other parts of the Centro Subarea.

6. Inter Subarea Transfers of Water. Water Produced in one (source) Subarea and exported to another Subarea for use or disposal shall bear a Replacement Water Obligation equal to the sum of the Production in excess of the Producer's share of the Free Production Allowance in the source Subarea plus the amount of water exported that would normally have been returned to the source Subarea. Such exported water shall be credited to the appropriate Subarea Obligation unless it has been purchased or leased as Replacement Water pursuant to a transfer agreement.

7. Verde Ranch Producers. Together the Spring Valley Lake Country Club ("the Country Club"), the Spring Valley Lake Association ("the Association"), the California Department of Fish and Game (DFG) Mojave Narrows Regional Park ("the Park") the Kemper Campbell Ranch ("the Ranch") comprise a group herein called the Verde Ranch Producers. Each Verde Ranch Producer has the ability physically both to Produce Groundwater and to Produce water that originated as tailwater flowing from the DFG Mojave River Fish Hatchery. DFG Producer Groundwater to supply the Hatchery, and Hatchery tailwater can be discharged in part or entirely to the Mojave River or in part or entirely to a lined channel that conveys tailwater to points where the Verde Ranch Producers can Produce it. The present flow regimen is as follows: Hatchery Production flows through the Hatchery and is then discharged to the River and/or the lined channel. Water discharged to the lined channel flows to a Country Club lake. The Country Club Produces Groundwater that is discharged to the Country Club lake. The Country Club property is irrigated by pumping from the Country Club lake. Water overflowing from the Country Club lake flows through a lined channel and

through other Country Club lakes, and finally is discharged to Spring Valley Lake. The Association Produces Groundwater that is discharged to Spring Valley Lake. Water overflowing from Spring Valley Lake flows to lakes in the Park. The Park Produces Groundwater that is discharged to the lakes in the Park. The Park also Produces Groundwater that is used directly for irrigation of the Park. The Park is also irrigated by pumping from the lakes in the Park. Water overflowing from the lakes in the Park is discharged to the Mojave River. Some water from the lakes in the Park also flows to a lake on the Ranch. The Ranch also Produces Groundwater. The Ranch is irrigated from the lake on the Ranch. No water flows on the surface from the Ranch property to the Mojave River.

In order to continue the present arrangements among the Hatchery and the Verde Ranch Producers while assuring that they participate fairly in the Physical Solution the following rules shall apply:

a. Total Production by the Country Club will be calculated as the sum of Country Club Groundwater Production plus inflow of Hatchery tailwater minus outflow to Spring Valley Lake. The Country Club shall monitor and report to Watermaster the amounts of such Groundwater Production, inflow and outflow.

b. Total Production by the Association will be calculated as the sum of Association Groundwater Production plus inflow from the Country Club minus outflow to the Park. The Association shall monitor and report to Watermaster the amounts of such Groundwater Production, inflow and outflow.

c. Total Production by the Park will be calculated as the sum of Park Groundwater Production plus inflow from the Association minus outflow to the Ranch minus outflow to the Mojave River. The Park shall monitor and report to Watermaster as to such Groundwater Production, inflow and outflows.

d. Total Production by the Ranch will be calculated as the sum of Ranch Groundwater Production plus inflow from the Park. The Ranch shall monitor and report to Watermaster the amounts of such Groundwater Production and inflow.

e. Hatchery Production up to 10,678 acre-feet per Year will be permitted free of any Assessments against the Hatchery. The Hatchery shall monitor and report to Watermaster its Groundwater Production and the amounts of tailwater discharged to the River and to the artificial channel. In any Year the Hatchery may Produce more than 10,678 acre-feet free of any Assessments against the Hatchery, provided such Production in excess of 10,678 acre-feet is reported as Groundwater Production by one or more of the Verde Ranch Producers in the same Year pursuant to operating agreements by and between the Hatchery and such Producer(s) filed with the Watermaster. The operating agreement shall specify the responsibility for payment of assessments. In the operating agreement, the Verde Ranch Producers may elect to have assessments be based on the aggregate Production of the Verde Ranch Producers, and may freely transfer Base Annual Production Rights internally, provided that the aggregate consumptive use of the Verde Ranch Producers shall not be increased. In the absence of such operating agreements, or if the operating agreements do not otherwise allocate responsibility for payment of Assessments, the Hatchery

shall be liable for Administrative, Replacement Water and Biological Resource Assessments on the amount of water Produced by the Hatchery in excess of 10,678 acre-feet in any Year. In the event that Verde Ranch Producer who is allocated responsibility for payment of Assessments pursuant to an operating agreement is delinquent in making any such payment, the Hatchery shall not be liable therefor.

f. In any Year, if the total discharge to the River from the Hatchery and the Verde Ranch Producers exceeds the Groundwater Production by the Hatchery, such excess discharge shall be subject to Administrative, Replacement Water and, except for the Park, Biological Resource Assessments. Such Assessments shall be levied against individual Verde Ranch Producers in proportion to the extent that outflow from each Producer exceeds inflow to that Producer.

g. The Hatchery and the Verde Ranch Producers shall install all stage recorders, meters or other measuring devices necessary to determine inflows, outflows and Production that they are responsible for monitoring and reporting to Watermaster. Such stage recorders, meters or other measuring devices shall be installed, calibrated and operated in manner satisfactory to Watermaster.

h. Any change in the flow regimen described above will be subject to the same general rules set forth in this Paragraph 7. Any such change shall be reported to Watermaster in advance.

8. Harper Lake Basin. No Producer in the Harper Lake Basin may transfer any Base Annual Production Right or any portion thereof to Producers outside of Harper Lake Basin except by

physically conveying the water in compliance with the rules set forth in this Exhibit "F".

EXHIBIT G

SUBAREA OBLIGATIONS

EXHIBIT G

SUBAREA OBLIGATIONS

1. Subarea Obligations. Producers in the respective Subareas shall have the obligation to provide the following average Annual and minimum Annual Subsurface Flows and/or Base Flows per Year:

a. Este Subarea Producers--200 acre-feet per Year of Subsurface Flow to the Alto Subarea, except that in any Year the Subsurface Flow obligation shall be not be less than 160 acre-feet plus one-third of any cumulative debit plus any additional amount of water required to reduce the cumulative debit to 200 acre-feet.

b. Oeste Subarea Producers--800 acre-feet per Year of Subsurface Flow to the Alto Subarea, except that in any Year the Subsurface Flow obligation shall be not less than 640 acre-feet plus one-third of any cumulative debit plus any additional amount of water required to reduce the cumulative debit to 800 acre-feet.

c. Centro Subarea Producers--1200 acre-feet per Year of Subsurface Flow to the Baja Subarea, except that in any Year the Subsurface Flow Obligation shall be not less than 960 acre-feet plus one-third of any cumulative debit plus any additional amount of water required to reduce the cumulative debit to 1200 acre-feet.

d. Baja Subarea Producers--400 acre-feet per Year of Subsurface Flow toward Afton across the MWA eastern boundary, except that in any Year the Subsurface Flow Obligation shall not be less than 320 acre-feet plus one-third of any cumulative debit plus any additional amount of water required to reduce the cumulative debit to 400 acre-feet.

e. Alto Subarea Producers--an average Annual combined Subsurface Flow and Base Flow of 23,000 acre-feet per Year to the Transition Zone. For the purposes of Paragraph 6 of this Exhibit G, the Subsurface Flow component shall be deemed to be 2,000 acre-feet per Year. In any Year Alto Subarea Producers shall have an obligation to provide to the Transition Zone a minimum combined Subsurface Flow and Base Flow as follows:

i. If the accounting pursuant to Paragraph 5, below, reflects a net cumulative credit at the beginning of the Year, the combined minimum flow obligation shall be 18,400 acre-feet minus any net cumulative credit, but shall be not less than 15,000 acre-feet.

ii. If the accounting pursuant to Paragraph 5, below, does not reflect a net cumulative credit at the beginning of the Year, the combined minimum flow obligation shall be 18,400 acre-feet plus one-third of any net cumulative debit plus any additional amount of water required to reduce the net cumulative debit to 23,000 acre-feet.

2. <u>Obligation for Transition Zone Replacement Water</u>.

a. Until the Court approves Groundwater levels to be established and maintained pursuant to Subparagraph 2b of this Exhibit, Watermaster shall provide Replacement Water in the Transition Zone equal to Production in the Transition Zone that is in excess of the Transition Zone Producers' share of the Alto Subarea Free Production Allowance for that Year. All such Replacement Water shall be provided as soon as practicable during the next ensuing Year.

b. As soon as is practicable, the MWA shall establish key wells to be used to monitor Groundwater levels in the Transition Zone and, subject to approval by the Court, Watermaster shall establish minimum water levels to be maintained in the key wells.

c. After water level elevations have been established pursuant to Subparagraph 2b of this Exhibit, Watermaster shall provide Replacement Water in the Transition Zone as necessary to maintain the minimum water levels. Water purchased with Replacement Water Assessments paid by Producers in the Transition Zone in excess of the quantity of water needed to maintain said water levels shall be provided elsewhere in the Alto Subarea.

3. Other Water. "Other Water" that may be credited to a Subarea Obligation may include water conveyed and discharged across a boundary or Free Production Allowance water that is not Produced. Water other than Base Flow, Subsurface Flow or Storm Flow that is conveyed and discharged across a boundary between Subareas other than pursuant to a transfer agreement, shall be credited or debited, as appropriate, to the pertinent Subarea Obligation during the Year in which it is so conveyed and discharged. Any portion of the Subarea's Free Production Allowance that is allowed to remain unproduced in a Subarea pursuant to transfer agreements in order to satisfy a Subarea Obligation shall be credited to the pertinent Subarea Obligation in accordance with the terms of the transfer agreements.

4. Makeup Water. Assessments for Makeup Water shall be paid in accordance with the time schedule set forth in Exhibit D.

Makeup Water shall be credited to the Subarea Obligation at the end of the Year in which the Makeup Water Assessment is paid.

5. Accounting. Watermaster shall Annually not later than February 1 cause to be prepared a report of the status of each Subarea Obligation as of the end of the prior Year. The report shall set forth at least the following information for each Subarea Obligation:

a. The cumulative total of the average Annual Subarea Obligations since the Judgment was entered as of the beginning of the prior Year;

b. The cumulative total of all water credited to the Subarea Obligation since the Judgment was entered as of the beginning of the prior Year;

c. The net cumulative credit or debit [the difference between (a) and (b)] as of the beginning of the prior Year;

d. The amounts of water credited to the Subarea Obligation during the prior Year including, as appropriate, Base Flow, Subsurface Flow, Other Water and Makeup Water;

e. The cumulative total of the average Annual Subarea Obligations as of the end of the prior Year;

f. The cumulative total of all water credited to the Subarea Obligation as of the end of the prior Year;

g. The net cumulative credit or debit as of the end of the prior Year;

h. Any Makeup Water Obligation;

i. The Minimum Subarea Obligation for the current Year.

6. Subsurface Flow Assumptions. Some Subarea Obligations are expressed as average Annual or minimum Annual Subsurface Flow.

In all cases the Subsurface Flow obligations have been established initially at amounts equal to the estimated historical average Subsurface Flow across Subarea boundaries. Not later than two Years following entry of this Judgment MWA shall begin to install monitoring wells to be used to obtain data to enable improved estimates of Subsurface Flow at each Subarea boundary where there is a Subsurface Flow obligation and to develop methodology for future determinations of actual Subsurface Flow. Not later than ten years following entry of this Judgment Watermaster shall prepare a report setting forth the results of the monitoring program and the future methodology. Following opportunity for review of Watermaster's report by all Parties, Watermaster shall prepare a recommendation to the Court as to the likely accuracy of the estimated historical Subsurface Flows and any revision of Subarea Obligations that may be indicated. Pending Watermaster's report to the Court, Subsurface Flows shall be assumed to be equal to the Subsurface Flow obligations for purposed of accounting for compliance therewith.

7. Example Calculation. Table G-1 sets forth an example of Subarea Obligation accounting procedures using hypothetical flows.

TABLE G-1

HYPOTHETICAL EXAMPLE

ACCOUNTING FOR COMPLIANCE WITH SUBAREA OBLIGATIONS

OBLIGATION OF SUBAREA A TO SUBAREA B

AVERAGE ANNUAL: 23,000 AFA (21,000 AFA BASEFLOW + 2,000 AFA SUBSURFACE FLOW)

MINIMUM ANNUAL: 18,400 AFA + 1/3 OF ANY NET CUMULATIVE DEBIT; OR 18,400 AFA - ANY NET CUMULATIVE CREDIT, BUT NOT LESS THAN 15,000 AFA

	YEAR 1 AF	YEAR 2 AF	YEAR 3 AF	YEAR 4 AF	YEAR 5 AF	YEAR 6 AF	YEAR 7 AF	YEAR 8 AF	YEAR 9 AF	YEAR 10 AF
STATUS AT BEGINNING OF YEAR										
CUMULATIVE OBLIGATION	0	23,000	46,000	69,000	92,000	115,000	138,000	161,000	184,000	207,000
CUMULATIVE FLOW	0	17,000	32,600	50,800	69,067	87,067	107,111	139,978	168,378	198,978
NET CUMULATIVE CREDIT (DEBIT)	0	(6,000)	(13,400)	(18,200)	(22,933)	(27,933)	(30,889)	(21,022)	(15,622)	(8,022)
FLOW DURING THE YEAR (HYPOTHETICAL)										
BASE FLOW	8,000	5,000	4,000	4,000	2,000	2,000	15,000	18,000	20,000	23,000
SUBSURFACE FLOW	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
OTHER WATER	7,000	7,200	7,400	7,600	7800	8,000	8,200	8,400	8,600	8800
MAKEUP WATER PURCHASED	0	1,400	4,800	4,667	6,200	8,044	7,667	0	0	0
TOTAL FLOW	17,000	15,600	18,200	18,267	18,000	20,044	32,867	28,400	30,600	33,800
MINIMUM OBLIGATION DURING THE YEAR	18,400	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074
MAKEUP OBLIGATION INCURRED	1,400	4,800	4,667	6,200	8,044	7,667	0	0	0	0
STATUS AT END OF YEAR										
CUMULATIVE OBLIGATION	23,000	46,000	69,000	92,000	115,000	138,000	161,000	184,000	207,000	230,000
CUMULATIVE FLOW	17,000	32,600	50,800	69,067	87,067	107,111	139,978	168,378	198,978	232,778
NET CUMULATIVE CREDIT (DEBIT)	(6,000)	(13,400)	(18,200)	(22,933)	(27,933)	(30,889)	(21,022)	(15,622)	(8,022)	2,778
FOLLOWING YEAR MINIMUM OBLIGATION										
18,400 + 1/3 OF NET CUM. DEBIT	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074	0
ADDITIONAL TO REDUCE DEBIT TO 23,000	0	0	0	0	0	0	0	0	0	0
18,400 - CUM. CREDIT, BUT NLT 15,000	0	0	0	0	0	0	0	0	0	15,622
MINIMUM OBLIGATION	20,400	22,867	24,467	26,044	27,711	28,696	25,407	23,607	21,074	15,622

EXHIBIT H

BIOLOGICAL RESOURCE MITIGATION

EXHIBIT H

BIOLOGICAL RESOURCE MITIGATION

1. Protection of and Description of Existing Riparian Habitat. In arriving at a Physical Solution, the Parties have taken into consideration the water needs of the public trust resources of the Mojave Basin Area, including but not limited to, those species listed in Table H-1 within each of the areas as shown on Figure H-1 and the riparian habitat areas shown on Figure H-1 and described generally as follows:

a. The area which extends, south to north, in the Alto Subarea, from the intersection of the north line of Section 36, Township 5 North, Range 4 West with the Mojave River channel to the United States Geological Survey gauging station at the Lower Narrows;

b. The Lower Narrows to the Helendale Fault (Transition Zone);

c. The Harvard/Eastern Baja Subarea reach of the Mojave River that extends west to east, from Harvard Road to the Iron Ranch/Iron Mountain area (0.5 miles east of the west line of Section 20, Township 10 North, Range 4 East).

2. Protection Pursuant to Physical Solution. The following aspects of the Physical Solution must be implemented to seek to achieve the water table standards set forth in Table H-2 which were proposed by DFG as being necessary to maintain and converse the riparian resources in the areas shown on Figure H-1, including the species listed in Table H-1:

a. Pursuant to Paragraph 24(o) of the Judgment, the Watermaster in recommending an adjustment in Free Production

Allowance, shall compare the Free Production Allowance with the estimated Production Safe Yield. In the event the Free Production Allowance exceeds the estimated Production Safe Yield by five percent or more, Watermaster shall recommend a reduction of the Free Production Allowance equal to a full five percent of the aggregate Subarea Base Annual Production. In considering whether to increase or decrease the Free Production Allowance in a Subarea, Watermaster shall, among other factors, take into consideration for the areas shown on Figure H-1 the Consumptive Use of water by riparian habitat, the protection of public trust resources, including the species listed in Table H-1 and the riparian habitat areas shown on Figure H-1, and whether an increase would be detrimental to the protection of public trust resources.

b. If, pursuant to Paragraph 27, Watermaster buys or leases Free Production Allowance in the Baja Subarea below the Calico-Newberry Fault to satisfy the need for Replacement Water, priority shall be given to purchases or leases that will result in reducing Production in or near the area described in Subparagraph 1(c) of this Exhibit.

c. Pursuant to Paragraph 2 of Exhibit "G", Watermaster shall purchase Replacement Water to maintain Groundwater levels in the Transition Zone.

3. <u>Additional Protection Pursuant to Trust Fund Established by Watermaster Using the Proceeds of Biological Resource Assessments</u>.

a. Watermaster shall establish a Biological Resources Trust Fund account for the benefit of the riparian habitat areas shown on Figure H-1 and the species listed on Table H-1. To

establish and maintain the Trust Fund Watermaster shall levy against each acre-foot of Production within the Basin Area, other than Production by the California Department of Fish and Game (DFG), a Biological Resource Assessment of fifty cents ($0.50) (1993 dollars) to be collected at the same time and in the same manner as the Administrative Assessment, except that no Biological Resources Assessment shall be levied whenever the Trust Fund account balance exceeds $1,000,000 (1993 dollars).

b. Watermaster shall make funds held in the Biological Resources Trust Fund available to DFG only in the event that Groundwater levels are not maintained as set forth in Table H-2. Watermaster shall take action to acknowledge any proposed expenditure from the Biological Resources Trust Fund by DFG. Such Watermaster action shall be subject to the review procedures set forth in Paragraph 36 of the Judgment, provided that any motion made pursuant thereto and any Court disapproval of such Watermaster action and proposed DFG expenditure may be based only: 1) on the ground that the Groundwater levels set forth in Table H-2 are being maintained; and/or 2) the ground that the proposed expenditure is not for any of the purposes set forth in Subparagraphs 3.b.(i), (ii), or (iii) below in this Exhibit. The Biological Resources Trust Fund may be used only for the following purposes and only in the three areas identified on Figure H-1:

i. not to exceed $100,000 for the preparation by DFG of a DFG habitat water supply management plan, which plan shall include the water needs of the species listed in Table H-1 and the riparian habitat areas shown on Figure H-1.

ii. the purchase or lease by DFG of Supplemental Water or the lease or purchase of DFG of Base Annual Production Rights to be used to meet riparian habitat water needs of the species listed in Table H-1 and the riparian habitat areas shown on Figure H-1.

iii. the construction, repair and replacement of wells or other facilities identified in the plan prepared pursuant to Subparagraph (i), above, and/or any other measures necessary to implement the plan.

DFG shall not prepare or make any expenditure from the trust fund for the payment of administrative overhead or staff of DFG.

4. DFG agrees that absent substantial changed circumstances, DFG shall not seek to modify the provisions of this Judgment in any way to add to or change the above-stated measures to protect the referenced species or habitat. Nothing stated in this Judgment or in this Exhibit "H" is intended nor shall be deemed to relieve any Party hereto from any obligation or obligations not specifically referenced in this Exhibit H. Nothing in this Judgment or in this Exhibit H is intended or shall be construed to be a waiver by the State or any of its departments or agencies, including DFG, of its rights and obligations under the common law, the public trust doctrine, the constitution, statutes and regulations to preserve, protect or enhance the natural resources of the State including rare, threatened or endangered species or species of concern.

TABLE H-1

LIST OF SPECIES

SPECIES	ALTO			CENTRO		BAJA		
	Forks Dam to Upper Narrows	Upper Narrows to Lower Narrows	Lower Narrows to Helendale	Helendale to Hodge	Hodge to Barstow	Barstow to Harvard Road	Harvard Road to Mannix Wash	Afton Canyon
Purple Monkeyflower	6							
Mohave Monkeyflower	6		6	6	6	6		
Mohave Tarweed	5							
Desert Cymopterus	6							
Barstow Woolly Sunflower					6	6		
Victorville Shoulderband	6	6						
Mohave Tui Chub							1, 3	
California Red-legged Frog	6	6	6	6				
Southwestern Pond Turtle	6		6	6		6	6	6
Desert Tortoise	2, 4		2, 4	2, 4	2, 4	2, 4		
San Diego horned Lizard	6							
Cooper's Hawk	8	8						
Ferruginous Hawk	8	8						
Swainson's Hawk	4	4						
Bald Eagle	1, 3	1,3						
Merlin	6, 8	6, 8						
Prairie Falcon	6, 8	6, 8	6, 8	6, 8	6, 8	6, 8		
Western Yellow-billed Cuckoo	3, 7			3, 7	3, 7			
Southwestern Willow Flycatcher	8							
Brown-crested Flycatcher		8						
Vermillion Flycatcher	8					8	8	8
Le Conte's Thrasher	8							
Least Bell's Vireo	1, 3							1, 3

TABLE H-1

LIST OF SPECIES
(CONT'D)

SPECIES	ALTO			CENTRO		BAJA		
	Forks Dam to Upper Narrows	Upper Narrows to Lower Narrows	Lower Narrows to Helendale	Helendale to Hodge	Hodge to Barstow	Barstow to Harvard Road	Harvard Road to Mannix Wash	Afton Canyon
Yellow Warbler	9							
Yellow-breasted Chat	8	8			8	8		
Summer Tanager	8	8						8
Pale Big Earred Bat	8							
Mohave Ground Squirrel	4, 6		4, 6	4, 6				
Mohave Vole			6	6				
Nelson's Bighorn Sheep					10	10		10
TOTAL NUMBER OF SPECIES = 30 TOTAL NUMBER OF SPECIES IN EACH AREA:	25	11	7	8	7	8	3	5

1 = Federally Endangered
2 = Federally Threatened
3 = State Endangered
4 = State Threatened
5 = Federal Category: 1
6 = Federal Category: 2
7 = Federal Category: 3b
8 = State: Special Concern
9 = State: Sensitive
10 = State: Fully Protected

TABLE H-2

RIPARIAN HABITAT MONITORING WELL WATER LEVEL CRITERIA

ZONE	WELL NUMBER	MAXIMUM DEPTH BELOW GROUND
Victorville/Alto	H1-1	Seven (7) Feet
Victorville/Alto	H1-2	Seven (7) Feet
Lower Narrows/Transition	H2-1	Ten (10) Feet
Harvard/Eastern Baja Riparian Forest Habitat	H3-1	Seven (7) Feet
Harvard/Eastern Baja Surface Water Habitat	H3-2	Plus One (1) Foot (1705 Ft msl)*

* Surface Water Habitat water surface elevation of 1705 ft. msl is approximate pending ground elevation survey.

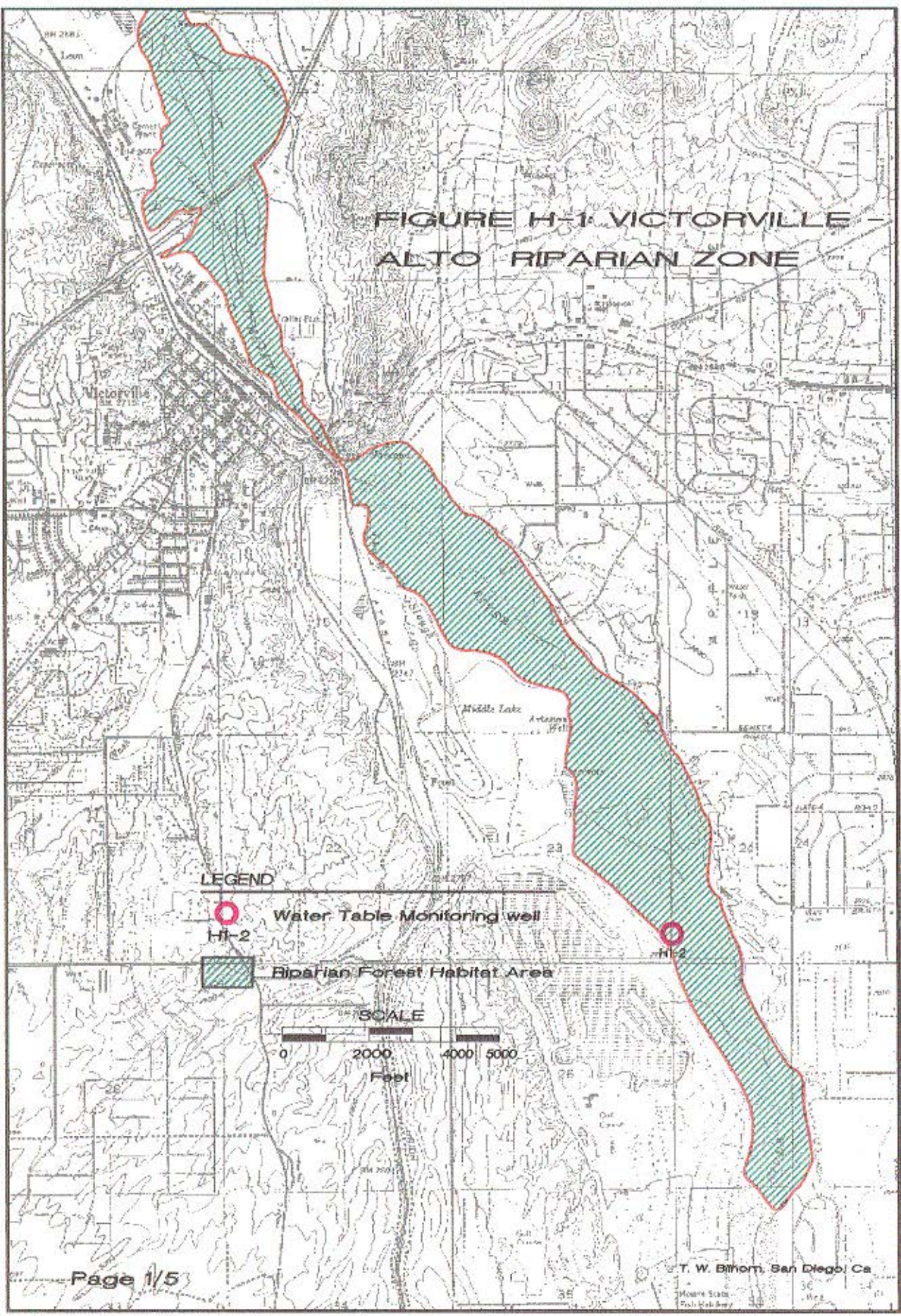


FIGURE H-1 VICTORVILLE - ALTO RIPARIAN ZONE
LEGEND
Water Table Monitoring well
H1-2
Riparian Forest Habitat Area
SCALE
0
2000
4000
5000
Feet
H1-2
Victorville
Middle Lake
T. W. Bihorn, San Diego, Ca
Page 1/5

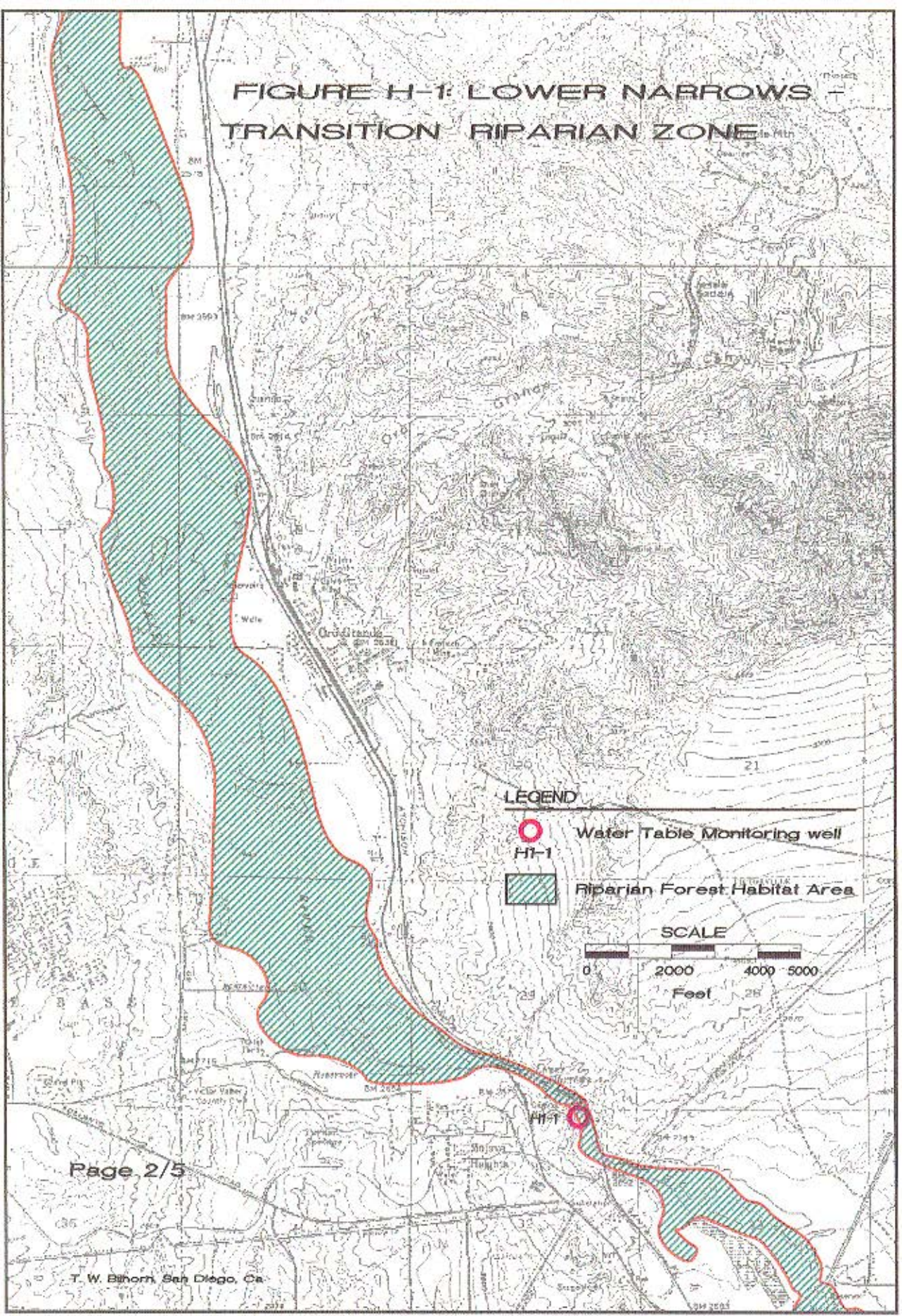


FIGURE H-1: LOWER NARROWS - TRANSITION RIPARIAN ZONE
LEGEND
H1-1
Water Table Monitoring well
Riparian Forest Habitat Area
SCALE
0
2000
4000
5000
Feet
H1-1
Page 2/5
T. W. Biborn, San Diego, Ca.

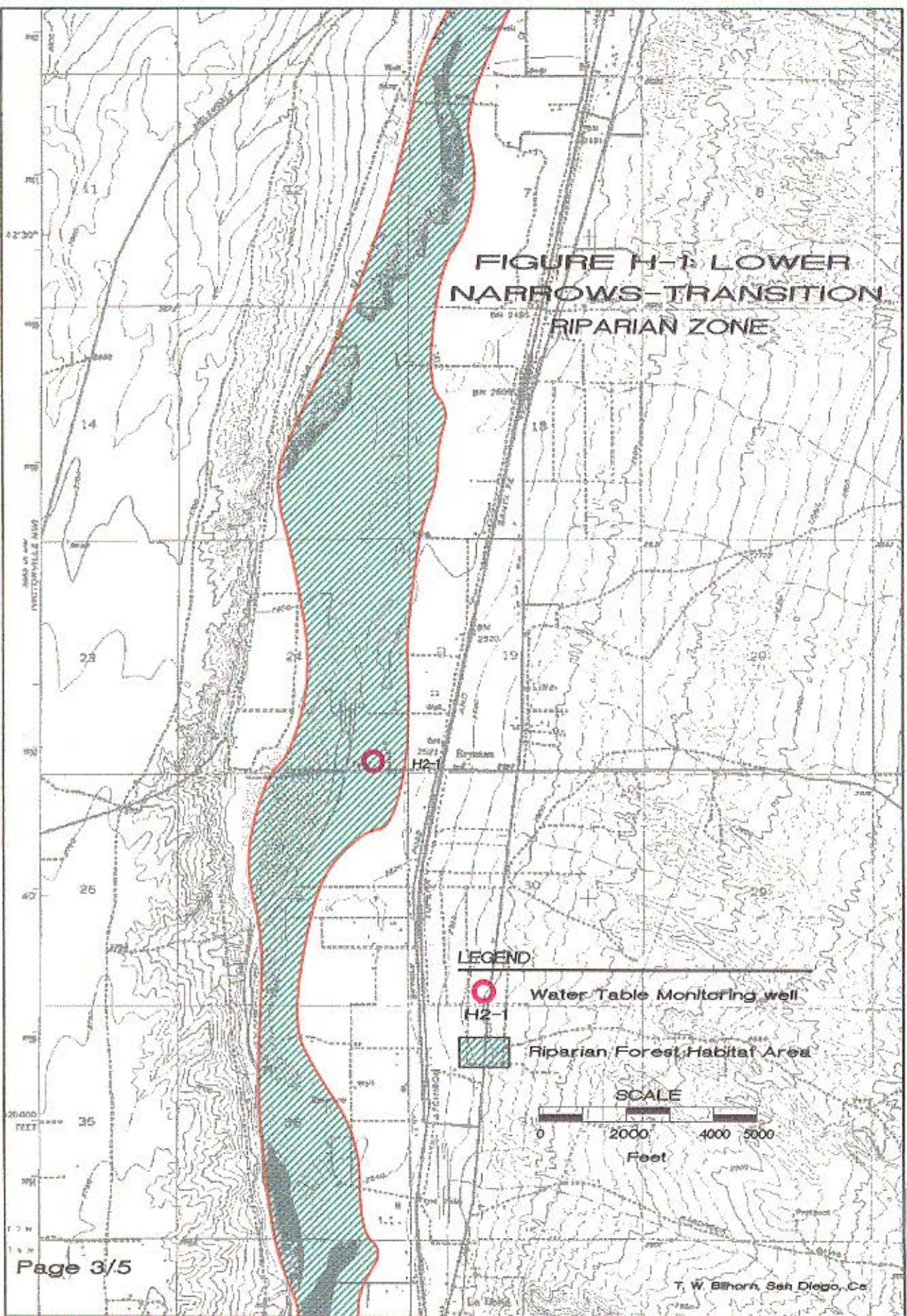


FIGURE H-1 LOWER
NARROWS-TRANSITION
RIPARIAN ZONE
H2-1
LEGEND
Water Table Monitoring well
H2-1
Riparian Forest Habitat Area
SCALE
0
2000
4000
5000
Feet
T. W. Elhorn, San Diego, Ca

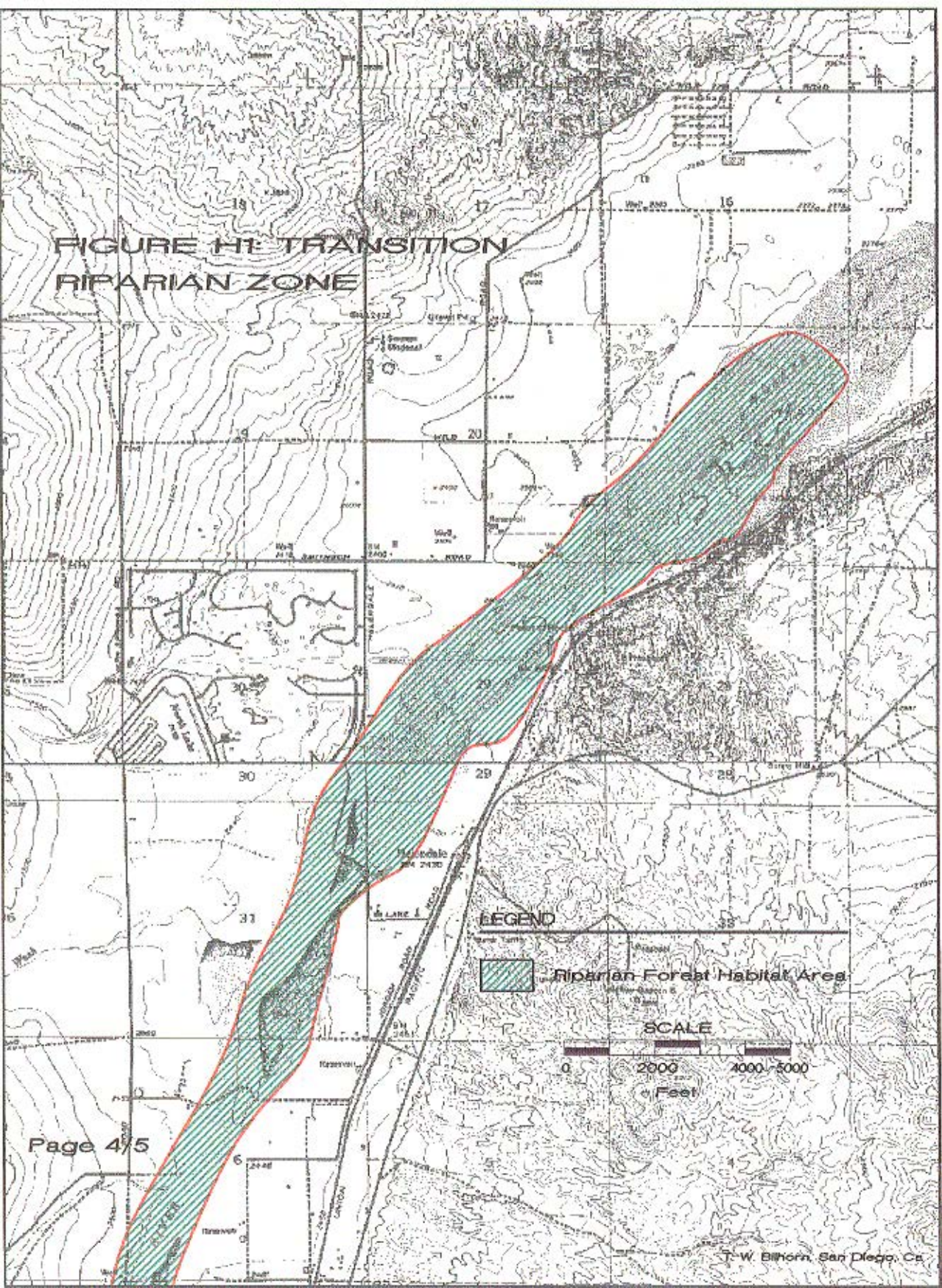
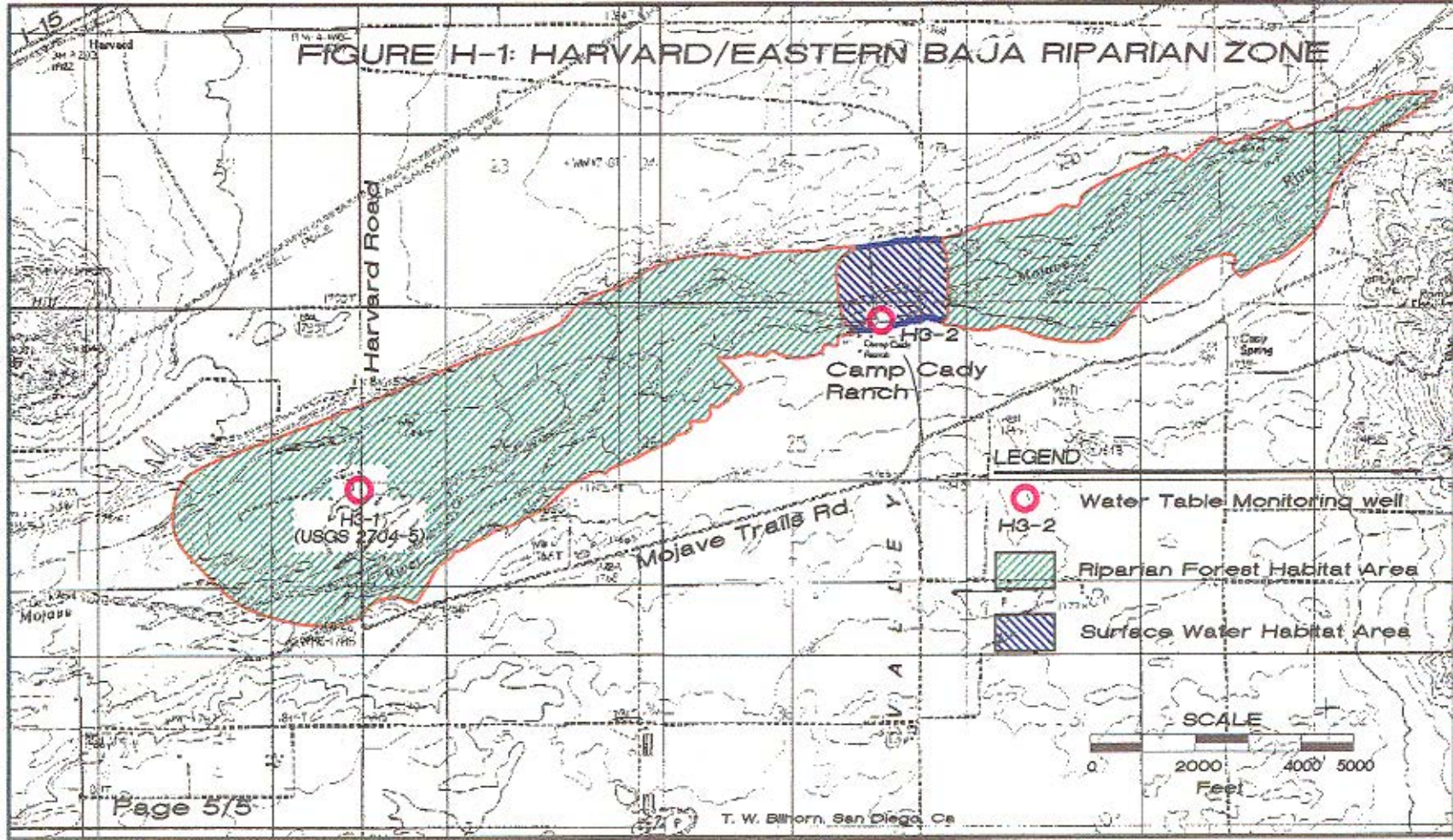
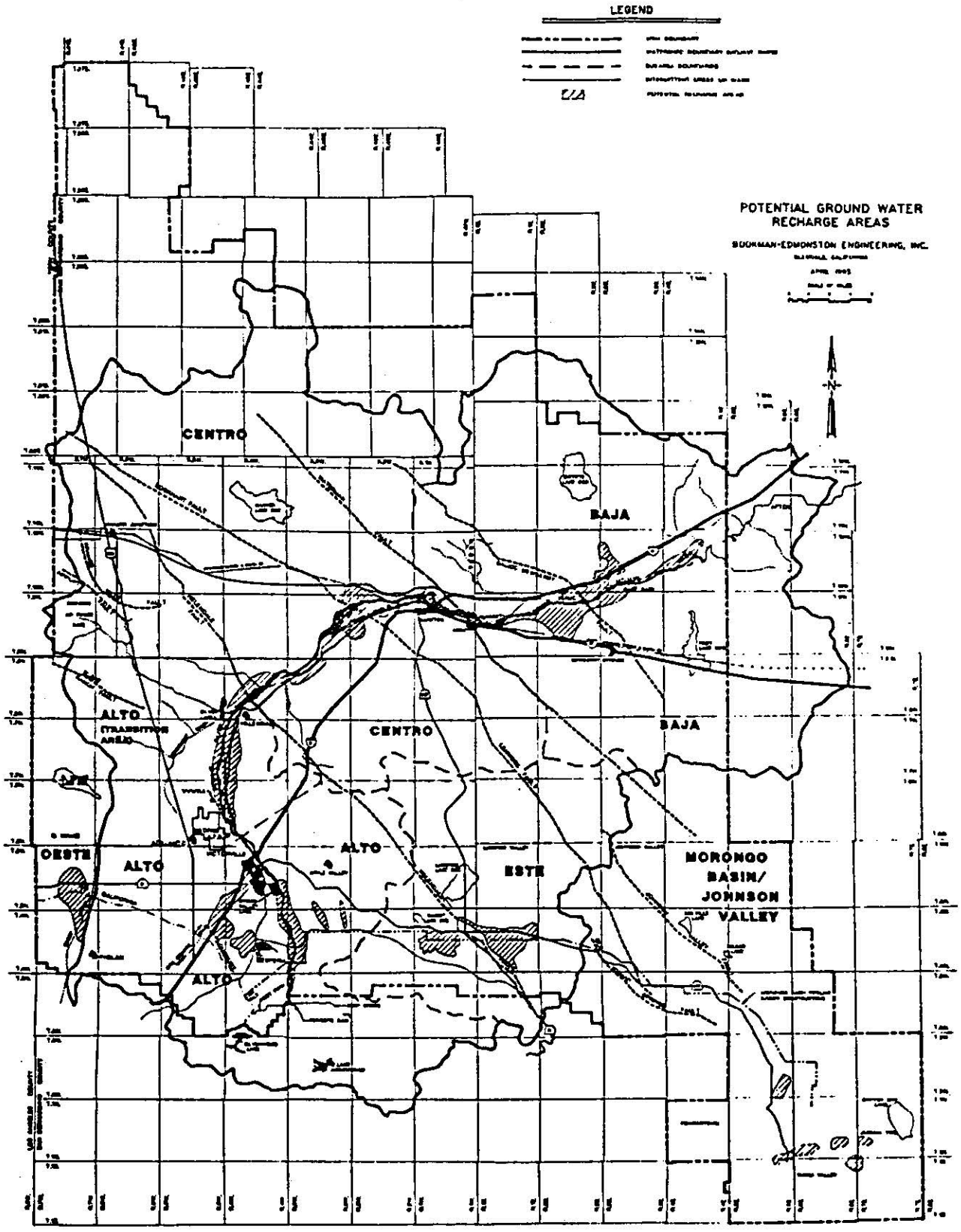


FIGURE H: TRANSITION
RIPARIAN ZONE
LEGEND
Riparian Forest Habitat Area
SCALE
0
2000
4000 - 5000
Feet
T. W. Bilhorn, San Diego, Ca.

FIGURE H-1: HARVARD/EASTERN BAJA RIPARIAN ZONE





MOJAVE WATER AGENCY

REGIONAL WATER MANAGEMENT PLAN

APPENDIX K

City of Adelanto 2014 Consumer Confidence Report

11780 Air Expressway
Adelanto
California 92301
Office 760.246.2300
www.percwater.com

ANNUAL WATER QUALITY REPORT
2014

ADELANTO WATER AUTHORITY
Consumer Confidence Report
July 1, 2015

SOURCE OF DRINKING WATER SUPPLY

About 5.3 million gallons of water is pumped daily from a combination of ten (10) of the City's active wells. Wells include 1G, 3G2, 4, 4G, 5A, 6, 7, 8G2, 14A and 15. Water is pumped from underground storage areas called aquifers located within the City and along the Mojave River. These aquifers are recharged naturally by rainfall and snowmelt and artificially from the State Water Project; an emergency source connection with the City of Victorville exists for backup or emergency needs.

WATER QUALITY REGULATIONS

Water quality regulations are strictly enforced on a state and federal level. The State of California Department of Public Health (CDPH) (formerly California Department of Health Services (DHS) monitors all listed contaminates plus bacteriological samples taken on a weekly basis.

WATER QUALITY CONTROL

Before the water reaches your tap, samples from wells and 30 individual locations throughout the City have been collected and tested in State certified laboratories. In this report, we summarize the extensive certified third-party laboratory data and test results in a simple manner to inform our customers of the exceptionally high quality drinking water we provide.

SOURCE WATER ASSESSMENTS

In the year 2001 the CDPH conducted a source water assessment of all 15 of the City's water wells. The purpose of the assessment was to determine the vulnerability of the wells to "possible contaminating activities." A copy of the complete assessment may be viewed at the City of Adelanto Water Department or at the CDPHS San Bernardino District Office, 464 W. Street, Suite 437, San Bernardino, CA 92401.

PUBLIC PARTICIPATION

As always the public is welcome to attend and encouraged to participate in water related discussions. City Council meetings are held on the 2nd and 4th Wednesdays of each month at 7:00 p.m. at City Hall, 11600 Air Expressway.

CONTACT INFORMATION

Questions concerning this report may be directed to Rich Buday, Water Superintendent at (760) 246-2300.

EDUCATIONAL INFORMATION

Additional General Information on Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California Department of Health Services (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791). Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Terms used in this Report

- **Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.
- **Maximum Contaminant Level Goal (MCLG)**: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.
- **Public Health Goal (PHG)**: The level of a contaminant in drinking water below which there is no known or expected risk of health. PHGs are set by the California Environmental Protection Agency.
- **Maximum Residual Disinfectant Level (MRDL)**: The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
- **Maximum Residual Disinfectant Level Goal (MRDLG)**: The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.
- **Primary Drinking Water Standard (PDWS)**: MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.
- **Secondary Drinking Water Standards (SDWS)**: MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.
- **Treatment Technique (TT)**: A required process intended to reduce the level of a contaminant in drinking water.
- **Regulatory Action Level (AL)**: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Variances and Exemptions**: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.
- **ND**: not detectable at testing limit.
- **ppm**: parts per million or milligrams per liter (mg/L).
- **ppb**: parts per billion or micrograms per liter (ug/L)
- **ppt**: parts per trillion or nanograms per liter (ng/L).
- **pCi/L**: picocuries per liter (a measure of radiation)
- **MFL**: million fibers per liter. MCL for fibers exceeding μm in length.
- N/A: Not Applicable
- **Notification Level (NL):** Notification levels are health-based advisory levels established by CDPH for chemicals in drinking water that lack maximum contaminant levels (MCLs).
- **μmho:** Microohms

CITY OF ADELANTO 2014 WATER QUALIT REPORT

Primary Standards: Mandatory Health-Related Standards

CONTAMINANT	MCL	PHG (MCLG)	AVERAGE	RANGE	SOURCES IN DRINKING WATER
Arsenic (ppb)	10	0.004	0.48	ND-10	Erosion of natural deposits
Flouride (ppm)	2	1	0.55	0.29-2.1	Natually Present in environment
Barium (ppm)	1	2	ND	ND	Erosion of natural deposits
Gross Alpha (pCi/L)	15	0	2.66	0.99-15	Erosion of natural deposits
Total Triahalomethanes "TTHMs" (ug/L)	80	N/A	29.47	10.2-48	By-product of drinking water disinfection
Haloacetic Acid "HAA5" (ug/L)	60	N/A	6.32	1.1-11.6	By-product of drinking water disinfection
UNREGULATED CONTAMINANT	**NOTIFICATION LEVEL**	**PHG (MCLG)**	**AVERAGE**	**RANGE**	**SOURCES IN DRINKING WATER**
Vanadium (ppb)	50	N/A	13.25	5.5-21	

Secondary Standards

Aesthetic Standards

CONTAMINANT	MCL	AVERAGE	RANGE	SOURCES IN DRINKING WATER
Bicarbonate Alkalinity (ppm)	N/A	110	110-210	Natually present in environment
Calcium	N/A	16	16-54	Natually present in environment
Chloride (ppm)	500.0	75	13-160	Natually present in environment
Color (units)	15.0	0	0	Naturally present in environment
Odor Threshold (units)	3.0	1	1	Naturally present in environment
Hardness (CaCO3)	N/A	96	52-180	Naturally present in environment
Iron (ppm)	300.0	0.02	ND-20	Naturally present in environment; industrial waste
Manganese (ppm)	0.1	0.047	ND-1.4	Naturally present in environment
ph Units	N/A	7.56	7-8.6	Naturally present in environment
Clarity "turbidity" (NTU)	5.0	0.2	0-0.77	Naturally present in environment
Sodium (ppm)	N/A	133	53-360	Naturally present in environment
Specific Conductance (µmho)	1600.0	856	340-1600	Substances from ions in water
(ppm)	250.0	174	56-400	Naturally present in environment
Zinc (ppm)	5.0	0.017	ND-0.05	Naturally present in environment

Detection of Coliform Bacteria

MICROBIOLOGICAL CONTAMINANT	MCL	HIGHEST NO. OF DETECTIONS	MONTHS IN VIOLATION	SOURCES IN DRINKING WATER
*Total Coliform Bacteria ≤ 40 Samples/Month (Present/Absent)	More than 1 sample in a month with a detection	1	0	Normally present in the environment

Lead and Copper

CONTAMINANT	Sample Date	No. of samples collected	90th percentile level detected	No. sites exceeding AL	AL	PHG	SOURCES IN DRINKING WATER
Copper (ppb)	9/20/2012	32	1.0	0	1.3	0.3	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

Emergency Source
City of Victorville
Water Quality 2014

Table 1 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD					
Chemical or Constituent	**Range of Detections**	**Average Level**	**MCL**	**PHG (MCLG) (MRDLG)**	**Typical Source of Contaminant**
Arsenic (ppb)	0 - 10	4.72	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chromium (ppb)	0-12	5.43	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	0-3.50	0.64	2.0	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as No3) (ppm)	0-12.0	3.94	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Table 2 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD					
Chemical or Constituent	**Range of Detection**	**Average Level**	**Secondary MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Chloride (ppm)	1.8-49.0	8.5	500	N/A	Runoff/leaching from natural deposits; seawater influence
Specific Conductance (µmho)	180-550	264	1600	N/A	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2.7-150	21.07	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	94-350	176	1000	N/A	Runoff/leaching from natural deposits
Turbidity (NTU)	0-4.7	0.4	5	N/A	Soil runoff
Table 4 – SAMPLING RESULTS FOR SODIUM AND HARDNESS					
Chemical or Constituent	**Range of Detection**	**Average Level**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	20-72	47.54	None	None	Naturally occurring mineral found in ground & surface water
Hardness (ppm)	0-170	27.87	None	None	Generally found in ground & surface water

Summary Information for Contaminants Exceeding an MCL, MRDL, or AL, or a Violation of Any Treatment Technique or Monitoring and Reporting Requirement

Arsenic levels in Well 4 were found to exceed the EPA maximum contaminant level of 10 ppb (0.010 ppm); Well 4 water is being blended with well waters with low levels of Arsenic to produce finished water below the MCL for Arsenic. A blending plan for Arsenic was submitted to CDPH in 2013.
Water blending is required for Fluoride adjustment from wells 4 and 5A. Filtration treatment is required for Iron and Manganese for wells 1G, 3G2, 4G, and 8G2. CDPH approved Fluoride blending in 2005.

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

Monitoring Requirements Not Met for City of Adelanto

Our water system failed to monitor as required for drinking water standards during the past year and, therefore, was in violation of the regulations. Even though this failure was not an emergency, as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 2014, we did not complete all monitoring for Nitrate and therefore, cannot be sure of the quality of our drinking water during that time.

What should I do?

- There is nothing you need to do at this time
- The table below lists the contaminant we did not properly test for during the last year, how many samples we are required to take and how often, how many samples we took, when samples should have been taken, and the date on which follow-up samples were taken.

Contaminant	Required Sampling Frequency	Number of Samples Taken	Number of delinqent sample	When All Samples Should Have Been Taken	When Delinquent Samples Were Taken
Nitrate	One (1) Annual Sample per Well (10)	Five (5)	Five (5)	2014	*6/2/2015

* Nitrate Sample results for two of the three delinquent wells was “Non-detect”. One well remains unsampled due to maintenance issues of the well. Nitrate sampling met water quality standards. The delinquent wells ran for a total of 271 days (Well 6), 352 days (Well 7), 298 days (Well 8G2), and 362 days (Well 1G).

- If you have other health issues concerning the consumption of this water, you may wish to consult your doctor.

What happened? What is being done?

Nitrate samples are required to be taken annually from source water wells used for potable water consumption. During 2014 5 of the ten wells were sampled for Nitrate; five were not. These five wells are utilized intermittently during the year on an as needed basis; one well was out of service for maintenance issues and is still out of service so samples were not taken from this well. The remaining 4 wells were not sampled due Staff's failure to properly adhere to the sampling frequency.

One well remains out of service for maintenance and will be sampled when the well is returned to service. The remaining 4 wells were sampled on June 2, 2015. **The results from Nitrate sampling was "Non-detect" respectively for these wells. Nitrate sampling met water quality standards.**

For more information, please contact Mr. Thomas Thornton; (Public Utilities Director) at 760-246-2300; Ext: 3025 or at 11600 Air Expressway, Adelanto, CA 92301.

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- SCHOOLS: Must notify school employees, students, and parents (if the students are minors).
- RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.
- BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.

This notice is being sent to you by the City of Adelanto

State Water System ID#: _3610001____. Date distributed: _____.

APPENDIX L

Landscape Water Conservation Ordinance No. 441, Adelanto Municipal Code, Section 17.60

ORDINANCE NO. 441

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ADELANTO, SAN BERNARDINO COUNTY, STATE OF CALIFORNIA, FINDING THE APPROVAL OF CODE AMENDMENT 05-02 EXEMPT FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT PURSUANT TO SECTION 15308 OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT GUIDELINES (ACTIONS BY REGULATORY AGENCIES FOR PROTECTION OF THE ENVIRONMENT), ADOPTING CODE AMENDMENT 05-02 MODIFYING CHAPTER 17.10 OF THE ZONING CODE DELETING THE CURRENT LANDSCAPING SECTION 17.10.110 AND ADDING CHAPTER 17.60 TO INCLUDE THE OLD LANDSCAPE REQUIREMENTS AND ADDING NEW INFORMATION REGARDING WATER CONSERVATION, INCORPORATING MORE DETAILED REGULATIONS FOR NEW RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT, MODIFYING TABLE 25-1 OF SECTION 17.25.040 AND TABLE 30-1 OF SECTION 17.30.040(A) REDUCING THE MINIMUM AMOUNT OF LANDSCAPING FOR COMMERCIAL AND INDUSTRIAL DEVELOPMENT FROM 10 PERCENT TO 5 PERCENT IN THE ADELANTO MUNICIPAL CODE, AND MAKING FINDINGS IN SUPPORT THEREOF.

WHEREAS, the City of Adelanto has enacted landscaping regulations as part of the adopted Zoning Code; and

WHEREAS, the City of Adelanto acknowledges that there is a need to conserve water throughout the Victor Valley; and

WHEREAS, a Notice of public hearing was posted and published in the newspaper on January 26, 2006. In addition, a letter advising applicants of the proposed Code Amendment, and an invitation to a workshop on December 1, 2005 was mailed to all applicants with current development projects in process in the City, both residential and non-residential; and

WHEREAS, at the November 9, 2005 meeting, staff presented for discussion an ordinance amendment to reduce the percentage of landscaping area required for commercial and industrial development; and

WHEREAS, a workshop was conducted with the development community on December 1, 2005 to review the proposed water conservation policies; and

WHEREAS, a duly noticed public hearing was held before the City Council on February 8, 2006 to hear public testimony and consider the proposals; and

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA HEREBY ORDAINS AS FOLLOWS:

Section 1. The above recitals are all true and correct.

Section 2. The City Council has reviewed and considered the information included in the General Plan, Zoning Code, staff reports for the public hearings, and public testimony prior to taking action on the proposed Code Amendment. This information is on file and available at the Community Development Department at the City Hall of the City of Adelanto.

Section 3. The City Council finds and determines that the adoption of Code Amendment 05-02 is exempt from the California Environmental Quality Act pursuant to Section 15308 of the California Environmental Quality Act Guidelines (Actions by Regulatory Agencies for Protection of

the Environment) and the City Council determinations reflect the independent judgment of the City Council.

Section 4. The City Council hereby further finds and determines that the City has followed the procedures for Ordinance Amendments as set forth in Sections 65850 through 65863.13 of the California Government Code.

Section 5. The City Council of the City of Adelanto hereby adopts Ordinance No. 441, adopting Code Amendment 05-02, modifying Chapter 17.10 of the Zoning Code deleting the current landscaping Section 17.10.110 and adding Chapter 17.60 to include the old landscape requirements and adding new information regarding water conservation, incorporating more detailed regulations for new residential, commercial, and industrial development, modifying Table 25-1 of Section 17.25.040 and Table 30-1 of Section 17.30.040(a) reducing the minimum amount of landscaping for commercial and industrial development from 10 percent to 5 percent n the Adelanto municipal code, attached hereto as Exhibits A, B, and C, and incorporated herein.

Section 6. If any provision of this ordinance or the application thereof to any persons or circumstances is held invalid, the remainder of the ordinance and the application of such provision to other persons or circumstances shall not be affected thereby.

Section 7. The Mayor shall sign and the City Clerk shall certify passage and adoption of this Ordinance, and shall cause the same to be published and posted pursuant to the provisions of law in this regard, and this Ordinance shall take effect sixty (60) days after its final passage.

Attachments

Exhibit A:	Chapter 17.60
Exhibit B:	Table 25-1
Exhibit C:	Table 30-1

PASSED, APPROVED AND ADOPTED this 22nd day of February 2006.

Jim Nehmens
Mayor of the City of Adelanto

Cindy Herrera
City Clerk

APPROVED AS TO FORM:

Marguerite P. Battersby, City Attorney

I, Cindy Herrera, City Clerk of the City of Adelanto, California, do hereby certify that the foregoing Ordinance No. 441 was duly introduced for first reading on the 8th day of February 2006 and regularly adopted at a regular meeting of the City Council of the City of Adelanto on this 22nd day of February 2006, by the following vote, to-wit:

AYES: Council Members Baisden, Glasper, McCauley, Mayor Pro Tem Perez, and Mayor Nehmens

NOES: None

ABSENT: None

IN WITNESS WHEREOF, I hereunto set my hand and affix the official seal of the City of Adelanto on this 22nd day of February 2006.

Cindy Herrera
City Clerk

SEAL

Exhibit A – Ordinance No. 441

CHAPTER 17.60

LANDSCAPING/WATER CONSERVATION

17.60.10	**General Provisions**
17.60.20	**Landscape Design Plan**
17.60.30	**Landscape Design Standards**
17.60.40	**Landscape Material and Area Requirements**
17.60.50	**Model Home Complexes**
17.60.60	**Landscape Maintenance**
17.60.70	**Water Conservation**
17.60.80	**Approved Plant List**

17.60.10 General Provisions

Landscaping shall be provided, irrigated and maintained as required by the Planning Director, pursuant to this Code and the policies of the City General Plan, each of which may be amended from time to time.

A. Purpose. The purpose of this Chapter is to provide minimum water conservation and landscape development standards which will promote the general welfare of Adelanto residents through the provision of an outdoor environment which will:

1. Create aesthetically pleasing views and vistas along public streets;

2. Complement and enhance the functional and aesthetic design of new building and site development projects so as to protect and enhance property values;

3. Provide visual screening of parking, service and storage areas;

4. Mitigate the adverse impacts of higher intensity land uses upon lower intensity uses through the provision of needed landscape buffers;

5. Promote water conservation by restricting the use of turf and ornamental water features and requiring the utilization of low water use plant materials;

6. Promote climate modifications for enhancement of pedestrian environment at street frontages, parking lots and building facades.

7. Provide maximum shade on ground surfaces to reduce the "urban heat island effect" produced by large expanses of unprotected

paved areas.

B. Applicability.

All persons owning, developing or maintaining property subject to the provisions of this Chapter shall comply with all applicable provisions contained herein as identified below.

The landscape standards and requirements established by Sections ~~B. through E~~ *17.60.20 through 17.60.280* ~~of this Chapter~~ shall apply to all new developments whether residential, commercial or industrial. The landscape standards and requirements establish by Sections ~~B. through F.~~ *17.60.20 through 17.60.80* ~~of this Chapter~~ shall not apply to existing development, unless the development is being expanded by 25% or more of the existing floor area. The landscape maintenance provisions of Section ~~F. of this Chapter~~ *17.60.60* shall apply to all new and existing development.

This Chapter does not apply to registered historical sites or cemeteries. Registered historical sites and cemeteries shall provide scheduled irrigation based on CIMIS (California Irrigation Management Information System) or conduct water audits every three (3) years with strict adherence to the recommendations in the water audit. CIMIS and water audits shall be submitted to the water serving entity for compliance.

17.60.20 Landscape Design Plan

A. Prior to the issuance of a building permit, ~~one (1) copy~~ *three (3) copies* of a landscape design plan consisting of the landscape and irrigation plans shall be submitted to the Planning Division. Such plans shall be drawn at a minimum scale of one (1) inch equals thirty (30) feet (maximum sheet size 30" X 42") and contain the following information:

1. Building footprints and roof overhangs, walkways, parking surfaces and vehicular overhang lines, property lines, right-of-way lines, and easement lines;

2. Calculations of the square footage and percent of total of all site elements including building footprints, parking, and landscaped area. Landscaped area shall also be further subdivided into subcategories of turf, shrubs/groundcover, and inorganic materials;

3. The location of existing and proposed plant materials;

4. Plant graphic symbol legend and a plant schedule including botanical and common names, planting size, number of plants, and on-center spacing of massed shrubs and ground cover plants on each landscape plan sheet;

5. Planting details, specifications and required guarantee (see Section ~~F.2.~~ *17.60.60.B*);

6. Inorganic materials schedule including type of materials (i.e. decomposed granite, river rock, screened rock, etc.) quantities and depth;

7. Irrigation plan showing location of controller, existing or proposed meters, backflow preventer, water lines, heads, and materials schedule on each landscape plan sheet. Irrigation systems shall be designed to minimize maintenance and water consumption, and the irrigation system shall be properly designed and installed to ensure that overspray onto fences, walls and structures is eliminated to the maximum extent feasible;

8. Irrigation details and pressure loss calculations.

9. A diagrammatic plan showing the amount of shading that the landscaping is expected to provide at its maturity with the sun at its apex.

B. The landscaping and irrigation plans shall be approved by the Director if found to be in compliance with the standards and requirements of this Chapter, which approval shall be obtained prior to the installation of the landscaping and irrigation materials. The installation of the landscaping and irrigation materials required by this Chapter shall be completed and shall be approved by the Director prior to the issuance of a Certificate of Occupancy for the structure, or prior to the use of the facility if no structure is involved.

17.60.30 Landscape Design Standards

A. Landscaping shall be designed, installed and continuously maintained in accordance with the following standards:

1. Principles of Xeriscape Landscaping. Landscape developments shall be designed, installed and continuously maintained in accordance with the following seven basic principles of Xeriscape landscaping:

a. Planning and Design. Use a water conservation design. Implement a "mini-oasis" concept. Water using plants and turf should be concentrated in small areas near buildings where they may be enjoyed at the pedestrian level.

b. Limited Turf Areas. Limit the use of turf to small areas where it will be actively used and efficiently watered. *See Section 17.60.70.E for further information.*

c. Efficient Irrigation. Utilize the most efficient irrigation system for the area being served. Drip irrigate individual plants rather than flooding larger areas. Group plantings with common water requirements together to be watered on the same irrigation control zone.

d. Soil Improvements. Add soil amendments within planned areas to increase the water holding capacity of the soil and improve the health and vigor of plants.

e. Mulching. Cover final soil surfaces with organic or inorganic mulches to insulate against soil temperature extremes and conserve moisture.

f. Use Lower Water Demand Plants. Utilize only those plants listed in the officially approved low water use plant list (see Section ~~G.~~ *17.60.80*) or alternative plants approved by the Director.

g. Appropriate Maintenance. Maintain irrigation systems so they operate at peak efficiency. Lessen water demand by keeping weed growth down and by thinning unwanted wood from trees rather than cropping them.

2. Unity and Continuity[1].

Landscape unity and continuity may be significantly enhanced through the selection of a dominant tree and shrub species. Such dominance shall be established by making the selected species clearly in the majority (60% or more).

3. Tree and Shrub Placement in Proximity to Fire Hydrants.

Trees, as measured from trunk center, shall be placed a minimum of five (5) feet from fire hydrants. Shrubs, as measured from their mature perimeter, shall be located a minimum of five (5) feet from the rear of a fire hydrant. In no case shall any material other than groundcover be placed between the street or roadway and within fifteen (15) feet of either side or front of a fire hydrant (Figure ~~17.10.110-A~~ *17.60.30-A*).

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1 Plant palettes partially implemented through the construction of one or more phases of a previously approved master planned project, except for turf areas in excess of the limitations established by these landscape standards, shall be continued throughout the development of that project.

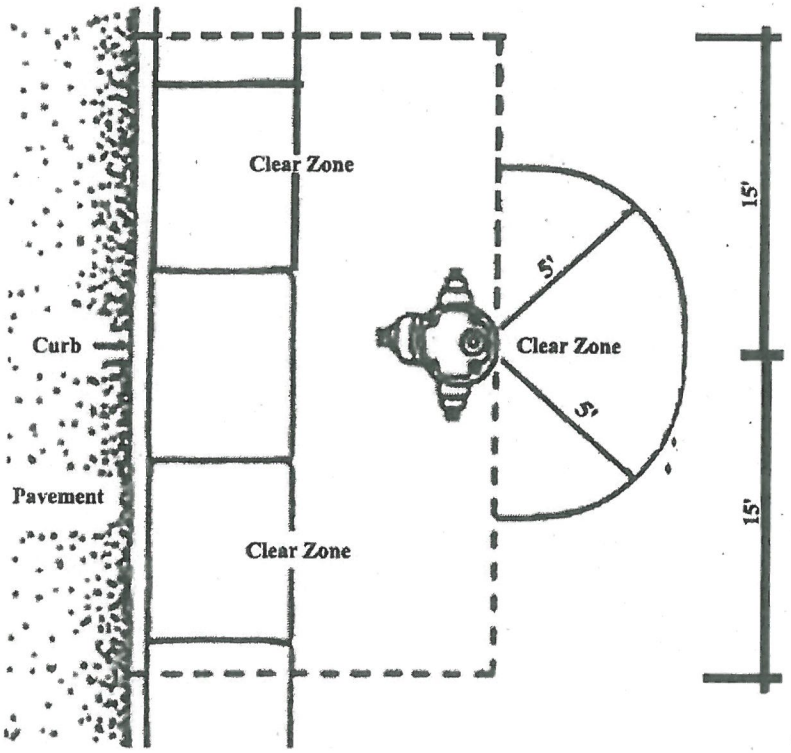


Figure 17.60.30-A - Fire Hydrant Clear Zone

4. Ground Surface Treatment

a. Pre-Treatment of Ground Surfaces Required. A pre-emergent herbicide shall be applied to the ground prior to and after the placement of natural surface materials (decomposed granite, gravel, crushed rock, river run rock, etc.) in any landscaped area to prevent weed growth.

b. Inorganic Ground Cover. Inorganic ground covers (decomposed granite, crushed stone, etc.) shall be of a natural color harmonious with other site and architectural materials and shall be installed to a minimum depth of two (2) inches.

c. Plant Cover/Dust Control. All portions of a development site (including future building pads) not occupied by buildings, structures, paved improvements, and required landscape areas shall be temporarily landscaped with plant materials in accordance with this Chapter or treated

with an appropriate inorganic ground cover and maintained in a weed and dust free condition.

5. Plant Massing.

The massing of trees and shrubs into groups containing three (3) or more plants is required unless standards elsewhere within this Chapter require only a single element, e.g., single trees within parking lot planter islands. Planting of single shrub specimens, unless used to repeat an element already established within a massed planting within the same visual area, is prohibited.

6. Plant Groupings.

The grouping of plant species commonly found together in natural associations or of common environmental requirements (soil type, water, sun exposure, temperature limitations, etc.) is required.

7. Plant Spacing.

In order to foster a more natural look, an uneven spacing of plants is required unless such plants are being used to create a massed shrub or groundcover bed. The spacing of shrubs shall be sufficient to allow plants to reach their natural mature size and form.

8. Consistency with Existing Streetscape Standards.

Street frontage landscaping shall be consistent with any previously adopted specific streetscape standards.

17.60.40 Landscape Material and Area Requirements

A. New developments shall be landscaped in accordance with the following minimum standards:

1. Plant Material

a. Landscaping shall consist of native or drought-tolerant plants capable of surviving the desert environment and climate with a minimum of maintenance and supplemental watering. A list of plants determined capable of meeting this criterion is contained in Section ~~G.~~ *17.60.80.* Other plants may be considered on their merits in meeting this criterion. Determinations of plant species suitability will be made by the Director upon submission of project plans.

b. Landscaping materials may also consist of wood

timbers, decorative rocks, boulders, sand, bark, gravel, or a combination thereof; provided, however, that the majority of landscape materials and area shall consist of plants, as set forth above.

2. Irrigation

Utilize the most efficient irrigation system for the area being served. Irrigation of required landscaped areas should be by drip irrigation and matched precipitation rate, low-gallonage sprinkler heads, bubblers, and timing devices. Timing devices shall include soil moisture sensors and rain sensing override devices.

Irrigation systems shall be designed to minimize maintenance and water consumption, and the irrigation system shall be properly designed and installed to ensure that overspray onto fences, walls and structures is eliminated to the maximum extent feasible.

3. Landscape Area Requirements.

All portions of a development site not utilized for building development, service areas, paved or improved storage areas, parking, driveways, etc., shall be landscaped. *Developers are required to install front and street side yard landscaping for all new development.* Minimum areas of landscaping are as follows:

a. Front Building Setback/Street Right-of-Way Areas. All front building setback and street right-of-way areas located between on-site improvements and the back of existing or future public sidewalks or street curbs, except needed access driveways, shall be fully landscaped, unless otherwise provided for in this Development Code.

b. Parking Lot Area. The following landscaping standards apply to parking lots (Figure ~~17.10.110~~ *17.60.40*-B, C, and D).

1) In order to reduce the "heat island effect" of large expanses of unprotected paved areas, a minimum of thirty (30) percent of the interior parking surface of all parking lots shall be shaded at the maturity of the landscaping.

2) Provide a minimum of one (1) tree (minimum fifteen (15) gallon size when planted) for each seven (7) parking spaces located so as to visually disrupt long rows of parking spaces, trees may be clustered where appropriate.

3) A thirty-six to forty-two (36-42) inch high decorative masonry wall, hedge or landscaped berm, as measured from the finished grade of the parking area, shall also be used adjacent to public rights-of-way to screen the parking area. The height of the screening wall or berm may be reduced when the parking lot is below grade. Horizontal and vertical variations in the design of screening walls are required where the length of such walls exceeds forty (40) feet. Said variations are subject to Planning Staff approval.

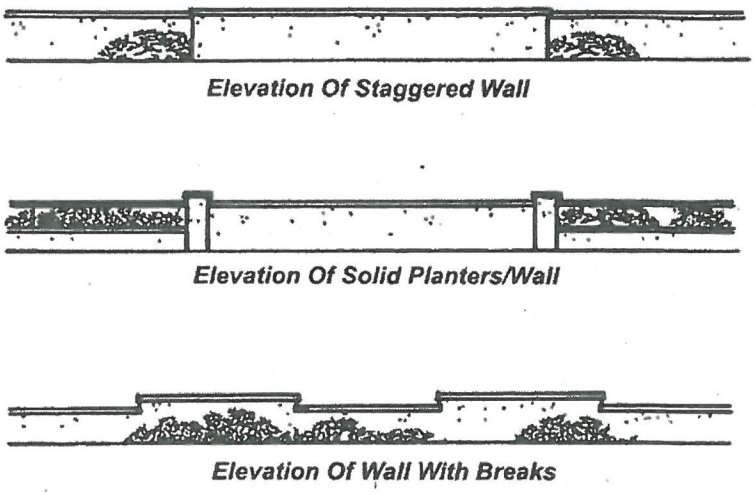


Figure 17.60.40-B - Recommended Design Features and Materials

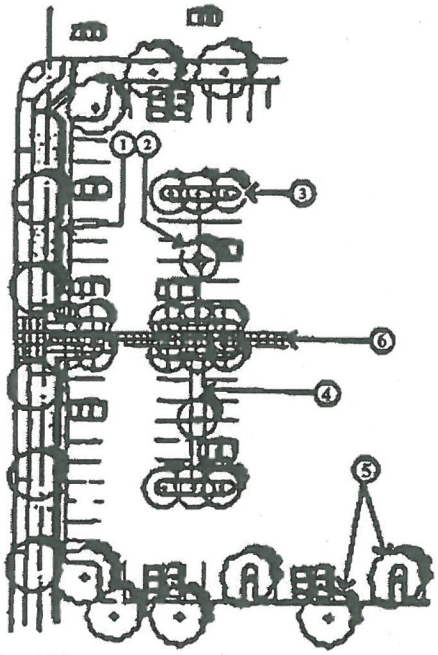
4) A minimum of five (5) percent of the interior parking surface area of all parking lots shall be landscaped. Such percentage may be achieved by combining paragraph (1) below with paragraph (2) and/or (3).

a) Planter islands a minimum of five (5) feet in width shall be located at the ends of all rows of parking stalls between the last stall and any drive aisle. Where drive aisles are curved, alternative dimensions with similar area may be approved (Figure ~~17.10.110~~ *17.60.40-*C); and

b) Planter islands, shall be uniformly distributed throughout the interior parking area, and protected by raised curbs (Figure ~~17.10.110~~ *17.60.40*-C); or

c) Planter strips, located between double rows of parking stalls, shall be a minimum of four (4) feet in width. Each parking stall may overhang two (2) feet into this area (Figure ~~17.10.110~~ *17.60.40*-C).

5) Trees within parking lots shall be kept trimmed to a minimum clear canopy height of six (6) feet for visual safety.



LEGEND
1 30" - 42" Block wall and/or berm.
2 Minimum 6' square tree well.
3 Minimum 6'x18' end of row planter island.
4 Planter strips a mimimum of 4' in width between double rows.
5 Minimum one tree per each 7 uninterrupted parking stalls.
6 Special paving at pedestrian circulation areas.

Figure 17.60.40-C - Planter Islands/Strips

6) A landscaped strip with a minimum width of ten (10) feet shall be provided where parking lots are adjacent to a public right-of-way or

residential uses or districts, unless otherwise provided for in this Code.

4. Landscape Buffers/Perimeter Landscape Strips

a. Landscape Buffers. When providing a buffer between commercial/industrial and residential uses or districts the following features are required:

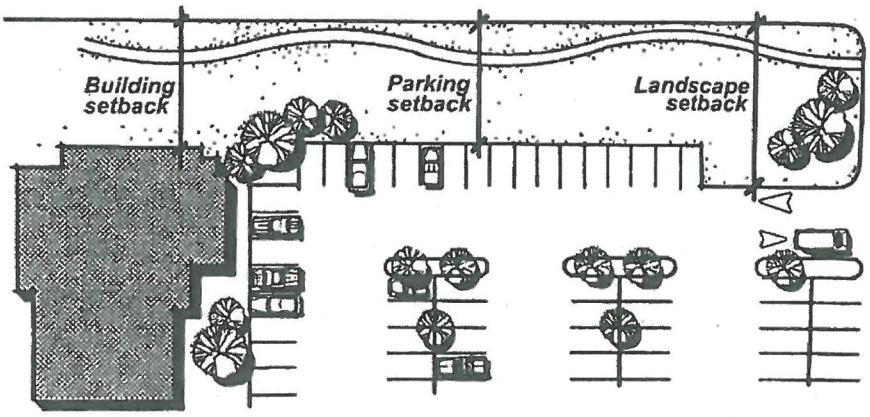


Figure 17.60.40-D - Landscape Areas

1) Landscaping shall include one (1) tree for each 200 square feet of required landscape area. Said tree shall be a minimum fifteen (15) gallon size when planted, twenty (20) percent of such required trees shall be twenty-four (24) inch box size; and

2) A six (6) foot decorative masonry wall to City standards; and

3) Evergreen trees a minimum of six (6) feet in height, and 2 inches in diameter, planted at a maximum spacing of twenty (20) feet on center and shrubs planted at a rate of five (5) per one hundred linear feet.

b. Front Building Setback Area. Landscaping in the front building setback area shall be provided at a minimum rate of one (1) tree and six (6) shrubs per thirty (30) linear feet of frontage plus sufficient groundcover plantings to provide combined shrub and ground coverage of fifty (50) percent of the total landscaped area. Trees and shrubs may be grouped, but gaps between groupings of plants shall not exceed forty (40) feet.

c. Other Perimeter Areas. Landscaping in other perimeter areas shall be provided at a minimum rate of one (1) tree and six (6) shrubs per forty (40) linear feet plus sufficient groundcover plantings to provide combined shrub and ground coverage of forty (40) percent of the total landscaped area, except where screening is required. Trees shall be a minimum fifteen (15) gallon size when planted, twenty (20) percent of which shall be twenty-four (24) inch box size. Trees and shrubs may be grouped, but gaps between groupings of plants shall not exceed fifty (50) feet.

5. Landscape Improvement Requirements. The following minimum landscape improvements are required within the following landscape areas:

a. Single and Multi-Family Residential Developments

1) Common open space/retention areas. A minimum of one (1) tree and six (6) shrubs per 500 square feet of open space plus such additional vegetative ground cover as is necessary to cover a minimum of fifty (50) percent of the total landscaped area with shrubs and ground cover. The inclusion of turf is subject to the limitations established in ~~subsection 6. below,~~ *Section 17.60.70.E and* in Table ~~17.10.110~~ *17.60.40*-A.

2) Arterial and collector street rights-of-way. Arterial and collector street rights-of-way adjacent to and within single and multi-family residential developments shall be landscaped at a rate of one (1) tree and three (3) shrubs per 30 linear feet plus such vegetative ground cover necessary to cover a minimum of forty (40) percent of the total landscaped area with shrubs and ground cover. Turf is prohibited within public rights-of-way.

3) Front and Street Side Yards. The use of turf in these areas is discouraged. See Section 17.60.70.E for specific restrictions.

b. Commercial/Office/Institutional Developments. One (1) tree and six (6) shrubs per 500 square feet of interior open space plus such additional ground cover which, upon maturity, will cover a minimum of fifty (50) percent of all interior open space surfaces. The inclusion

of turf is subject to the limitations established in ~~subsection 6. below,~~ *Section 17.60.70.D and* in Table ~~17.10.110~~ *17.60.40*-A.

c. Industrial Developments. One (1) tree and six (6) shrubs per 750 square feet of interior open space plus such additional vegetative ground cover which, upon maturity, will cover a minimum of forty (40) percent of all interior open space surfaces. The inclusion of turf is subject to the limitations established in ~~subsection 6. below,~~ *Section 17.60.70.D and* in Table ~~*17.10.110*~~ *17.60.40*-A.

d. Grading in the Front Building Setback. Front setback areas shall be graded in a manner which creates natural and pleasing ground forms in accordance with the following guidelines:

1) A maximum of fifty (50) percent of the front building setback area may be used for storm water retention;

2) Soil excavated to create needed retention basins shall, within the slope limitations established below, be used to create complementary earth mounds elsewhere within the same front building setback area;

3) Earth mounds with a maximum slope ratio of four to one (4:1), horizontal to vertical, shall be located and designed to minimize street views into retention basins;

4) Grading and other site preparation shall preclude the run-off of rain and/or irrigation water from landscaped surfaces onto paved surfaces.

e. Finished Grade Surfaces. All landscaped areas shall be graded so that finish grade surfaces of all nonliving materials (i.e., decomposed granite, crushed rock, mulch, and the like) are at least one and one-half (11/2) inches below concrete or other paved surfaces.

f. Protection of Landscaped Areas. Landscaped areas adjacent to vehicular drives or parking areas shall be protected by a six (6) inch vertical curb. Areas surfaced with different materials (i.e. lawn and decomposed granite) shall be separated by masonry, wood, or mowing strips.

g. Irrigation Systems. The use of drip irrigation systems or systems of equivalent efficiency for all landscaping at commercial and industrial facilities and all common areas of residential developments is required. The use of similar systems on individual residential lots is encouraged.

Irrigation systems shall be designed to minimize maintenance and water consumption, and the irrigation system shall be properly designed and installed to ensure that overspray onto fences, walls and structures is eliminated to the maximum extent feasible.

h. Limitations on the Use of Turf

Unless watered with "reclaimed" water, the use of turf in specific land uses shall be limited to the percentages listed in Table 17.60.40-A below.

Table 17.60.40-A – Permitted Turf Area	
Land Use	Turf permitted as a percent of Total Landscaped Area
Single family residential	~~No limitations~~ *20%*
Multi-family residential	~~40%~~ *20%*
Common open space/retention basins	~~40%~~ *20%*
Parks, schools, golf course and cemeteries	No limitations
Commercial/office/institutional	20%
Industrial	10%

7. Decorative Water Features.

Within commercial, industrial and multi-family developments the use of decorative water features including, but not limited to, pools, ponds, fountains, streams, and waterfalls, unless serviced with "reclaimed water", shall be limited to small scale pedestrian oriented locations and features. Water feature designs that reduce evaporation, e.g. cascading water rather than vertical sprays, are required.

17.60.50 Model Home Complexes

A. Model home complexes, unless they are utilizing "reclaimed water",

shall be landscaped in accordance with the xeriscape landscape principles listed in ~~subsection C.1. of this Chapter~~ *Section 17.60.30.A* and the following minimum requirements:

1. Plant Materials.

   Landscaping shall consist of native or drought-tolerant plants capable of surviving the desert environment and climate with a minimum of maintenance and supplemental watering. A list of plants determined capable of meeting this criterion is contained in Section ~~G.~~ *17.60.80* ~~of this Chapter~~. Other plants may be considered on their merits in meeting this criterion. Determinations of plant species suitability will be made by the Director upon submission of project plans.

2. Turf and Water Surfaces/Features.

   Combined turf and water surfaces of all water features shall not occupy more than fifty (50) percent of the landscapable area within each lot in the model home complex. Swimming pools, hot tubs and spas are exempt from this limitation.

3. Literature Package.

   A literature package describing water conserving landscaping designs shall be on display within all model sales offices. If copies of the literature package are not made available by the homebuilder, such display shall include information regarding where the literature is available. The following are recommended to be included in the literature package:

   a. A Guide to High Desert Landscaping. Available at your local water district offices and the Planning Division offices.

   b. The Unthirsty One Hundred
      Reprint from Sunset Magazine - October 1988
      Lane Publishing Company
      Menlo Park, California 94025

17.60.60 Landscape Maintenance

A. Landscape Maintenance. Landscaping shall be continuously maintained (watering, fertilizing, weeding, mowing, trash pick-up, and pruning) by the landowner or the lessor of new and existing development in accordance with the following:

1. Sites shall be kept clean and attractive at all times. Weeds and trash (windblown or otherwise) shall not be allowed to accumulate on the site.

2. Living plant material shall receive sufficient water and fertilization to maintain health and vigor and shall, to the maximum extent possible, be allowed to attain its natural mature size and shape.

3. Pruning and mowing shall be used to maintain plant health and vigor while enhancing its form and structure. Cropping trees, unless necessary to protect traffic safety or overhead power lines, is prohibited.

   Pruning and mowing will conform to the commonly used standards for each species; however, in no case will the landscape areas be allowed to become overgrown. Examples of overgrown landscape material include:

   a. Lawn grass species: Plants which have established seed heads, lawns that have become thatched and matted, have become infested with herbaceous weeds, or exceed eight (8) inches in height.

   b. Shrubs and decorative grasses: Plants that have grown so large as to block natural light from entering windows, extend over property lines, extend over roof peaks or eaves, or are causing the strangulation of other plants.

   c. Trees: Plants which display sucker growth, have grown to a height or canopy width which impairs the normal illumination of street lights, extend over property lines, interfere with overhead lines or impact public property.

4. All dead or obviously unhealthy plant material shall be replaced in an expeditious manner with material equal to that which was originally specified on the approved landscape plan.

5. Bare spots in lawns or planters shall be promptly revegetated.

6. Customary maintenance shall include provision of adequate irrigation, based on the micro-climate, and regular application of fertilizer, based on the needs of the plant.

7. *All property owners shall be responsible for maintenance of parkway areas within the public right-of-way adjacent to their properties, except those areas outside of a six-foot high block wall or solid fence.*

B. Landscape Guarantee

1. The owner or developer shall, prior to the issuance of a certificate of occupancy, evidence that all plant materials are

guaranteed for a minimum period of sixty (60) days from the date of final approval of the installation of the landscaping. Terms of the guarantee shall also specify that any plant materials which are not approved prior to October 1st of the calendar year in which they are installed shall be further guaranteed until May 20th of the following calendar year.

2. Trees, shrubs, vines, ground cover, and turf which have to be replaced under terms of the guarantee shall be guaranteed for an additional sixty (60) days from the date of replacement.

3. All plant materials requiring replacement under the conditions of the contractors guarantee shall be replaced within ten (10) working days from the date of written notification.

C. Existing Landscaping

1. Maintenance. Required landscape areas, existing at the time of adoption of this Ordinance, shall be maintained in accordance with the provisions of Section ~~F.1.~~ *17.60.60.A* above.

2. Prevention of Wasted Water. Existing developments shall, through improvements to its irrigation system and landscaped areas, prevent water waste resulting from inefficient landscape irrigation, run-off, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, nonirrigated areas, walks, roadways, or structures.

17.60.70 Water Conservation

A. Definitions

*1. **Acre-foot of** water – that quantity of water required to cover (1) acre of land one (1) foot deep, or three hundred twenty-five thousand, eight hundred fifty-one (325,851) gallons.*

*2. **Active recreational area** – an area designated and primarily used for organized sports, including, without limitation, softball, baseball, football, soccer or a similar related sport, including all amenities related to the activity.*

*3. **Body of water** – any artificially constructed lake, pond, or lagoon, regardless of size.*

*4. **City** – the City of Adelanto*

*5. **Controller** – a mechanical timer capable of operating valve stations to set days, length of time, and frequency of water application.*

6. ***Escaped water*** *– the pumping, flow release, escape, or leakage of any water from any pipe, valve, faucet, connection, diversion berm, well, or any facility for the purposes of water supply, transport, storage, disposal, or delivery onto adjacent property or public right-of-way.*

7. ***Excess runoff*** *– water accumulation on streets, gutters, neighboring properties, or other areas in an amount sufficient to cause flow.*

8. ***Manager*** *– the City Manager or the City Manager's designee.*

9. ***Lot*** *– a legally created parcel of land occupied or intended for occupancy by one (1) main building together with its accessory buildings, and uses customarily incidental to it, including the open space required by the City's zoning ordinance, and having it's principal frontage upon a street as defined in the City's zoning ordinance.*

10. ***Model home*** *– a facility used exclusively for the promotion and sale of homes similar to the model.*

11. ***Person*** *– an individual, corporation, partnership, incorporated association, or any other similar entity.*

12. ***Public water system*** *– any publicly or privately owned network of pipes, conduits, wells, reservoirs, holding tanks, and other components, including any combination thereof, which supplies water to water users, who are charged a fee of any kind or nature for such purpose, or which is designed to supply water or is capable of supplying water to water users for a fee, and includes any such system whether it is operated under the regulatory authority of the City of Adelanto, but does not include any irrigation company or district whose primary purpose is to supply water for farming.*

13. ***Residential development*** *– the development of any type of dwelling unit or units suitable or designed for human habitation, including, but not limited to, single family homes, condominiums, or manufactured homes, but not including hotels, motels, licensed convalescent homes, commercially operated retirement homes, time share units, or the like. "Residential development" shall not include remodeling or reconstruction where no new dwelling unit is created.*

14. ***Right of way*** *– land which by deed, conveyance, agreement, easement, dedication, usage, or process of law is reserved for or dedicated to the general public for street, highway, alley, public utility, or pedestrian walkway purposes.*

15. ***Turf*** *– a surface layer of earth containing grass with its roots.*

16. ***Turf-related facility*** *– a school, public recreational facility, cemetery, golf course, industrial park, or common area of a housing development that applies water from any source, including effluent.*

17. ***Water-intensive landscape*** *– an area of land that is watered with a permanent water application system and planted primarily with plants not listed in Section H "Approved Plant List". Included is the total surface area of all water features (i.e. swimming pools of any size, fountains, ponds, water courses, waterfalls, and other artificial water structures) filled or refilled with water from any source.*

18. ***Water purveyor*** *– the owner or operator of a public water system.*

19. ***Water user*** *– those persons, customers, and properties served by a water purveyor within the incorporated boundaries of the City.*

20. ***Water waste*** *– the indiscriminate use or excessive dissipation of water, which is unproductive or does not reasonably sustain life or economic benefits.*

B. *Application of Section*

The provisions of this chapter shall apply to all water users. Any new single family residential development that is in Final Map check or has submitted Street Improvement Plans at the time this Ordinance is adopted is exempt from these regulations.

1. *resulting from fire fighting, hydrant flushing, or fire training activities; or*

2. *necessary to prevent or abate threats to the public health or safety; or*

3. *from routine maintenance of any public water system or from temporary water system failures or malfunctions; or*

4. *from water users engaged in landscape irrigation with treated wastewater, effluent, grey water, or other nonpotable water.*

5. *drought tolerant plants as outlined in Section 17.60.80.*

C. *Prohibited Water Uses and Water Waste*

The restrictions or prohibitions in this chapter shall not apply to water

use, runoff, or flow.

1. *It shall be unlawful for any water user of a public water system to knowingly allow water waste at any location or premises within the City limits after having been served with a notice of violation, pursuant to Section 17.60.70.C for wasting water from the same location or premises.*

2. *It shall be unlawful for any owner, occupier, or manager of real property within the City to knowingly allow water waste at any such real property after having been served with a notice of violation, pursuant to Section 17.60.70.C for wasting water from the same location or premises.*

3. *It shall be unlawful for any water user within the City to knowingly make, cause, use, or permit the use of water for residential, commercial, industrial, agricultural, or any other purpose in a manner contrary to any provision of this chapter.*

4. *It shall be unlawful for any water user to cause or permit any water furnished to any property within the City to run or to escape from any hose, pipe, valve, faucet, sprinkler, or irrigation device onto any sidewalk, street, or gutter or to otherwise escape from the property, if such running or escaping can reasonably be prevented.*

5. *It shall be unlawful for any water user to wash any vehicle, equipment, or other object, or any driveway, parking lot, sidewalk, street, or other paved surface, in any manner permitting the continuous flow of water for more than five minutes.*

6. *Commercial and noncommercial watering of turf, ground cover, open ground, shrubbery, crops, gardens, and trees, including agricultural irrigation, in a manner or to an extent which allows substantial amounts or excess runoff shall not be permitted. A minimum amount of runoff, which is a natural consequence of conservative watering, either by hand or by mechanical or automated sprinkling facilities, is permitted, so long as such runoff does not amount to excess runoff as defined in this Chapter.*

7. *It shall be unlawful for any water user to permit the excess use, loss, or escape or water through breaks, leaks, or other malfunctions in the water user's plumbing or distribution system for any period of time after such escape of water should have reasonably been discovered and corrected.*

8. *It shall be unlawful for any water user to willfully or negligently permit or cause the escape or flow of irrigation water in such*

quantity as to cause flooding, impede vehicular or pedestrian traffic, create a hazardous condition to such traffic, or cause damage to public or private rights of way through failure or neglect to properly operate or maintain any irrigation structure, delivery ditch, or waste ditch.

9. *It shall be unlawful for any water user to water or permit the watering of water intensive landscape or turf at time other than as authorized by the water purveyor.*

10. *It shall be unlawful for any water user to willfully or negligently fail to accept irrigation water after it has been ordered.*

D. *Limitation on water intensive landscape and turf areas within new nonresidential facilities*

The following types of facilities shall limit the water intensive landscape and turf within the landscaped area to the following percentages of the total lot area, and all remaining landscaped area shall consist of plants listed in Section 17.60.80:

1. *Churches. Twenty percent (20%) of total lot area.*

2. *Resorts, including hotels and motels. See Table 17.60.40-A (Permitted Turf Area).*

3. *Commercial and industrial uses. See Table 17.60.40-A (Permitted Turf Area).*

4. *Active recreational areas shall not be considered in calculating the percentage of the total lot area and shall not be considered in determining compliance with this Section.*

5. *No water intensive landscape or turf shall be permitted in any right of way.*

6. *No water features (ponds, fountains, etc.) shall be allowed without proof that the feature is utilizing water conservation measures such as recirculated water.*

E. *Limitations on model home and new residential development landscaping*

1. *Developers are required to provide front and street side yard landscaping to all new developments prior to the issuance of a Certificate of Occupancy. All new model homes and new residential development shall limit water intensive landscape and turf area to the following percentage of the total lot area, and all remaining landscaped area shall consist of plants listed in Section 17.60.80:*

a. *Front yard and street side yards. Twenty percent (20%) of the total front/street side yard area. (Total yard area of single family residences include any hardscape areas such as driveways and walkways.)*

b. *Rear yard. No limitations.*

2. *Common areas in residential developments. Ten percent (10%) of the first acre and five percent (5%) of each additional acre up to five (5) acres. Residential developments larger than five (5) acres shall not plant any additional water intensive landscape and turf in common areas.*

3. *Each model home complex shall include at least one plan showing no turf in the front yard and another plan showing no turf in the rear yard (may be the same plan if desired). This no-turf option shall be offered as an option to the home buyer.*

   In addition, at least one plan of each model home complex shall contain no more than 20 percent turf in the rear yard. This option shall be offered as an option to the home buyer.

4 *Water intensive landscape or turf is not limited in rear yards, but is strongly encouraged.*

5. *No water intensive landscape or turf shall be permitted in any right of way.*

6. *No water features (ponds, fountains, etc.) shall be allowed without proof that the feature is utilizing water conservation measures such as recirculated water.*

Any modification to the landscaping that results in a proven reduction of water use may be used to obtain greater flexibility in the minimum turf area allowed. Methods used to reduce water use may include: satellite sprinkler systems, elimination of surface runoff, and/or the use of reclaimed water.

F. *Public education during drought*

The City will use intensive public education to assist water users impacted by the drought to understand the City's need for voluntary compliance. In addition to education, the City may use enforcement measures to curb water misuse.

G. *Drought management plan implementation*

1. *The City Council shall promulgate a drought management plan containing regulations setting forth the criteria for*

implementation and termination of various water use reduction stages.

2. *The City Council is authorized to declare a drought, and to implement a drought management plan, in response to events including, but not limited to, the following: reductions in supply from the Mojave Water Agency or Adelanto Public Utilities Authority, or when an insufficient supply appears likely due to water system limitations or structural failure.*

3. *Such declaration may designate the entire area of the City, or a portion of it if the shortage is not Citywide.*

4. *The City Council may terminate the drought declaration when he or she determines that the events that triggered the drought no longer exist.*

H. *Notification and publication of drought management plan*

If the City Council determines that the health and safety of the City dictate implementing the drought management plan, notification shall be published in a paper of general circulation, to educate the public about the need for the plan, and give them notice of conservation regulations and requirements of the applicable stage of the plan. A copy of the drought management plan shall also be available for inspection at the City Clerk's office.

I. *Enforcement of drought management plan*

1. *The City Manager or his or her designee shall have authority to take actions to enforce any mandatory elements that are part of drought management plans.*

2. *A written notice shall be placed on the property when a first violation occurs, and a duplicate mailed to the person who is responsible for the service to the property where the violation took place. The notice shall describe the violation and order that it be abated immediately.*

3. *For subsequent violations, the City will issue citations and fines according to the provisions of this Chapter.*

4. *Funds generated by the fines under this Section shall be used to mitigate the impact of the drought.*

J. *Variances from drought management plan*

Variances to drought management plan provisions may be granted at the discretion of the City Manager or his or her designee. Applicants for a variance must apply in writing to the City Manager or his or her

designee, and demonstrate special circumstances such as health and safety needs or obligation of contract.

K. Limited exemption to restrictions for users of reclaimed water

To the extent they are exempt from the drought management plan, users of reclaimed or recycled water shall clearly post notices stating that the water being used is not potable and not from the public drinking water supply, and is in conformance to the drought management plan in force at the time.

L. Violations

1. For a first violation of any provision of this chapter, the City shall issue a written notice of first violation and provide the violator with educational materials on water conservation, including a copy of the relevant provisions of this chapter. The City shall give the water user a reasonable period of time to correct the violation. Failure to correct the violation within a reasonable period of time shall constitute a second violation.

2. For a second violation of any provision of this chapter, the City shall issue a written notice of second violation to the water user imposing a fine in the amount not to exceed that outlined in the City of Adelanto Municipal Code and requiring immediate correction of the violation.

3. For a third violation of any provision of this section, the City shall issue a written notice of third violation to the water user imposing a fine in an amount not to exceed that outlined in the City of Adelanto Municipal Code and requiring immediate correction of the violation.

4. For a fourth or subsequent violation of this Section, the City shall impose a fine in an amount not to that outlined in the City of Adelanto Municipal Code. The fourth and each subsequent violation of this chapter shall be deemed a public nuisance, which may be abated pursuant to the procedures provided in the City of Adelanto Municipal Code.

5. Any fine imposed under this Section shall be collected in accordance with the procedures provided in the City of Adelanto Municipal Code. Failure to pay any portion of a water user's account, including any fines imposed pursuant to this Section, shall subject said account to termination of water service in accordance with the provisions of this Section.

6. In addition to the remedies set forth above, the City may seize equipment, line, fountains, and other devices which are operated in violation of this Chapter, until the fine is paid. The City may

dispose of these items if the fine is not paid in six (6) months from the date the equipment was confiscated.

M. Right to hearing

Any water user against whom a penalty is levied under this chapter shall have a right to a hearing before the City Manager of the City Manager's designee.

17.60.80 Approved Plant List

CITY OF ADELANTO
WATER CONSERVING PLANTS FOR THE HIGH DESERT

LEGEND: D = Drought Tolerant
M = Moderate Water Use

1. Vines

M	Antigonon leptopus	Queen's Wreath
M	Campsis radicans	Trumpet Creeper
M	Gelsemium sempervirens	Carolina Jasmine
M	Hedera helix	English Ivy
M	Jasminum mesnyi	Yellow Jasmine
M	Lonicera japonica 'Halliana'	Hall's Honeysuckle
M/D	Macfadyena ungis-cati	Cat Claw Vine
M/D	Parthenocissus quinquefolia	Virginia Creeper
M	Rosa banksiae	Lady Bank's Rose
M	Wisteria floribunda	Japanese Wisteria

2. Ground

M/D	Acacia redolens	Prostrate Acacia
D	Atriplex semibacata	Salt Bush
M/D	Buccharis pilularis 'Twin Peaks'	Coyote Bush
D	Cerastium tomentoseum	Snow-in-summer
M/D	Convolvulus mauritanicus	Ground Morning Glory
D	Dalea graggii	Trailing Indigo Bush
M	Euonymus fortunei	Winter Creeper
M/D	Festuca ovina glauca	Blue Fescue
M/D	Gazinia rigens 'Copper King'	Gazania
M	Lirope muscari	Lily Turf
D	Oenothern berlandieri	Mexican Primrose
M	Ophiopogon japonicus	Mondo Grass
M/D	Pyrocantha coccinea 'Low Boy'	Firethorn
M/D	Teucrium chamaedrys	Germander
M/D	Verbena rigida	Verbena
M	Vinca major	Periwinkle
M	V. minor	Dwarf Periwinkle

3. Trees

D	Acacia constricta	Whitethorn Acacia

D	A. greggii	Catclaw Acacia
D	Ailathus altissima	Tree of Heaven
M	Albizzia jullibrissin	Silk Tree/Mimosa
M/D	Arbutus unedoq	Strawberry Tree
M/D	Calocedrus decurrens	Insense Cedar
M	Cauarina stricta	Beefwood/She Oak
D	Catalpa speciosa	Western Catalpa
M	Chitalpa (Chiolopsis linearis X Catalpa bignonioides)	
M	Cedrus atlantica	Atlas Cedar
M	C. deodora	Deodar Cedar
D	Celtis pallida	Desert Hackberry
M/D	C. reticulata	Western Hackberry
D	Cercidium Floridum	Blue Palo Verde
D	C. microphyllum	Little Leaf Palo Verde
M/D	Cercis occidentalis	Western Redbud
M	Chamaerops humulis	Mediterranean Fan Palm
D	Chilopsis linearis	Desert Willow
D	Cupressus arizonica	Arizona Cypress
D	Cotinus coggygria	Smoke Tree
D	Cupressus glabra	Arizona Cypress
D	C. sempervirens	Italian Cypress
D	Elaeagnus angustifolia	Russian Olive
M	Eriobotrya japonica	Loquat
D	Eucalyptus cinerea	Silver Dollar Gum
D	E. gunnii	Cider Gum
D	E. microtheca	Coolibah Tree
D	E. nicholii	Willow Lead Peppermint
D	E. pulverulenta	Silver Mountain Gum
M/D	Fraxinus velutina	Arizona Ash
M/D	F.v. 'Modesto'	Modesto Ash
M/D	F.v. 'Rio Grande'	Fan-Tex Ash
D	Fremontodendron californicum	Flannel Bush
M	Gleditsia triacanthos	Honey Locust
M	G.t. 'Sunburst'	Sunburst
D	Heteromeles arbutifolia	Toyon/California Holly
M/D	Koelreuteria paniculata	Golden Rain Tree
M/D	Lagerstromeia indica	Crape Myrtle
M/D	Melia azedarach	Chinaberry
M	Morus alba	Fruitless Mullberry
M/D	Nerium oleander	Oleander
M/D	Olea eruopaea	European Olive
D	Parkinsonia aculeata	Mexican Palo Verde
M	Photinia fraseri	Fraser's Photinia
M/D	Pinus eldarica	Mondel Pine
M/D	P. halepensis	Aleppo Pine
M/D	P. edulis	Pinion Pine
M/D	P. pinea	Italian Stone Pine
M/D	P. roxburghii	Chir Pine
M/D	P. thunbergiana	Japanese Black Pine
D	Pistachio atlantica	Mt. Atlas Pistache

M	Platanus acerfolia	London Plane Tree
M	R. pacemosa	California Sycamore
D	Prosopis species	Mesquite
D	Prunis ilicifolia	Hollyleaf Cherry
M	P. caroliniana	Carolina Cherry
M.	P. cerasifera 'Autopurpurea'	Purple Leaf Plum
M	P. persica	Flowering Peach
M/D	Punica granatum	Pomegranate
M	Pyrus kawakamii	Evergreen Pear
D	Quercus dumosa	Scrub Oak
M	Q. ilex	Holly Oak
M	Q. lobata	Valley Oak
M	Q. palustris	Pin Oak
M	Q. suber	Cork Oak
M/D	Robinia ambigua 'Idahoensis'	Idaho Locust
D	R. Pseudoacacia	Black Locust
M	Sambucus mexicana	Mexican Elderberry
M	Sequoiadendron giganteium	Giant Sequoia
D	Sophora secundiflora	Texas Mountain Laurel
M/D	Trachycarpus fortunei	Windmille Palm
M/D	Vauquelinia californica	Rosewood
M/D	Vitex agnus-castus	Chaste Tree
M/D	Washingtonia filifera	California Fan Palm
M/D	W. robusta	Mexian Fan Palm
D	Yucca brevifolia	Joshua Tree
M/D	Zelkova Serrata	Japanese Zelkova
M/D	Ziziphus jujuba	Chinese Date

4. Shrubs

M	Abelia grandiflora	Glossy Abelia
M	A.g. 'Prostrata'	Dwarf abelia
D	Agave americana	Century plant
D	Aloe saponaria	African Aloe
M/D	Arctostaphylos hookerii	Monterey Manzanita
D	Atriplex canescens	Four-wing Salt Bush
D	A. lentiformis	Quail Bush
D	A.l. 'Breweri'	Brewer's Saltbush
D	Daccharis sarthroides	Desert Broom
M	Buxus microphylla	Japanese Boxwood
D	Caesalpinia gilliessi	Desert Bird of paradise
D	Calliandra eriophulla	Fairy Duster
D	Cassia Wislizeni	Shrubby senna
D	Cistus species	Rockrose
M/D	Convolvulus species	Bush Morning Glory
D	Cortaderia selloana	Pampas Grass
M	Cotoneaster horizontalis	Rock Cotoneaster
M	C. microphyllus	Rockspray Cotoneaster
M	C. lacteus	Parney Cotoneaster
D	Dasylirion wheeleri	Desert Spoon
D	Dendromecon rigida	Bush Poppy

D	Elaeagnus pungens	Silverberry
D	Eriogonum species	Buckwheat
M	Euonymus Species	Evergreen Euonymus
M	Fatsia japonica	Japanese Aralia
D	Ferocactus species	Barrel cactus
D	Fouquieria splendens	Ocotilla
D	Hesperaloe englemanii	Red Yucca
M/D	Hibiscus syriacus	Rose of Sharon
M	Ilex cornuta "Burfordii'	Buford Holly
M/D	Ilex vomitoria	Yapon Holly
M/D	Juniperus species	Juniper
D	Larrea tridentata	Creosote Bush
D	Lavendula species	Lavender
D	Leucophyllum frutescens	Texas Ranger
M	Ligustrum texanum	Wax Leaf Privet
D	Lycium species	Desert Thorn
M/D	Mahonia aquifolium	Oregon Grape
M	Myrtus communis	True Myrtle
M	M.c. Compacta	Dwarf Myrtle
M	M.c. 'Boetica'	Twisted Myrtle
M/D	Nandina domestica	Heavenly Bamboo
M/D	N.d. 'Nana'	Dwarf Nandina
M/D	Nerium oleander	Oleander
D	Opuntia species	Prickley Pear and Cholla Cactus
M	Osmanthus fragrans	Sweet Olive
D	Pennisetum species	Fountain Grass
D	Penstemon species	Beard Tongue
M	Photinia fraseri	Fraser's Photinia
M	P. serrulata	Chinese Photinia
M	Pittosporum tobira	Mock Orange
M	P.t. 'Wheeler's Dwarf'	Wheeler's Dwarf
D	Teucrium fruticans	Bush Germander
M/D	Puracantha species	Firethorn
M	Raphiolepis indica	Indian Hawthorn
D	Romneya coulteri	Matilija Poppy
D	Phus ovata	Sugarbush
M/D	Rosmarinus officinalis	Bush Rosemary
M/D	R. prostratus	Dwarf Rosemary
D	Santolina chamaecyparissus	Lavander Cotton
D	S. virens	Green Santolina
D	Salvia dorrii	Mojave Sage
M/D	Syringa vulgaris	Common Lilac
D	Yucca alofolia	Spanish Bayonet
D	Y. schidigera	Mojave Yucca
D	Y. Whipplei	Our Lord's Candle
D	Zauschneria california	California Fuchsia

(Ord. 441, January 2006)

Exhibit B – Table 25-1
As Amended by Ordinance No. 441

TABLE 25-1
COMMERCIAL ZONE DISTRICTS - DEVELOPMENT STANDARDS

	Zone Districts		
Development Standard	**CR-2**	**C**	**CR**
A. Minimum Project Size, GLA	2,000 sf	10,000 sf	10,000 sf
B. Minimum Lot Dimensions			
☐ Width	120 ft	100 ft	100 ft
☐ Depth	120 ft	100 ft	100 ft
C. Maximum Height (a)	45 ft	45 ft	45 ft
D. Landscaping Required	At least ~~10~~ 5% of the project area (exclusive of areas within a public right of way) must be landscaped.		
E. Parking Lot Landscaping	At least 5% of parking areas (exclusive of loading areas) must be landscaped. This landscaping may be counted toward the total site area landscaping required in item E above.		
F. Maximum Floor Area Ratio (FAR)	No maximum floor-to-area ratio; FAR will be subject to meeting parking and landscaping standards		
G. Minimum Front Yard Setback			
· Setback to Building	25 ft	25 ft	25 ft
· Setback to Parking Area	10 ft	10ft	10 ft
H. Minimum Side Yard Setback (b)			
☐ Street Side	25 ft	25 ft	20 ft
☐ All others	10 ft	10 ft	10 ft
I. Minimum Rear Yard Setback (c)	20 ft	20 ft	20 ft

Abbreviations: sf = square feet; ft = feet; GLA = gross land area

Notes:
(a) On lots located adjacent to a residential zone district, building height shall be limited to 35 feet.
(b) Only one side yard is required. If a site adjoins a property zoned for residential, open space, or institutional uses, then the side yard must be provided on that side.
(c) A rear yard is required only when the adjoining rear property is zoned for residential, open space, or public uses.

Exhibit C – Table 30-1
As Amended by Ordinance No. 441

TABLE 30-1
ADD, LM and MI ZONE DISTRICTS - DEVELOPMENT STANDARDS

Development Standard	ADD, LM and MI Districts
A. Minimum Lot Size	20,000 sf (a)
B. Minimum Lot Dimensions ☐ Width ☐ Depth	 100 ft 100 ft Minimum lot dimensions may be reduced through the use a condominium-type project where areas smaller than the minimum standards are sold, leased, or rented to individual users.
C. Maximum Building Height	75 ft. (or per CALUP)
D. Landscaping Required	At least ~~10~~ 5% of the project area (exclusive of areas within a public right of way) must be landscaped.
E. Parking Lot Landscaping	At least 5% of parking areas (exclusive of loading areas) must be landscaped. This landscaping may be counted toward the total site area landscaping required in item E above.
G. Maximum Floor Area Ratio (FAR)	No maximum floor-to-area ratio; FAR will be subject to meeting parking and landscaping standards
H. Minimum Front Yard Setback · Setback to Building · Setback to Parking Area	 25 ft 15 ft
I. Minimum Side Yard Setbacks (b) ☐ Street Side ☐ All Others	 20 ft 10 ft
J. Minimum Rear Yard Setback ☐ Abutting residential district ☐ All other	 40 ft; May be reduced to zero (0) if approved by the City and the Fire Department 0 ft

Abbreviations: sf = square feet; ft = feet

Notes:

(a) Except in a condominium development, where a different minimum lot size standard may be provided.

(b) Only one side yard is required. If a site adjoins a property zoned for residential, open space, or public uses, the side yard must be provided on that side.

APPENDIX M

City of Adelanto Water Conservation Plan, Adelanto Municipal Code, Section 8.20

CITY OF ADELANTO

MEASURE AMENDEMENT TO THE 2010 URBAN WATER MANAGEMENT PLAN ESTABLISHING MANDORTORY CONSERVATION

April 2014 Proclamation refers to the Governor's Proclamation declaring a drought State of Emergency to exist in California due to severe drought conditions. The January 2014 Proclamation finds that dry conditions and lack of precipitation present urgent problems to drinking water supplies and cultivation of crops, which put farmers long term investments at risk. The conditions also threaten the survival of animals and plants that rely on California's rivers, including many species in danger of extinction. The January 2014 Proclamation also calls on all Californians to reduce their water usage by 20 percent.

8 WATER SHORTAGE CONTINGENCY PLAN 8-1

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8 WATER SHORTAGE CONTINGENCY PLAN

8.1 INTRODUCTION

8 WATER SHORTAGE CONTINGENCY PLAN

8.1 INTRODUCTION

California's extensive system of water supply infrastructure, its reservoirs, groundwater basins, and inter-regional conveyance facilities, mitigates the effect of short-term dry periods. Defining when a drought begins is a function of drought impacts to water users. Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Droughts occur slowly, over a multiyear period. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. In addition to climate, other factors that can cause water supply shortages include earthquakes, chemical spills, and energy outages at treatment and pumping facilities. The City has included the probability of catastrophic outages in its reliability planning.

8.2 URBAN WATER SHORTAGE CONTINGENCY PLAN

Stages of Action

The City of Adelanto has proposed a four stage plan of action for implementation in the event of a long term drought or a significant loss of supply, including losses of up to 50 percent of the water supply. The four stages include:

1. Stage 1 – This stage becomes effective when the City declares a water shortage exists. In this stage, the APUA will recommend a voluntary 10 percent reduction in water use based on an established baseline year determined by the City at the time Stage 1 is implemented. Simultaneously with this declaration, the City will

begin a public outreach campaign to encourage the efficient use of water. This will include articles published in local newspapers, information posted on the City's website, literature distributed to customers and educational conservation programs held on school campuses.

2. Stage 2 – The second stage is entered when the Stage 1 reduction goal has not been met for two consecutive years of a drought. Public awareness efforts will continue and a survey will be conducted on Stage 1 efforts. The City will establish a water conservation advisory committee comprised of officials from the Adelanto Public Utilities Authority and the City of Adelanto.

3. Stage 3 – The third stage goes into effect if the water shortage continues for four consecutive years. This stage recommends 20% Mandatory reductions in water use effective June 1, 2015 . A plan and Ordinance to enforce penalties for excessive water use will be developed as part of stage 3. The Ordinance will include prohibitions against specific wasteful practices such as gutter flooding, open hose car washing, driveway wash downs and other similar practices as described in further detail below (under the heading "Water Conservation Plan"). During Stage 3, the City will also analyze the impacts of the Conservation Plan on revenue and expenditures and propose measures to overcome those impacts.

4. Stage 4 – Stage four will be declared if a water shortage continues for one year beyond Stage 3. In this stage, the City shall determine the extent of any required additional conservation measures needed to address water supply reductions of up to 50 percent. Consumer compliance with all stages will be enforced through penalties, as outlined in

Section 8.4 of this UWMP.

Table 8.2-1 shows the use reduction stages as a guideline for recommending the

appropriate conservation stage and water conservation target.

Table 8.2-1

Water Use Reduction Stages

% Shortage Condition Water Conservation Stage

Type of Use

Reduction Program

Up to 10% 1 and 2 Voluntary/ Mandatory

10% to 20% 3 Mandatory

20% to 50% 4 Mandatory

Water Conservation Plan

Chapter 8.20 (Appendix H) of Adelanto's Municipal Code entitled "Water Conservation Plan" sets forth the rules and regulations governing the use of water in the City, even during non-drought times. The Code also requires adherence to the City's Landscape Water Conservation Ordinance contained within Section 17.60 of the Municipal Code (Adopted by Ordinance No. 441 – Appendix G). This section of the City's Municipal Code specifically requires all water users to abide by the following water conservation measures (even during non-drought times):

1. The use of water for any purpose shall not result in flooding or unnecessary runoff in gutters, driveways, streets or adjacent lands.

2. Lawns, trees, shrubs, and other landscaping shall not be watered beyond what they need for growth and to sustain life and water shall not be permitted to pool or to run off property onto streets or adjacent land.

Watering of lawns, grass, shrubbery, ground cover or other landscaping shall only be done on set watering days.

Even address numbers water on Tuesday and Thursday.

Odd address numbers water on Wednesday and Friday

If your property address ends in an even number, customers may only water their outdoor landscape on Tuesdays and Thursdays
If your property address ends in an odd number, customers may only water their outdoor landscape on Wednesdays and Fridays.
There will be no outdoor landscape watering on Mondays and weekends.

3. Sidewalks, walkways, driveways, parking areas, patios, porches or verandas or any other like area shall not be washed off with water from hoses or by any other means. The exception to this shall be the washing of flammable or other similar dangerous substances that require direct hose flushing using recognized safety control measures for the benefit of the public health and safety. Notification to the City of such wash down is required.

4. Water, sprinkling, aerial watering or irrigating of any landscaped or vegetated areas, including lawns, trees, shrubs, grass, ground cover, plants, vines, gardens, vegetables, flowers, or other landscaping shall not occur between the hours of 9:00 a.m. and 6:00 p.m. during the months of April through September; provided, however, that these restrictions shall not apply to hand-held hose or drip irrigation systems or to establishment of new lawns, landscaping, or gardens.

5. Non-commercial washing of privately owned vehicles, trailers, motor homes, buses, boats and mobile homes is prohibited except from a bucket, and except that a hose equipped with an automatic shut-off nozzle may be used for a quick rinse.

6. Water shall not be used to clean, fill, operate or maintain levels in decorative fountains unless such water is for replenishment of a recycling system.

7. Water lines, faucets, and other facilities shall be maintained so that they do not leak water. Existing leaks shall be repaired in a timely manner.

8. Restaurants, other food establishments, or other public places where food is served, shall not routinely provide glasses of drinking water to customers unless specifically requested by the customer.

9. Water for construction purposes including, but not limited to, debrushing of vacant land, compaction of fills and pads, trench backfill and other construction uses, shall be used in an efficient manner. The use of aerial type sprinklers is not recommended but, if used, shall not be operated between the hours of 9:00 a.m. and 6:00 p.m.

10. All new residential, commercial and industrial construction shall be equipped with low-flush toilets and low-flow showers and faucets.

11. Water used for cooling systems must be recycled to the extent possible.

12. Evaporation resistant covers are required for all new swimming pools and hot tubs and are encouraged to be installed for existing pools. The covers required by this Chapter shall, at the time of purchase, installation and all subsequent maintenance, meet or exceed current standards and specifications for swimming pool, spa and hot tub covers adopted by the American Society for Testing and Materials (ASTM).

13. Hotels/motels are required to post a notice in substantially the form provided by the City urging guests to conserve water.

14. All current and future water customers are encouraged to install flow restrictors or pressure reducers and to install toilet tank displacement devices (dams, bottles or bags), and as appliances or fixtures wear out, replace them with water saving models.

15. Parks, schools, golf courses, cemeteries, school grounds and all public use lands shall not irrigate between the hours of 9:00 a.m. and 6:00 p.m. during the months of April through September inclusive and are encouraged to use water conservation irrigation equipment.

16. The use of drought tolerant or native plant material is encouraged for exterior landscaping in all new residential construction, and required for new commercial and industrial construction.

17. The use of low precipitation sprinkler heads, bubblers, drip irrigation and timing devices are required in the exterior landscaping in all new residential, commercial and industrial construction.

18. At least fifty percent (50%) of all new model homes shall include as a part of the exterior landscape development low water use, drought-tolerant or native plants.

19. Projects, including Commercial and Planned Unit Developments, which utilize recycled water from sewage treatment or agricultural operations, may receive an exemption from Subsections 15 through 18 of this Section by approval of the City Council.

Health and Safety Requirements

The primary goal of the City's water system is to preserve the health and safety of its personnel and the public. Meeting this goal is a continuous function of the system – before, during and after a disaster or water shortage. Fire suppression capabilities will continue to be maintained during any water shortage contingency stage. Some water

needs are more immediate than others. The following list of public health needs and the allowable time without potable water is a guideline and will depend on the magnitude of the water shortage:

- Hospitals – continuous need
- Emergency shelters – immediate need
- Kidney dialysis – 24 hours
- Drinking water – 72 hours
- Personal hygiene, waste disposal – 72 hours

Based on commonly accepted estimates of interior residential water use in the United States, Table 8.2-2 indicates per capita health and safety water requirements. During the initial stage of a shortage, customers may adjust either interior and/or outdoor water use to meet the voluntary water reduction goal.

Table 8.2-2

Per Capita Health and Safety Water Quantity Calculations

Item Non-Conserving Fixtures Habit Changes

Conserving Fixtures

Toilet 5 flushes x 5.5 gpf 27.5 3 flushes x 5.5 gpf 16.5 5 flushes x 1.6 gpf 8.0

Shower 5 min. x 4.0 gpm 20.0 4 min. x 3.0 gpm 12.0 4 min. x 2.5 gpm 10.0

Washer 12.5 gpcd 12.5 11.5 gpcd 11.5 11.5 gpcd 11.5

Kitchen 4 gpcd 4.0 4 gpcd 4.0 4 gpcd 4.0

Other 4 gpcd 4.0 4 gpcd 4.0 4 gpcd 4.0

Total 68.0 48.0 37.5

CCF per capita per year 33.0 23.0 18.0

gpcd = gallons per capita per day / gpf = gallons per flush / gpm = gallons per minute

CCF = hundred cubic feet (approximately 748 gallons)

Reduced shower use from shorter and reduced flow. Reduced washer use from fuller loads. Fixtures include ULF 1.6 gpf toilets, 2.5 gpm showerheads, and efficient clothes washers.

Priority by Use

Conditions prevailing in the City of Adelanto service area require that available water resources be put to maximum beneficial use to the extent possible. The waste, unreasonable use, or unreasonable method of use, of water should be prevented and water conservation and water use efficiency is encouraged with a view toward maximizing reasonable and beneficial use thereof in the interests of the people of the City and for the public welfare. Preservation of health and safety will be a top priority for the City.

8.3 ESTIMATE OF MINIMUM SUPPLY FOR NEXT THREE YEARS

The Mojave Water Agency has projected a reliable supply of water during all multiple dry years through 2035. Consequently, MWA does not anticipate any problems in meeting the City's demands during multiple dry years occurring over the next three years. With that in mind, the information presented below has been extracted from Table 5.2-3.

Table 8.3-1

3-Year Estimated Water Supply Based on

Driest 3-Year Historic Sequence in AFY

Water Supply Sources	Normal Years			Multiple Dry Years		
	2011	2012	2013	2011	2012	2013
Local (Groundwater)	5,408	5,940	6,492	5,721	6,089	6,457
Total City Water Supply	5,408	5,940	6,492	5,721	6,089	6,457

Source: Projections are interpolated from data in Tables 5.2-1 and 5.2-3

8.4 Catastrophic Supply Interruption Plan - Water Shortage Emergency Response

A water shortage emergency could result from a drought or a catastrophic event such as an earthquake, transmission facility failure, regional power outage, flooding, supply contamination from chemical spills, or other adverse conditions.

The City recognizes, that in the event of an emergency such as an earthquake, the integrity of the water system can be breached causing disruptions in water supply. Because of the possibility of emergencies from both man-made and natural causes, water utility emergency planning is of utmost importance. The City of Adelanto prepared an Emergency Operations Plan to comply with the Standardized Emergency Management System (SEMS) developed by the State of California, and the National Incident Management System (NIMS) developed by the Federal Emergency Management Agency. The plan includes information on the Emergency Operations Organization, the roles and responsibilities of each section, and includes operational checklists to guide response actions.

In the event of an emergency, the City Manager will assume overall responsibility for coordinating the City's response. The City's Director of Public Utilities will coordinate all activities relating to water operations. The City of Adelanto has also entered into mutual aid agreements with other local cities and the County of San Bernardino, which may be implemented during an emergency, if necessary.

8.4.1 Prohibitions, Penalties, and Consumption Reduction Methods

Chapter 8.20.050 of the City's Municipal Code stipulates that anyone who violates any provision of the City's water conservation code (Chapter 8.20) shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished in accordance with the provisions of Chapter 1.20 of the Code (Municipal Code Violations).

Enforcement

Code Compliance officers shall be empowered to investigate instance of Water Waste and enforce all provisions.. Officers will issue any notice of violation or administrative citation in accordance with the provision in the chapter 8.20.050 of the City's Municipal code.

Administrative Fine Schedule

Administrative Fines shall be assessed as follows:

(1) For a first violation of any prohibition of this Chapter prior to the issuance of an administrative citation, shall be issued in accordance with the procedures for service and posting set forth in Section 8.20.050 of this Chapter.

(2) For violation(s) of any prohibitions during Shortage Stage 1, Administrative Fines may be assessed for each violation of the provisions of Section 8.20.050 in the amount of two hundred dollars ($200.00).

(3) For violation(s) of any prohibitions during Shortage Stage 2 Administrative Fines may be assessed for each violation of the provisions of Section 8.20.050 in the amount of three hundred dollars ($300.00).

(4) For violation(s) of any prohibitions during Shortage Stage 3, Administrative Fines may be assessed for each violation of the provisions of Section 8.20.050 in the amount of five hundred dollars ($500.00).

5) For violation(s) of any prohibitions during Shortage Stage 4, Administrative Fines may be assessed for each violation of the provisions of Section 8.20.050 in the amount of Seven hundred dollars ($700.00).

(b) The City Manager or his/her designee may waive any Administrative Fine or portion thereof assessed under this Section pursuant to written procedures (to be

developed by the City Manager) wherein mitigating circumstances or other conditions make the imposition of the Administrative Fine unreasonable.

(c) If the Responsible Person(s) fails to correct the violation(s), subsequent administrative citations and fines may be issued for the same violation(s).

(d) Payment of the Administrative Fine shall not excuse the failure to correct the violation nor shall it bar further enforcement action up to and including discontinuance of water service (following the notice specified in Section 8.20.050 (c) of this Chapter.

(e) Any fines imposed under this Section shall be collected in accordance with the Cities currently-effective Water Regulations and Service provisions as adopted by Ordinance. Such fines shall be deposited in the Cities APUA fund.

8.20.050

8.4.2 Revenue and Expenditure Impacts and Measures to Overcome those Impacts

The Adelanto Water Authority Fund provides funding for the operation and maintenance of the City's water distribution system under an enterprise fund separate from the City's General Fund. In governmental accounting, enterprise funds are used to account for operations that are operated and financed in a manner similar to private business enterprises where the intent is that the costs (expenses including depreciation) of providing goods or services to the general public on a continuing basis are to be financed or recovered primarily through user charges; or where periodic determination of revenues earned, expenses incurred, and/or net income is deemed appropriate, for capital maintenance, public policy, management control accountability or other purposes.

The Water Authority Enterprise Fund also serves as an emergency source of funds in the event of an extreme water shortage. Should an extreme shortage be declared and a large

reduction in water sales occur for an extended period of time, the City would re-examine its water rate structure and monitor projected expenditures. If needed, the City would consider increases in rates to overcome revenue lost.

8.5 WATER SHORTAGE CONTINGENCY ORDINANCE

As previously noted, the City's Municipal Code, adopted Ordinances and Four Stage Water Shortage Contingency Plan of Action address the use of water during periods of extreme drought including projected shortages of up to 50 percent.

8.6 MECHANISMS TO DETERMINE REDUCTIONS IN WATER USE

During normal water supply conditions, production figures are recorded daily and are incorporated into the City's water production report. During water shortages, water usage will continue to be closely monitored on a daily or, if necessary, hourly basis depending on the severity of the drought. Production data from the City's wells can be retrieved on an hourly basis. This will allow City staff to determine the effects of a reduction on water production within the system.

During a shortage resulting from a disaster, production figures will be monitored on an ongoing basis. The City's SCADA system will provide prompt warning of any critical conditions. Once a shortage stage is implemented, actual reductions in water production and usage can be determined based on the SCADA system monitoring. Reports will be provided on a daily basis to the City's Director of Utilities.

APPENDIX N

Draft Water Conservation Plan Resolution

DRAFT

APUA RESOLUTION NO. _____

A RESOLUTION OF THE ADELANTO PUBLIC UTILITY AUTHORITY OF THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, CALIFORNIA, FINDING THE EXISTENCE OF A WATER SHORTAGE AND ORDERING THE IMPLEMENTATION OF SHORTAGE STAGE _____ OF THE CITY OF ADELANTO WATER CONSERATION PLAN

WHEREAS, the Adelanto Public Utility Authority Water Conservation Plan establishes supply shortage contingency measures to be implemented when the demand for water consumption threatens to exceed the City's available supply of quality water to the consumer, provided there are not immediate resources available to remedy the situation; and

WHEREAS, Section 8.2 of the Water Conservation Plan establishes water shortage stages and Section 8.4.1 establishes enforcement penalties for violations of mandatory conservation measures to be enacted during a declared water shortage.

WHEREAS, the Adelanto Public Utility Authority is authorized to direct implementation of the applicable provisions of the Water Conservation Plan upon determination that such implementation is necessary to protect the public health, welfare and safety.

WHEREAS, the Adelanto Public Utility Authority hereby finds that a water shortage exists within the City's service area.

NOW, THEREFORE BE IT RESOLVED, the Adelanto Public Utility Authority does hereby resolve as follows:

Section 1. TBD

Section 2. TBD

APPENDIX O

Notice of Public Hearing Letters,
Notice of Public Hearing and Resolution for Plan Adoption, Proof of Publication of Public Hearing Notice

DRAFT

APUA RESOLUTION NO. 16-XX

A RESOLUTION OF THE ADELANTO PUBLIC UTILITY AUTHORITY OF THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, CALIFORNIA, APPROVING THE 2015 URBAN WATER MANAGEMENT PLAN ADOPTION AND ORDERING THE REPORT TO BE FILED WITH THE DEPARTMENT OF WATER RESOURCES

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et Seq., known as the Urban Management Planning Act) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan, the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS, the Adelanto Public Utility Authority is an Urban Supplier of water in excess of over 3,000 acre feet annually; and

WHEREAS, the Plan shall be periodically reviewed at least once every five years, and that the Adelanto Public Utility Authority shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS, the Adelanto Public Utility Authority has therefore, prepared and circulated for public review a draft 2015 Urban Water Management Plan and a properly noticed public hearing regarding said plan was held by the Adelanto Public Utility Authority on June 22, 2016; and

WHEREAS, the Adelanto Public Utility Authority did prepare and shall file said plan with the Department of Water Resources within 30 days of the date of adoption.

NOW, THEREFORE BE IT RESOLVED, the Adelanto Public Utility Authority does hereby resolve as follows:

Section 1. The Adelanto Public Utility Authority authorizes the adoption of its updated Urban Water Management Plan and orders the filing of the Plan with the California Department of Water Resources.

Section 2. The Adelanto Public Utility Authority is further authorized to implement the Water Conservation Programs as set forth in the 2015 Urban Water Management Plan, which includes a water shortage contingency analysis and recommendations regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation and water recycling programs.

Section 3. The Adelanto Public Utility Authority is further authorized to declare a Water Shortage Emergency according to the Water Shortage Stages and Triggers indicated in the Plan, implement

necessary elements of the Plan, and recommend additional regulations to carry out effective and equitable allocation of water resources.

PASSED, APPROVED AND ADOPTED this 22nd day of June, 2016, by the following vote:

CITY COUNCIL AGENDA REPORT

ADELANTO GOVERNMENTAL CENTER | 11600 AIR EXPRESSWAY | ADELANTO, CALIFORNIA 92301

DATE: June 22, 2016

TO: Honorable Mayor and City Council Members

FROM: Cindy Herrera, City Manager

BY: Mark de Manincor, Senior Planner

SUBJECT: MEDICAL MARIJUANA MANUFACTURING APPLICATION FEE

STAFF RECOMMENDATION:

Adopt Resolution 16-36, adopt findings and approve the proposed Medical Marijuana Manufacturing Permit Application Fee.

BACKGROUND:

The requirement for an application fee for a Medical Marijuana Manufacturing Permit Application was adopted by the City Council by Ordinance 545, May 11, 2016 for the first reading and will take effect, June 24, 2016. The proposed application fee consists of an amount to cover the cost of processing the Medical Marijuana Manufacturing Permit Application. Each applicant wishing to obtain a Medical Marijuana Manufacturing Permit is required to file an application and pay the associated fee.

It is estimated that the time and effort to process a Medical Marijuana Manufacturing Permit application will cost approximately $7,000.00. This amount is the same as our Medical Marijuana Cultivation Permit as the Cultivation Permit and Manufacturing Permit Application process and requirements are exactly the same as demonstrated below.

Our estimated costs are;

Background check via Sheriff's Department	$1,500
Background check via Finance Department	$1,500
Application Review, City Manager	$1,500
Application Review, Planning Department	$1,000
Legal Review	$1,500
Total estimated costs	$7,000

ENVIRONMENTAL IMPACT:

The project is considered environmentally exempt pursuant to section 15273 (a) (1) (Rates, Tolls, Fares and Charges) as the Medical Marijuana Manufacturing Permit Application fee covers the costs of processing the application.

FISCAL IMPACT:

There will be no direct fiscal impacts to the City General Fund. The proposed application fee will cover staffing expenses on a full cost-recovery basis and is in compliance with California Government Code Section 66000 et al.

ATTACHMENTS:

1. Resolution No. 16-36
2. Ordinance 545
3. Medical Marijuana Manufacturing Application

RESOLUTION 16-36

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ADELANTO, COUNTY OF SAN BERNARDINO, CALIFORNIA ADOPTING A MEDICAL MARIJUANA MANUFACTURING PERMIT APPLICATION FEE AND MAKING FINDINGS IN SUPPORT THEREOF

WHEREAS, the City of Adelanto has adopted Ordinance 545; and

WHEREAS, Ordinance 545 requires an application fee be adopted by resolution; and

WHEREAS, Chapter 17.80.090 of the Adelanto Municipal Code has been adopted to allow the manufacture of medical marijuana; and

WHEREAS, the proposed fee is in compliance with California Government Code Section 66000 et al regarding "Reasonable Relationship;" and

WHEREAS, a fee has been proposed for the Medical Marijuana Manufacturing Permit; and

WHEREAS, the project has been found environmentally exempt under section 15273 (a) (1) of the California Environmental Quality Act; and

WHEREAS, a duly noticed public hearing was held before the City Council on, June 22, 2016, to hear public testimony and consider the proposals.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ADELANTO HEREBY RESOLVE AS FOLLOWS:

Section 1. The above recitals are all true and correct.

Section 2. The City Council has reviewed and considered the information included in Ordinance 545 and staff report for the public hearing and public testimony prior to taking action on the proposed Resolution. This information is on file and available at the City Clerk's Office at the City Hall of the City of Adelanto.

Section 3. The City Council finds and determines that the adoption of Resolution 16-36 is exempt from the California Environmental Quality Act pursuant to section 15273 (a) (1) (Rates, Tolls, Fares and Charges) as the Medical Marijuana Manufacturing Permit Application Fee covers the costs of services provided to process the application and a notice of exemption has been prepared and the City Council determinations reflect the independent judgment of the City Council.

Section 4. The City Council finds and determines that the proposed amendment is consistent with the goals, policies, and objectives of the General Plan and that the proposed changes will not adversely affect surrounding properties.

Section 5. The City Council hereby further finds and determines that the City has followed the procedures for Resolutions as set forth in Sections 65850 through 65863.13 of the California Government Code.

Section 6. The City Council of the City of Adelanto hereby adopts Resolution 16-36, Medical Marijuana Manufacturing Permit Application Fee as follows:

1) **Medical Marijuana Manufacturing Permit Application Fee $7,000**

Section 7. The Mayor shall sign and the City Clerk shall certify passage and adoption of this Resolution, and shall cause the same to be published and posted pursuant to the provisions of law in this regard, and this Resolution shall take affect within 60 days.

PASSED, APPROVED AND ADOPTED THIS 22nd DAY OF JUNE 2016.

_____

Rich Kerr, Mayor

_____

Cindy M. Herrera, City Clerk, MMC

I, Cindy M. Herrera, City Clerk of the City of Adelanto, California, do hereby certify that the foregoing Resolution 16-36 was duly and regularly adopted at a regular meeting of the City Council of the City of Adelanto on this 22ND day of June, 2016, by the following vote, to-wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

IN WITNNESS WHEREOF, I hereunto set my hand and affix the official seal of the City of Adelanto on this 22nd day of June, 2016.

_____

Cindy M. Herrera, City Clerk, MMC

ORDINANCE NO. 545

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ADELANTO, CALIFORNIA, AMENDING SECTION 17.80.080 OF THE ADELANTO MUNICIPAL CODE RELATING TO MEDICAL MARIJUANA CULTIVATION AND ADDING SECTION 17.80.090 OF THE ADELANTO MUNICIPAL CODE RELATING TO MEDICAL MARIJUANA MANUFACTURING

WHEREAS, on October 9, 2015, Governor Brown approved the Medical Marijuana Regulation and Safety Act ("MMRSA"), effective January 1, 2016, which establishes a comprehensive State licensing and regulatory framework for the cultivation, manufacturing, testing, distribution, transportation, and dispensing of medical marijuana, and which recognizes the authority of local jurisdictions to prohibit or impose additional restrictions on any such medical marijuana activity.

WHEREAS, the City of Adelanto ("City") wishes to comply with California Law and allow for the cultivation and manufacturing of medical marijuana in accordance with applicable State laws.

WHEREAS, it is the purpose and intent of the City to regulate medical marijuana cultivation and manufacturing in a manner that is consistent with State law and promotes the health, safety, and general welfare of the residents and businesses within the City, while limiting the negative impacts associated with such medical marijuana cultivation and manufacturing.

WHEREAS, the City intends to be on the forefront of ground breaking research, science, innovation, and development of treatment for symptoms and cures in the field of medical marijuana, as scientific research, studies, and data has established that marijuana can help patients with a vast array of medical conditions that affect human beings.

WHEREAS, nothing in this Ordinance shall be construed to allow persons to engage in conduct that violates the law, endangers others, causes a public nuisance, allows the use or diversion of marijuana for nonmedical purposes, or allows any activity relating to marijuana that is otherwise illegal under California law.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ADELANTO DOES ORDAIN AS FOLLOWS:

Section 1. The above recitals are true and correct and incorporated herein.

Section 2. Section 17.80.080 (Cultivation of Medical Marijuana) is replaced in its entirety as follows, and Section 17.80.090 (Manufacturing of Medical Marijuana) is hereby added to the Adelanto Municipal Code is to read in its entirety as follows:

17.80.080 Cultivation of Medical Marijuana

(a) **Purpose.** The purpose and intent of this Section is to regulate the cultivation of medical marijuana that is grown in accordance with State law in order to promote the health, safety, morals, and general welfare of the residents and businesses within the City. The City is authorized to regulate this activity pursuant to the MMRSA.

(b) **Definitions.** For purposes of this Section, the following definitions shall apply, unless the context clearly indicates otherwise:

(1) "City" means the City of Adelanto, California, a Charter Law City.

(2) "City Manager" means the individual duly appointed by a majority of the City Council of the City to serve in the capacity as executive officer of the City on a permanent or interim basis.

(3) "Cultivation" shall be defined in accordance with the MMRSA, Business and Professions Code section 19300.5, and other applicable State laws.

(4) "Cultivation Permit" means a City permit to operate an indoor medical marijuana cultivation facility pursuant to the terms and conditions of this Section and the conditions of approval for the permit.

(5) "Cultivation Permitee" means an applicant who has applied for and has been issued a Cultivation Permit by the City pursuant to the terms and conditions of this Section.

(6) "CUP" means a Conditional Use Permit issued by the City in accordance with this Code.

(7) "Fully enclosed and secure structure" means a space within a building, greenhouse or other structure which has a complete roof enclosure supported by connecting walls extending from the ground to the roof, which is secure against unauthorized entry, provides complete visual screening, and which is accessible only through one or more lockable doors and is inaccessible to minors.

(8) "Indoors" means within a fully enclosed and secure structure.

(9) "Medical marijuana" also means "medical cannabis" and shall be defined in accordance with the MMRSA, Business and Professions Code section 19300.5, Health and Safety Code section 11018, and other applicable State laws.

(10) "MMRSA" means the State Medical Marijuana Regulation and Safety Act.

(11) "Outdoors" means any location within the City that is not within a fully enclosed and secure structure.

(c) **Marijuana Cultivation Prohibited.** All marijuana cultivation within the City is prohibited except as expressly permitted by this Section.

(d) **Indoor Medical Marijuana Cultivation Conditionally Permitted.** Indoor medical marijuana cultivation is conditionally permitted in the City only as expressly specified in this Section.

(1) Indoor Medical Marijuana Cultivation Standards. Indoor medical marijuana cultivation, within the City, shall be in conformance with the following standards:

A. Indoor medical marijuana cultivation shall only be allowed upon application and approval of a Cultivation Permit and a CUP in accordance with the criteria and process set forth in this Section and this Code.

B. Indoor medical marijuana cultivation is a conditionally permitted use only on properties within the Manufacturing/Industrial (MI) zoning designation in the Industrial Park ("Cultivation Zone").

C. No marijuana cultivation shall be established, developed, or operated within 2,500 feet of a school, public playground or park, child care or day care facility, youth center, or church. All distances shall be measured in a straight line, without regard to intervening structures, from the nearest point of the building or structure in which the indoor medical marijuana cultivation is, or will be located, to the nearest property line of those uses describe in this Subsection.

D. Indoor medical marijuana cultivation facilities may be located within the same building or structure as a medical marijuana manufacturing facility only if the indoor medical marijuana cultivation facility is located in separate rooms of the building or structure, and only if the indoor medical marijuana cultivation facility has its own separate entrance into the building or structure.

E. Subject to the further requirements of this Section, only the following State cultivator license classification types specified in the MMRSA and Business and Professions Code sections 19300.7

and 19332 will be allowed to operate in the City: 1A, 1B, 2A, 2B, 3A, 3B, and 4.

F. Indoor medical marijuana cultivation is allowed only within fully enclosed and secure structures that are inaccessible to minors.

G. Indoor medical marijuana cultivation shall not exceed the square footage authorized pursuant to the CUP.

H. From any public right-of-way, there shall be no visible exterior evidence of any indoor medical marijuana cultivation activity.

I. Indoor medical marijuana cultivation activity may include growing marijuana plants, harvesting marijuana plants, and drying marijuana flowers, but shall not include any extraction procedures to produce concentrated THC.

J. Indoor medical marijuana cultivation shall not adversely affect the health or safety of the nearby residents by creating dust, glare, heat, noise, smoke, traffic, vibration, or other impacts, and shall not be hazardous due to use or storage of materials, processes, products, or wastes.

K. All indoor medical marijuana cultivation facilities shall fully comply with all of the applicable restrictions and mandates set forth in State law. All indoor medical marijuana cultivation facilities shall comply with all size requirements for such facilities as imposed by State law. Indoor medical marijuana cultivation facilities shall not engage in any activities not allowed by indoor medical marijuana cultivation facilities pursuant to State law. All indoor medical marijuana cultivation facilities shall comply with all horticultural, labeling, processing, and other standards required by State law.

L. There is no set restriction on the hours of operation of indoor medical marijuana cultivation facilities; however, restricted hours of operation may be established as a condition of approval of the Cultivation Permit or the applicable CUP.

M. All medical marijuana shall be kept in a secured manner during all business and nonbusiness hours.

N. All indoor medical marijuana cultivation facilities shall operate within a legal structure that is compliant with all applicable State and local laws.

O. All indoor medical marijuana cultivation facilities must pay all applicable sales taxes pursuant to all federal, State, and local laws.

P. On-site smoking, ingestion, or consumption of marijuana or alcohol shall be prohibited on the premises of all indoor medical marijuana cultivation facilities. The term "premises" as used in this Subsection includes the actual indoor medical marijuana cultivation building, as well as any accessory structures and parking areas. The indoor medical marijuana cultivation facility building entrance shall be clearly and legibly posted with a notice indicating that smoking, ingesting, or consuming marijuana or alcohol on the premises or in the vicinity of the facility is prohibited.

Q. Signage for all indoor medical marijuana cultivation facilities shall be limited to name of business only, shall be in compliance with the City's sign code, and shall contain no advertising of any companies, brands, products, goods, or services. Signage shall not include any drug-related symbols.

R. Alcoholic beverages shall not be sold, stored, distributed, or consumed on the premises. Indoor medical marijuana cultivation facilities shall not hold or maintain a license from the State Department of Alcohol Beverage Control to sell alcoholic beverages, or operate a business that sells alcoholic beverages. In addition, alcohol shall not be provided, stored, kept, located, sold, dispensed, or used on the premises of any indoor medical marijuana cultivation facility.

S. Physician services shall not be provided on the premises. "Physician services" does not include social services, including counseling, help with housing and meals, hospice and other care referrals which may be provided on site.

T. The building in which any indoor medical marijuana cultivation facility is located, as well as the operations as conducted therein, shall fully comply with all applicable rules, regulations, and laws including, but not limited to, zoning and building codes, the City's business license ordinances, the Revenue and Taxation Code, the Americans with Disabilities Act, and the MMRSA. Compliance with all requirements of State law pertaining to indoor marijuana cultivation is also required.

U. Indoor medical marijuana cultivation facilities shall not distribute, sell, dispense, or administer marijuana from the facility to the

public. Indoor medical marijuana cultivation facilities shall not be operated as medical marijuana dispensaries.

V. The operators of all indoor medical marijuana cultivation facilities shall provide the City Manager or the City Manager's designee with the name, phone number, facsimile number, and email address of an on-site representative to whom the City and the public can provide notice if there are any operational problems associated with the indoor medical marijuana cultivation facility. All indoor medical marijuana cultivation facilities shall make every good faith effort to encourage residents and the public to call this representative to resolve any operational problems before any calls or complaints are made to the City or law enforcement.

W. All indoor medical marijuana cultivation facilities shall be operated in accordance with the conditions of approval associated with the applicable CUP for the parcel of real property upon which the indoor medical marijuana cultivation activities occur.

X. All indoor medical marijuana cultivation facilities shall have a security plan including the following measures:

1. Security cameras shall be installed and maintained in good condition, and used in an on-going manner with at least 120 concurrent hours of digitally recorded documentation in a format approved by the City Manager or the City Manager's designee. The cameras shall be in use 24 hours per day, 7 days per week. The areas to be covered by the security cameras include, but are not limited to, the storage areas, cultivation areas, all doors and windows, and any other areas as determined by the City Manager or the City Manager's designee. Remote log-in information shall be provided to the City Manager and the Chief of Police to allow them to view the security camera images and recordings from their own facilities at any time. Any disruption in security camera images shall be cured expeditiously in good faith.

2. The indoor medical marijuana cultivation facility shall be alarmed with an alarm system that is operated and monitored by a reputable security company.

3. Entrance to the cultivation area, and all storage areas, shall be locked at all times, and under the control the indoor medical marijuana cultivation facility's staff.

4. The entrances and all window areas shall be illuminated during evening hours. The facility shall comply with the City's lighting standards regarding fixture type, wattage, illumination levels, shielding, etcetera, and shall secure the necessary lighting approvals and permits as needed.

5. All windows on the building that houses the indoor medical marijuana cultivation facility shall be appropriately secured and all marijuana securely stored.

Y. Recordings made by the security cameras shall be made available to the City Manager, the City Manager's designee, or law enforcement upon verbal request—no search warrant or subpoena shall be needed to view the recorded materials.

Z. The City Manager, the City Manager's designee, and law enforcement shall have the right to enter the indoor medical marijuana cultivation facility at any time unannounced for the purpose of making reasonable inspections to observe and enforce compliance with this Section and all laws of the City and the State.

AA. All batches of final cultivated marijuana must be inspected and quality tested by a qualified third party distributor and testing facility prior to distribution to a dispensary as required by the MMRSA, Business and Professions Code sections 19326 and 19342, the Department of Food and Agriculture regulations, and the State Department of Public Health regulations.

(2) Cultivation Permit Applications. All applicants wishing to obtain a Cultivation Permit from the City shall file an application with the City upon a form provided by the City and shall pay a Cultivation Permit Application Fee as established by the City. An application for a Cultivation Permit shall include at least the following information:

A. An estimate of the size of the proposed indoor medical marijuana cultivation facility.

B. The address of the location for which the Cultivation Permit is sought. Only one Cultivation Permit will be issued per location.

C. A site plan and floor plan for the proposed premises denoting the use of all areas on the premises, including storage, cultivation areas, lighting, signage, etcetera.

D. A proposed security plan in compliance with the Indoor Medical Marijuana Cultivation Standards.

E. The names, addresses, and relevant criminal histories of all potential employees, facility managers, and other relevant parties for the indoor medical marijuana cultivation facility. Relevant criminal histories shall include any drug-related or felony convictions, the nature of such offenses, and the sentences received for such convictions.

F. The name and address of the owner and lessor of the real property upon which the indoor medical marijuana cultivation activity is proposed to be conducted. In the event the applicant is not the legal owner of the property, the application must be accompanied with a notarized acknowledgement from the owner of the property that an indoor medical marijuana cultivation facility will be operated on the property.

G. Authorization for the City Manager or the City Manager's designee to seek verification of the information contained within the application.

H. Evidence that the indoor medical marijuana cultivation facility will be located in a legal structure that is compliant with all applicable State and local laws.

I. A statement in writing by the applicant that the applicant certifies under penalty of perjury that all the information contained in the application is true and correct.

J. Any such additional and further information as is deemed necessary by the City Manager or the City Manager's designee to administer this Section.

K. The City Manager or the City Manager's designee shall conduct a background check of any applicant seeking a Cultivation Permit, including all potential employees and any person who may be a facility manager or otherwise responsible for the activities of the indoor medical marijuana cultivation facility ("Applicant's Agents"), and shall prepare a report on the acceptability of the applicant and the Applicant's Agents and the suitability of the proposed location.

L. The City Manager or the City Manager's designee shall rank all qualified applications in order of those that best satisfy the

requirements of this Section and provide the highest level of service and opportunities for residents of the City based on the requirements of this Section and the following criteria ("Merit List"):

1. The operational plan for the facility.

2. The security plan for the facility.

3. The experience of the operators of the facility.

4. The adequacy of capitalization for the facility and its operations.

5. The employment of City residents and other public benefits to the City.

(3) Cultivation Permit. The following conditions apply to all Cultivation Permits:

A. A Cultivation Permit will not be awarded to an applicant if:

1. The applicant or the Applicant's Agents made one or more false or misleading statements or omissions in the application or during the application process.

2. The proposed indoor medical marijuana cultivation facility is not allowed by State or local law.

3. The applicant is not a legal representative of the indoor medical marijuana cultivation facility.

4. The applicant or the Applicant's Agents have been convicted of a felony, or a misdemeanor involving moral turpitude, or the illegal use, possession, transportation, distribution, or any such similar activity related to controlled substances, with the exception of marijuana related offenses for which the conviction occurred prior to passage of Compassionate Use Act. A conviction within the meaning of this Section means a plea or verdict of guilty or a conviction following a plea of nolo contendere.

5. The applicant or the Applicant's Agents have engaged in unlawful, fraudulent, unfair, or deceptive business acts or practices.

6. The applicant has not satisfied each and every requirement of this Section.

B. Cultivation Permits shall be awarded by the City to eligible Cultivation Permit applicants in order of the Merit List as established by the City Manager or the City Manager's designee. The number of Cultivation Permits shall be limited to those that may be reasonably accommodated within the Cultivation Zone.

C. Before a Cultivation Permit can be issued to an applicant, Cultivation Permit fees must be paid to offset all related costs to the City, and the proposed indoor medical marijuana cultivation facility location must pass all applicable inspections.

D. Only one Cultivation Permit may be possessed or used by the same person or entity, including the representatives, agents, parent entities, or subsidiary entities of that person or entity.

E. All Cultivation Permits are subject to the conditions of approval in the applicable CUP for the parcel of real property upon which the indoor medical marijuana cultivation activity occurs.

F. All Cultivation Permits are subject to any additional conditions that may be applied by the City at the time of issuance or renewal as necessary to properly regulate the activity and protect the public.

G. All cultivation activities shall be subject to an excise tax to be established by the City and the voters.

H. Cultivation Permitees may not hold or use any other marijuana activity permits or licenses that would otherwise be a violation of the MMRSA or Business and Professions Code section 19328.

I. All Cultivation Permitees shall enter into an agreement with the City to fully reimburse the City for all fiscal impacts, costs, expenses, fees, and attorneys' fees incurred by the City related to the Cultivation Permit and the indoor medical marijuana cultivation activity.

J. All Cultivation Permitees shall:

1. Carry liability insurance in the amounts and types set by the City Manager or the City Manager's designee, and name

the City as an additional insured on all such insurance policies.

2. Execute an Indemnification Agreement prepared by the City that fully indemnifies the City for all liabilities associated with the Cultivation Permit, the Cultivation Permitee's marijuana related activities, and any action taken by the Cultivation Permitee pursuant to this Section.

3. Agree to defend the City, at the Cultivation Permitee's sole expense, in any action against the City or its agents, officers, or employees associated with the Cultivation Permit, the Cultivation Permitee's marijuana related activities, or any action taken by the Cultivation Permitee pursuant to this Section.

4. Agree to reimburse the City for all costs, expenses, fees, and attorney fees incurred by the City related to any action against the City or its agents, officers, or employees associated with the Cultivation Permit, the Cultivation Permitee's marijuana related activities, or any action taken by the Cultivation Permitee pursuant to this Section. The City may, at its sole discretion, participate in the defense of any such action, but such participation shall not relieve the operator of its obligation hereunder.

K. All Cultivation Permitees shall keep the City and law enforcement updated with the names, addresses, and relevant criminal histories of all employees, facility managers, and other relevant parties for the indoor medical marijuana cultivation facility at all times. Relevant criminal histories shall include any drug-related or felony convictions, the nature of such offenses, and the sentences received for such convictions.

L. All Cultivation Permitees shall account for job creation in the City and shall commit to employing a workforce that resides in the City. A minimum of 50% of all employees employed by the Cultivation Permitee at the indoor medical marijuana cultivation facility shall be residents of the City. All Cultivation Permitees shall use good faith efforts to comply with this subsection and shall report the residential composition of their workforce to the City every year and at any other time upon demand by the City Manager or the City Manager's designee.

M. Cultivation Permits issued pursuant to this Section are not transferable to any third parties under any circumstances.

N. All Cultivation Permits shall expire and be null and void 12 months after issuance to the Cultivation Permitee unless properly renewed. Upon payment of the applicable Cultivation Permit fees and passing the requisite Cultivation Permit inspections, Cultivation Permitees that have maintained compliance with all City, State, and other applicable marijuana and business related laws shall be entitled to renew their Cultivation Permit subject to all prevailing laws at the time of renewal.

O. To the fullest extent permitted by law, the City does not assume any liability, and expressly does not waive sovereign immunity, with respect to any medical marijuana cultivation activities or for the activities of any indoor medical marijuana cultivation facility.

(4) Conditional Use Permit. All parcels of real property in the Cultivation Zone upon which indoor medical marijuana cultivation activities may occur must obtain a CUP from the City for all such activities.

(5) Oversight Committee. The City shall create an Oversight Committee to oversee activities of the Cultivation Permitees to ensure that all applicable local, State, and federal laws are complied with, and that all provisions of this Section are enforced, and that no illegal activity is conducted on the indoor medical marijuana cultivation properties. The Oversight Committee shall have full authority to review all proposed applications, applicants, business proposals, financial resources, Merit Lists, and overall business plans when deciding which entities will receive Cultivation Permits as outlined herein. The Oversight Committee shall be appointed by the City Council and shall consist of five total members with one member from code enforcement, one member from planning, and three at-large appointments.

(e) **Enforcement.**

(1) Any marijuana cultivation within the City in violation of this Section is hereby declared to be unlawful and a public nuisance.

(2) Any party who engages in a violation of this Section, or who owns, possess, controls, or has charge of any parcel of real property in the City upon which a violation of the Section is maintained, shall be subject to the penalties and remedies provided by this Section.

(3) Any violation of this Section shall constitute a separate offense for each and every day the violation occurs or persists.

(4) Any person in violation of any provision of this Section shall be guilty of a misdemeanor and shall be punishable by a fine of up to $1,000 and up to six months imprisonment per offense.

(5) Any person in violation of any provision of this Section shall be punishable by an administrative fine of up to a $1,000 per offense.

(6) Any violation of this Section or any other City or State marijuana law by a Cultivation Permitee or a Cultivation Permitee's agent is grounds for revoking the Cultivation Permitee's Cultivation Permit. In addition, the City Manager or the City Manager's designee may revoke a Cultivation Permit if any of the following occur:

A. The City Manager or the City Manager's designee determines that the indoor medical marijuana cultivation facility has failed to comply with this Section, any condition of approval, or any agreement or covenant as required pursuant to this Section.

B. The indoor medical marijuana cultivation operations cease for more than 90 calendar days.

C. Ownership of the indoor medical marijuana cultivation facility is changed or transferred to third party.

D. The indoor medical marijuana cultivation facility fails to maintain 120 hours of security recordings.

E. The indoor medical marijuana cultivation facility fails to provide remote access to the security cameras to the City Manager, the City Manager's designee, or the Chief of Police, or fails to allow inspection of the security recordings, the activity logs, or of the premise by authorized City officials.

(7) Any decision regarding the revocation of a Cultivation Permit may be appealed to an independent neutral third party administrative hearing officer appointed by the City Manager or the City Manager's designee ("Hearing Officer"). Said appeal shall be made by a notice of appeal from the person appealing within 15 days from the date of the decision. The appeal shall be accompanied by a written verified declaration setting forth the basis for the claim that the Cultivation Permit was improperly revoked. The Hearing Officer's decision shall be final and binding upon the City and the appellant.

(8) These penalties and remedies are cumulative, and in addition to any other penalties and remedies available to the City.

17.80.090 Manufacturing of Medical Marijuana

(a) **Purpose.** The purpose and intent of this Section is to regulate the manufacturing of medical marijuana that is processed in accordance with State law in order to promote the health, safety, morals, and general welfare of the residents and businesses within the City. The City intends to be on the forefront of medical marijuana research and manufacturing. The City is authorized to regulate this activity pursuant to the MMRSA.

(b) **Definitions.** For purposes of this Section, the following definitions shall apply, unless the context clearly indicates otherwise:

(1) "City" means the City of Adelanto, California, a Charter Law City.

(2) "City Manager" means the individual duly appointed by a majority of the City Council of the City to serve in the capacity as executive officer of the City on a permanent or interim basis.

(3) "CUP" means a Conditional Use Permit issued by the City in accordance with this Code.

(4) "Fully enclosed and secure structure" means a space within a building, greenhouse or other structure which has a complete roof enclosure supported by connecting walls extending from the ground to the roof, which is secure against unauthorized entry, provides complete visual screening, and which is accessible only through one or more lockable doors and is inaccessible to minors.

(5) "Manufacturer" and "manufacturing" shall be defined in accordance with the MMRSA, Business and Professions Code section 19300.5, and other applicable State laws.

(6) "Manufacturing Permit" means a City permit to operate a medical marijuana manufacturing facility pursuant to the terms and conditions of this Section and the conditions of approval for the permit.

(7) "Manufacturing Permitee" means an applicant who has applied for and has been issued a Manufacturing Permit by the City pursuant to the terms and conditions of this Section.

(8) "Medical marijuana" also means "medical cannabis" and shall be defined in accordance with the MMRSA, Business and Professions Code section 19300.5, Health and Safety Code section 11018, and other applicable State laws.

(9) "MMRSA" means the State Medical Marijuana Regulation and Safety Act.

(c) **Marijuana Manufacturing Prohibited.** All marijuana manufacturing within the City is prohibited except as expressly permitted by this Section.

(d) **Medical Marijuana Manufacturing Conditionally Permitted.** Medical marijuana manufacturing is conditionally permitted in the City only as expressly specified in this Section.

(1) Medical Marijuana Manufacturing Standards. Medical marijuana manufacturing, within the City, shall be in conformance with the following standards:

A. Medical marijuana manufacturing shall only be allowed upon application and approval of a Manufacturing Permit and a CUP in accordance with the criteria and process set forth in this Section and this Code.

B. Medical marijuana manufacturing is a conditionally permitted use only on properties within the Manufacturing/Industrial (MI) zoning designation in the Industrial Park ("Manufacturing Zone").

C. No marijuana manufacturing shall be established, developed, or operated within 2,500 feet of a school, public playground or park, child care or day care facility, youth center, or church. All distances shall be measured in a straight line, without regard to intervening structures, from the nearest point of the building or structure in which the medical marijuana manufacturing is, or will be located, to the nearest property line of those uses describe in this Subsection.

D. Medical marijuana manufacturing facilities may be located within the same building or structure as an indoor medical marijuana cultivation facility only if the medical marijuana manufacturing facility is located in separate rooms of the building or structure, and only if the medical marijuana manufacturing facility has its own separate entrance into the building or structure.

E. Subject to the further requirements of this Section, only State manufacturer license classification type 6 level 1 will be allowed to operate in the City using nonvolatile solvents in accordance with the MMRSA and Business and Professions Code sections 19300.7 and 19341.

F. Medical marijuana manufacturing is allowed only within fully enclosed and secure structures that are inaccessible to minors.

G. Medical marijuana manufacturing shall not exceed the square footage authorized pursuant to the CUP.

H. From any public right-of-way, there shall be no visible exterior evidence of any medical marijuana manufacturing activity.

I. Medical marijuana manufacturing shall not adversely affect the health or safety of the nearby residents by creating dust, glare, heat, noise, smoke, traffic, vibration, or other impacts, and shall not be hazardous due to use or storage of materials, processes, products, or wastes.

J. All medical marijuana manufacturing facilities shall fully comply with all of the applicable restrictions and mandates set forth in State law. All medical marijuana manufacturing facilities shall comply with all size requirements for such facilities as imposed by State law. Medical marijuana manufacturing facilities shall not engage in any activities not allowed by medical marijuana manufacturing facilities pursuant to State law. All medical marijuana manufacturing facilities shall comply with all horticultural, labeling, processing, and other standards required by State law.

K. There is no set restriction on the hours of operation of medical marijuana manufacturing facilities; however, restricted hours of operation may be established as a condition of approval of the Manufacturing Permit or the applicable CUP.

L. All medical marijuana shall be kept in a secured manner during all business and nonbusiness hours.

M. All medical marijuana manufacturing facilities shall operate within a legal structure that is compliant with all applicable State and local laws.

N. All medical marijuana manufacturing facilities must pay all applicable sales taxes pursuant to all federal, State, and local laws.

O. On-site smoking, ingestion, or consumption of marijuana or alcohol shall be prohibited on the premises of all medical marijuana manufacturing facilities. The term "premises" as used in this Subsection includes the actual medical marijuana manufacturing building, as well as any accessory structures and parking areas. The medical marijuana manufacturing facility building entrance shall be clearly and legibly posted with a notice indicating that smoking, ingesting, or consuming marijuana or alcohol on the premises or in the vicinity of the facility is prohibited.

P. Signage for all medical marijuana manufacturing facilities shall be limited to name of business only, shall be in compliance with the City's sign code, and shall contain no advertising of any companies, brands, products, goods, or services. Signage shall not include any drug-related symbols.

Q. Alcoholic beverages shall not be sold, stored, distributed, or consumed on the premises. Medical marijuana manufacturing facilities shall not hold or maintain a license from the State Department of Alcohol Beverage Control to sell alcoholic beverages, or operate a business that sells alcoholic beverages. In addition, alcoholic beverages shall not be provided, stored, kept, located, sold, dispensed, or used on the premises of any medical marijuana manufacturing facility.

R. Physician services shall not be provided on the premises. "Physician services" does not include social services, including counseling, help with housing and meals, hospice and other care referrals which may be provided on site.

S. The building in which any medical marijuana manufacturing facility is located, as well as the operations as conducted therein, shall fully comply with all applicable rules, regulations, and laws including, but not limited to, zoning and building codes, the City's business license ordinances, the Revenue and Taxation Code, the Americans with Disabilities Act, and the MMRSA. Compliance with all requirements of State law pertaining to medical marijuana manufacturing is also required.

T. Medical marijuana manufacturing facilities shall not distribute, sell, dispense, or administer marijuana from the facility to the

public. Medical marijuana manufacturing facilities shall not be operated as medical marijuana dispensaries.

U. The operators of all medical marijuana manufacturing facilities shall provide the City Manager or the City Manager's designee with the name, phone number, facsimile number, and email address of an on-site representative to whom the City and the public can provide notice if there are any operational problems associated with the medical marijuana manufacturing facility. All medical marijuana manufacturing facilities shall make every good faith effort to encourage residents and the public to call this representative to resolve any operational problems before any calls or complaints are made to the City or law enforcement.

V. All medical marijuana manufacturing facilities shall be operated in accordance with the conditions of approval associated with the applicable CUP for the parcel of real property upon which the medical marijuana manufacturing activities occur.

W. All medical marijuana manufacturing facilities shall have a security plan including the following measures:

1. Security cameras shall be installed and maintained in good condition, and used in an on-going manner with at least 120 concurrent hours of digitally recorded documentation in a format approved by the City Manager or the City Manager's designee. The cameras shall be in use 24 hours per day, 7 days per week. The areas to be covered by the security cameras include, but are not limited to, the storage areas, manufacturing areas, all doors and windows, and any other areas as determined by the City Manager or the City Manager's designee. Remote log-in information shall be provided to the City Manager and the Chief of Police to allow them to view the security camera images and recordings from their own facilities at any time. Any disruption in security camera images shall be cured expeditiously in good faith.

2. The medical marijuana manufacturing facility shall be alarmed with an alarm system that is operated and monitored by a reputable security company.

3. Entrance to the manufacturing area, and all storage areas, shall be locked at all times, and under the control the medical marijuana manufacturing facility's staff.

4. The entrances and all window areas shall be illuminated during evening hours. The facility shall comply with the City's lighting standards regarding fixture type, wattage, illumination levels, shielding, etcetera, and shall secure the necessary lighting approvals and permits as needed.

5. All windows on the building that houses the medical marijuana manufacturing facility shall be appropriately secured and all marijuana securely stored.

X. Recordings made by the security cameras shall be made available to the City Manager, the City Manager's designee, or law enforcement upon verbal request—no search warrant or subpoena shall be needed to view the recorded materials.

Y. The City Manager, the City Manager's designee, and law enforcement shall have the right to enter the medical marijuana manufacturing facility at any time unannounced for the purpose of making reasonable inspections to observe and enforce compliance with this Section and all laws of the City and the State.

Z. All medical marijuana manufacturing facilities must employ full time quality control personnel. The Manufacturing Permitee must establish Standard Operating Procedures and Batch Records that comply with current Good Manufacturing Practices and the MMRSA for all food products, as outlined by the State Department of Public Health and the Food and Drug Administration.

AA. All finished products produced by a medical marijuana manufacturing facility must be labeled in compliance with the MMRSA, Business and Profession Code section 19347, and the labeling requirements outlined by the State Department of Public Health.

BB. All finished products produced by a medical marijuana manufacturing facility must be packaged in child resistant containers prior to leaving the facility or becoming commercially available in accordance with the MMRSA, Business and Profession Code section 19347, the State Department of Public Health regulations, and other applicable State laws.

CC. All batches of final marijuana products must be tested by a qualified third party testing facility prior to distribution to a dispensary as required by the MMRSA, Business and Professions

Code sections 19326, 19341, and 19342, and the State Department of Public Health regulations.

DD. Medical marijuana manufacturing facilities shall only use nonvolatile solvents that have been approved by the State Department of Public Health for medical marijuana level 1 manufacturing. Until such time as any such nonvolatile solvents are approved by the State Department of Public Health for medical marijuana level 1 manufacturing, medical marijuana manufacturing facilities shall only use nonvolatile solvents that have been approved by the Food and Drug Administration for the processing and preparation of botanical dietary supplements or food grade products.

EE. All processing and analytical testing devises used for medical marijuana manufacturing facilities must be UL listed, or otherwise approved for the intended use by the City's Building Official or the Fire Department. Any processing devices using only non-pressurized water are exempt from such approval.

FF. Unless otherwise prohibited, all processing devices used by a medical marijuana manufacturing facility that utilize hydrocarbons or otherwise flammable solvents must operate in a closed loop, or in such a way that all solvent material is recovered in the process. All hazardous material must be disposed of in a manner which is compliant with all local, State, and federal guidelines for the disposal of hazardous materials.

(2) Manufacturing Permit Applications. All applicants wishing to obtain a Manufacturing Permit from the City shall file an application with the City upon a form provided by the City and shall pay a Manufacturing Permit Application Fee as established by the City. An application for a Manufacturing Permit shall include at least the following information:

A. An estimate of the size of the proposed medical marijuana manufacturing facility.

B. The address of the location for which the Manufacturing Permit is sought. Only one Manufacturing Permit will be issued per location.

C. A site plan and floor plan for the proposed premises denoting the use of all areas on the premises, including storage, manufacturing areas, lighting, signage, etcetera.

D. A proposed security plan in compliance with the Medical Marijuana Manufacturing Standards.

E. The names, addresses, and relevant criminal histories of all potential employees, facility managers, and other relevant parties for the medical marijuana manufacturing facility. Relevant criminal histories shall include any drug-related or felony convictions, the nature of such offenses, and the sentences received for such convictions.

F. The name and address of the owner and lessor of the real property upon which the medical marijuana manufacturing activity is proposed to be conducted. In the event the applicant is not the legal owner of the property, the application must be accompanied with a notarized acknowledgement from the owner of the property that a medical marijuana manufacturing facility will be operated on the property.

G. Authorization for the City Manager or the City Manager's designee to seek verification of the information contained within the application.

H. Evidence that the medical marijuana manufacturing facility will be located in a legal structure that is compliant with all applicable State and local laws.

I. A statement in writing by the applicant that the applicant certifies under penalty of perjury that all the information contained in the application is true and correct.

J. Any such additional and further information as is deemed necessary by the City Manager or the City Manager's designee to administer this Section.

K. The City Manager or the City Manager's designee shall conduct a background check of any applicant seeking a Manufacturing Permit, including all potential employees and any person who may be a facility manager or otherwise responsible for the activities of the medical marijuana manufacturing facility ("Applicant's Agents"), and shall prepare a report on the acceptability of the applicant and the Applicant's Agents and the suitability of the proposed location.

L. The City Manager or the City Manager's designee shall rank all qualified applications in order of those that best satisfy the

requirements of this Section and provide the highest level of service and opportunities for residents of the City based on the requirements of this Section and the following criteria ("Merit List"):

1. The operational plan for the facility.

2. The security plan for the facility.

3. The experience of the operators of the facility.

4. The adequacy of capitalization for the facility and its operations.

5. The employment of City residents and other public benefits to the City.

(3) Manufacturing Permit. The following conditions apply to all Manufacturing Permits:

A. A Manufacturing Permit will not be awarded to an applicant if:

1. The applicant or the Applicant's Agents made one or more false or misleading statements or omissions in the application or during the application process.

2. The proposed medical marijuana manufacturing facility is not allowed by State or local law.

3. The applicant is not a legal representative of the medical marijuana manufacturing facility.

4. The applicant or the Applicant's Agents have been convicted of a felony, or a misdemeanor involving moral turpitude, or the illegal use, possession, transportation, distribution, or any such similar activity related to controlled substances, with the exception of marijuana related offenses for which the conviction occurred prior to passage of Compassionate Use Act. A conviction within the meaning of this Section means a plea or verdict of guilty or a conviction following a plea of nolo contendere.

5. The applicant or the Applicant's Agents have engaged in unlawful, fraudulent, unfair, or deceptive business acts or practices.

6. The applicant has not satisfied each and every requirement of this Section.

B. Manufacturing Permits shall be awarded by the City to eligible Manufacturing Permit applicants in order of the Merit List as established by the City Manager or the City Manager's designee. The number of Manufacturing Permits shall be limited to those that may be reasonably accommodated within the Manufacturing Zone.

C. Before a Manufacturing Permit can be issued to an applicant, Manufacturing Permit fees must be paid to offset all related costs to the City, and the proposed medical marijuana manufacturing facility location must pass all applicable inspections.

D. Only one Manufacturing Permit may be possessed or used by the same person or entity, including the representatives, agents, parent entities, or subsidiary entities of that person or entity.

E. All Manufacturing Permits are subject to the conditions of approval in the applicable CUP for the parcel of real property upon which the medical marijuana manufacturing activity occurs.

F. All Manufacturing Permits are subject to any additional conditions that may be applied by the City at the time of issuance or renewal as necessary to properly regulate the activity and protect the public.

G. All manufacturing activities shall be subject to an excise tax to be established by the City and the voters.

H. Manufacturing Permitees may not hold or use any other marijuana activity permits or licenses that would otherwise be a violation of the MMRSA or Business and Professions Code section 19328.

I. All Manufacturing Permitees shall enter into an agreement with the City to fully reimburse the City for all fiscal impacts, costs, expenses, fees, and attorneys' fees incurred by the City related to the Manufacturing Permit and the medical marijuana manufacturing activity.

J. All Manufacturing Permitees shall:

1. Carry liability insurance in the amounts and types set by the City Manager or the City Manager's designee, and name

the City as an additional insured on all such insurance policies.

2. Execute an Indemnification Agreement prepared by the City that fully indemnifies the City for all liabilities associated with the Manufacturing Permit, the Manufacturing Permitee's marijuana related activities, and any action taken by the Manufacturing Permitee pursuant to this Section.

3. Agree to defend the City, at the Manufacturing Permitee's sole expense, in any action against the City or its agents, officers, or employees associated with the Manufacturing Permit, the Manufacturing Permitee's marijuana related activities, or any action taken by the Manufacturing Permitee pursuant to this Section.

4. Agree to reimburse the City for all costs, expenses, fees, and attorney fees incurred by the City related to any action against the City or its agents, officers, or employees associated with the Manufacturing Permit, the Manufacturing Permitee's marijuana related activities, or any action taken by the Manufacturing Permitee pursuant to this Section. The City may, at its sole discretion, participate in the defense of any such action, but such participation shall not relieve the operator of its obligation hereunder.

K. All Manufacturing Permitees shall keep the City and law enforcement updated with the names, addresses, and relevant criminal histories of all employees, facility managers, and other relevant parties for the medical marijuana manufacturing facility at all times. Relevant criminal histories shall include any drug-related or felony convictions, the nature of such offenses, and the sentences received for such convictions.

L. All Manufacturing Permitees shall account for job creation in the City and shall commit to employing a workforce that resides in the City. A minimum of 50% of all employees employed by the Manufacturing Permitee at the medical marijuana manufacturing facility shall be residents of the City. All Manufacturing Permitees shall use good faith efforts to comply with this subsection and shall report the residential composition of their workforce to the City every year and at any other time upon demand by the City Manager or the City Manager's designee.

M. Manufacturing Permits issued pursuant to this Section are not transferable to any third parties under any circumstances.

N. All Manufacturing Permits shall expire and be null and void 12 months after issuance to the Manufacturing Permitee unless properly renewed. Upon payment of the applicable Manufacturing Permit fees and passing the requisite Manufacturing Permit inspections, Manufacturing Permitees that have maintained compliance with all City, State, and other applicable marijuana and business related laws shall be entitled to renew their Manufacturing Permit subject to all prevailing laws at the time of renewal.

O. To the fullest extent permitted by law, the City does not assume any liability, and expressly does not waive sovereign immunity, with respect to any medical marijuana manufacturing activities or for the activities of any medical marijuana manufacturing facility.

(4) Conditional Use Permit. All parcels of real property in the Manufacturing Zone upon which medical marijuana manufacturing activities may occur must obtain a CUP from the City for all such activities.

(e) **Enforcement.**

(1) Any marijuana manufacturing within the City in violation of this Section is hereby declared to be unlawful and a public nuisance.

(2) Any party who engages in a violation of this Section, or who owns, possess, controls, or has charge of any parcel of real property in the City upon which a violation of the Section is maintained, shall be subject to the penalties and remedies provided by this Section.

(3) Any violation of this Section shall constitute a separate offense for each and every day the violation occurs or persists.

(4) Any person in violation of any provision of this Section shall be guilty of a misdemeanor and shall be punishable by a fine of up to $1,000 and up to six months imprisonment per offense.

(5) Any person in violation of any provision of this Section shall be punishable by an administrative fine of up to a $1,000 per offense.

(6) Any violation of this Section or any other City or State marijuana law by a Manufacturing Permitee or a Manufacturing Permitee's agent is grounds for revoking the Manufacturing Permitee's Manufacturing Permit. In

addition, the City Manager or the City Manager's designee may revoke a Manufacturing Permit if any of the following occur:

A. The City Manager or the City Manager's designee determines that the medical marijuana manufacturing facility has failed to comply with this Section, any condition of approval, or any agreement or covenant as required pursuant to this Section.

B. The medical marijuana manufacturing operations cease for more than 90 calendar days.

C. Ownership of the medical marijuana manufacturing facility is changed or transferred to third party.

D. The medical marijuana manufacturing facility fails to maintain 120 hours of security recordings.

E. The medical marijuana manufacturing facility fails to provide remote access to the security cameras to the City Manager, the City Manager's designee, or the Chief of Police, or fails to allow inspection of the security recordings, the activity logs, or of the premise by authorized City officials.

(7) Any decision regarding the revocation of a Manufacturing Permit may be appealed to an independent neutral third party administrative hearing officer appointed by the City Manager or the City Manager's designee ("Hearing Officer"). Said appeal shall be made by a notice of appeal from the person appealing within 15 days from the date of the decision. The appeal shall be accompanied by a written verified declaration setting forth the basis for the claim that the Manufacturing Permit was improperly revoked. The Hearing Officer's decision shall be final and binding upon the City and the appellant.

(8) These penalties and remedies are cumulative, and in addition to any other penalties and remedies available to the City.

Section 3. Recognizing that there is a potential conflict between federal and State law, it is the City Council's intention that this Ordinance shall be deemed to comply with California law as established by the MMRSA.

Section 4. The City Council determines that it is in the best interest of the residents of the City to allow cultivation and manufacturing facilities that comply with the MMRSA to be established and operated as permitted uses within certain areas of the

City subject to the regulations and restrictions provided in this Ordinance. It is the City Council's intention that nothing in this Ordinance shall be construed to:

1. Allow persons to engage in conduct that endangers others or causes a public nuisance.

2. Allow the use of marijuana for nonmedical purposes of any kind.

3. Allow any activity relating to marijuana that is otherwise not permitted under State law.

Section 5. The City Council finds that the actions contemplated by this Ordinance are exempt from the California Environmental Quality Act pursuant to Section 15061(b)(3) and 15305 of the Guidelines, in that the amendment does not have the potential for causing a significant effect on the environment.

Section 6. No use, business, or activity of any kind that cultivated or manufactured medical marijuana prior to the enactment of this Ordinance shall be deemed to have been a legally established use, and any such use shall not be entitled to claim legal nonconforming status.

Section 7. If any section or provision of this Ordinance is for any reason held to be invalid, unconstitutional, illegal, or unenforceable by any court of competent jurisdiction, or contravened by reason of any preemptive legislation, then such section or provision shall be severed and shall be inoperative, and the remainder of this Ordinance shall remain in full force and effect.

Section 8. By regulating medical marijuana cultivation and manufacturing facilities, the City is only undertaking to preserve the general welfare through implementing the MMRSA. The City Council is not assuming, nor is it imposing on its officers and employees, an obligation for which a breach thereof would expose the City to liability in money damages to any person who claims that such breach proximately caused injury. To the fullest extent permitted by law, the City shall assume no liability whatsoever, and expressly does not waive sovereign immunity, with respect to any provision of this Ordinance or for the activities of any medical marijuana cultivation or manufacturing facility. To the fullest extent permitted by law, any actions taken by a public officer or employee under the provisions of this Ordinance shall not become a personal liability of any public officer or employee of the City. Nothing in this Ordinance shall be deemed or considered in any respects to constitute authorization to violate any law.

Section 9. The Mayor shall sign and the City Clerk shall certify passage and adoption of this Ordinance, and the City Clerk shall cause the same to be published and posted pursuant to the provisions of law in this regard, and this Ordinance shall take effect 30 days after its final passage.

PASSED, APPROVED and ADOPTED this 25th day of May, 2016.

_____
Mayor, Richard Kerr

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

I, Cindy Herrera, City Clerk of the City of Adelanto, do hereby certify that the foregoing Ordinance was introduced for a first reading on the 11th day of May, 2016, and approved for a second reading at a regular meeting of the City Council of the City of Adelanto held on the 25th day of May, 2016, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST:

_____

Cindy M. Herrera, City Clerk, City of Adelanto

Development Services Department

11600 Air Expressway
Adelanto, CA 92301
760-246-2300

MEDICAL MARIJUANA APPLICATION

Medical Marijuana Cultivation ____ $ 7,000
Medical Marijuana Manufacturing ____ $ 7,000

Case Number _____ Date _____
To be filled out by City

I.

Application Information

Name of Business:_____

Applicant entity Structure: ☐ Corporation

☐ Unincorporated Association

☐ Other (describe):_____

II.

Location/ Property Information

Facility Address: _____

Assessor's Parcel Number (APN):_____ Zip Code:_____

Approximate Size of Facility:_____

III.

Primary Contact

Contact Person (please print): _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: ( ) _____ E-mail: _____

Mobile: ( ) _____

IV.

Property Owner Information

Recorded Owner: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: (___)_____ Mobile: (____)_____

V.

Criminal Convictions

Please list any Felony Criminal Conviction or Misdemeanor Conviction Involving Moral Turpitude, or the Illegal Use, Possession, Transportation, Distribution or Similar Activities Related to Controlled Substances, with the Exception of Marijuana Related Offenses for which the Conviction Occurred Prior to the Passage of the Compassionate Use Act. Please list Offense, Date of Offense & Conviction, and City in which Conviction Occurred.

1. _____
_____
_____
2. _____
_____
_____
3. _____
_____
_____
4. _____
_____
_____
5. _____
_____
_____

VI.

Unfair Business Practices

For Any Applicant or Managing Member, Please List Any and All Unlawful, Fraudulent, Unfair, or Deceptive Business Acts or Practices.

1. _____
_____
_____
2. _____
_____
_____
3. _____
_____
_____
4. _____
_____
_____
5. _____
_____
_____

APPLYING AS A CORPORATION

Check Appropriate Box: ☐Nonprofit ☐Not-For-Profit ☐For-Profit

Name of Corporation: _____

Cal. Sec. of State Corp. Identification No.: _____

Federal Tax Identification No.: _____

Date of Incorporation: _____

Place of Incorporation: _____

Location of Corporate Headquarters: _____

Is this a Mutual Benefit Corporation? ☐Yes ☐No

Are all members of the corporation Qualified Patients and Designated Primary Caregivers of the Qualified Patient members? ☐Yes ☐No

Will the applicant have non-applicant-members provide employment services at the Medical Marijuana Facility on behalf of the applicant? ☐Yes ☐No

If "Yes," identify the person(s), describe the proposed services, and include whether the person(s) will be paid by the applicant as an employee: _____

_____

_____

_____

Please provide the first name, middle initial, last name; address; title; function(s) performed; and phone number(s) for each Medical Marijuana Permit applicant corporate officer: (Attach additional pages to the application if necessary.)

Name	Title	Address	Phone

ADELANTO PROPERTY OWNER/LANDLORD USE DISCLOSURE & AUTHORIZATION FOR A MEDICAL MARIJUANA FACILITY

I _____, am the legal owner / landlord / lessor of real
(Name of Property Owner/Landlord) (Circle Appropriate Term)

property located at _____, in Adelanto, California.
(Address of Property)

I hereby authorize the Medical Marijuana Applicant entitled

_____, to use this property as a Medical
(Name of the Corporation, Individual or Business)

Marijuana Facility, as that term is define in state law and the City of Adelanto Municipal Code/Ordinance 545, for the specific use of a Medical Marijuana Facility.

_____	_____	_____
(Signature of legal owner/landlord/lessor)	(Printed Name & Title)	(Date)
_____	_____	_____
(Signature of legal owner/landlord/lessor)	(Printed Name & Title)	(Date)
_____	_____	_____
(Signature of legal owner/landlord/lessor)	(Printed Name & Title)	(Date)

This authorization may be executed in two or more counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one and the same instrument. Facsimile signature(s) shall be deemed the equivalent of original signatures.

I declare under penalty of perjury that the foregoing information is true and correct. Executed

this_____ day of _____ 20___, at Adelanto, California.

ACKNOWLEDGEMENT OF MEDICAL MARIJUANA OPERATING STANDARDS AS SET FORTH IN ADELANTO ORDINANCE 545.

The undersigned Management Members, on behalf of the herein Medical Marijuana Operation

Permit applicant,_____ declare under penalty of perjury that they have read and understand the attached provisions of Adelanto Ordinance 545, and shall, collectively and individually, ensure that the Medical Marijuana Applicant, its members and Management Members shall not engage in activity that violates the Operating Conditions set forth in Adelanto Ordinance 545, which states in relevant part that the Medical Marijuana Applicant shall:

(A) Only operate at a location zoned by the City of Adelanto.

(B) Operate only on a property within the Manufacturing/Industrial (M1) zoning designation in the Industrial Park and not within a 2,500 foot radius of a school, pubic playground or park, child care or day care facility, youth center, or church.

(C) Fully Enclosed and Secure Facility. The Medical Marijuana Facility shall be fully enclosed and secure structure. All marijuana shall be kept in a secured manner during business and non-business hours. Entrance to the facility shall be locked at all times, and under control of staff of the facility.

(D) Alarm. The facility shall be secured with an alarm system and monitored by a recognized security company.

(E) No Distribution to the Public. The medical marijuana facility shall not distribute, sell, dispense, or administer marijuana out of its facility to the public. The medical marijuana facility shall not be operated as a dispensary.

(F) No Visible Evidence. No evidence of Medical Marijuana at the Property shall be visible with the naked eye from any public or other private property, nor shall Medical Marijuana be visible from the building exterior. No operation shall occur at the Property unless the area devoted to the operation is secured from public access by means of a locked gate and any other security measures necessary to prevent unauthorized entry.

(G) No Adverse Effects. The Medical Marijuana facility shall not adversely affect the health or safety of the nearby residents by creating dust, glare, heat, noise, smoke, traffic, vibration, or other impacts, and shall not be hazardous due to use or storage of materials, processes, products or wastes.

(H) Legal Compliance with State and City Laws. The Medical Marijuana Facility shall comply fully with all of the applicable restrictions and mandates set forth in state law, including without limitation the Attorney General Guidelines the medical marijuana facility shall comply with all size requirements for such facilities imposed by state law. The facility shall not engage in any activities not allowed at facilities pursuant to State law. The facility shall comply with all horticulture, labeling, processing, and other standards required by State law. The building in which the facility is located shall fully comply with all applicable rules, regulations, and laws of the City and State.

(I) Legal Structure. The medical marijuana facility shall operate within a legal structure compliant with all laws of the State of California.

(J) No Onsite Consumption. On site smoking, ingestion, or consumption of marijuana or alcohol shall be prohibited on the premises of the medical marijuana facility. Moreover, the building entrance to the medial marijuana facility shall be clearly and legibly posted with a notice indicating that smoking, ingesting, or consuming marijuana on the premises or in the vicinity is prohibited.

(K) Signage. Signage for the medical marijuana facility shall be limited to the name of the business only and shall be in compliance with the city's sign code, and no advertising or companies, brands, products, goods and/or services shall be permitted. Signage shall not include any drug-related symbols.

(L) No Alcohol. No alcohol shall be sold, stored, distributed or consumed on the premises.

(M) Physician Services. Physician services shall not be provided on the premises of the facility.

(N) Storage of Marijuana. No dried medical marijuana shall be stored at the property in structures that are not completely enclosed, in an unlocked vault or safe, in any other unsecured storage structure, or in a safe or vault that is not bolted to the floor of the Property.

(O) Insurance. The medical marijuana facility agrees to carry insurance in an amount acceptable to the City. The facility also agrees to name the City of Adelanto as an additionally insured.

(P) Operate with sufficient odor absorbing ventilation and exhaust systems;

(Q) Operate with a quality closed circuit security camera with at least 120 concurrent hours of digitally recorded documentation in a format approved by the City Manager or the City Manager's designee;

(R) Operate with a quality closed circuit security camera in use 24 hours per day, 7 days per week.

We, _____ and _____
(Printed Name of Property Owner) (Printed Name of Operator)

collectively acknowledge that we have been provided a copy of the medical marijuana facility operating standards listed in the City of Adelanto Ordinance 545. We further acknowledge that we have read, understand, and shall ensure compliance with the aforementioned operating standards and all applicable provisions of the City of Adelanto Ordinance 545 at the medical

marijuana facility entitled _____.
(Name of facility listed on the application)

We certify under penalty of perjury that the foregoing information is true and correct.

Executed this _____ day of _____, 20___ in Adelanto, California.
(Day) (Month)

_____ _____
Signature of Property Owner Printed Name and Title

_____ _____
Signature of Operator Printed Name and Title

INFORMATION AND RELEASE FORM

The undersigned, on behalf of _____, hereby
(Name of Corporation/)

authorize the City of Adelanto, by and through its appropriate officers, agents and employees to verify and confirm the information contained in this application, and to conduct such other investigations as may be reasonably required by the City of Adelanto, its officers, agents and employees for the purpose of determining the capability, fitness and capacity of the above named Corporation to obtain the Medical Marijuana Permit.

The applicant by signing this Information Release Form consents to service of any notice required or provided for by the laws, rules, regulations, or ordinances of the City of Adelanto upon the person(s) at the address listed for applicant, will constitute sufficient and legal notice, unless said applicant listed an attorney of record and/or agent for service of process, with sufficient contact information.

The applicant consents and agrees that full compliance will be made with all applicable State laws and City ordinances governing the conduct of the particular type of activity for which the Medical Marijuana Permit is requested. The applicant by signing this Information Release Form understands that any incomplete or false information may constitute grounds for denial.
This form MUST be signed by each applicant Management Member.

_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)
_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)
_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)

This release may be executed in two or more counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one and the same instrument. Facsimile signature(s) shall be deemed the equivalent of original signatures.

I declare under penalty of perjury that I have read the forgoing application and all information, statements, verifications, declarations and authorizations made, attached to and contained herein, and that I have personal knowledge of the information contained in the application, and that the information contained in the application is true and correct, and that the application was completed under the supervision of the Management Members.

Executed this _____ day of _____, 20___, at Adelanto California.

ADELANTO MEDICAL MARIJUANA FACILITY
ON-SITE MEMBER CONTACT STATEMENT

The undersigned, on behalf of _____Corporation,
(Name of Corporation (Applicant))

hereby designates _____ as the on-site
(Name of On-Site Manager)

Community Relation's representative to whom the public or City can provide notice to if there are operating problems or issues relating to the Adelanto Medical Marijuana Facility. The Medical Marijuana Facility shall make every good faith effort to encourage residents to call this person to try to solve operating problems, if any, before any calls or complaints are made to the police or planning departments.

_____ _____
Signature of On-Site Manager Printed Name & Title

_____ (____)_____
Address Phone Number

_(_____)_____ _____
Facsimile Number Email Address

I declare under penalty of perjury that I have read the forgoing application and all information, statements, verifications, declarations and authorizations made, attached to and contained herein, and that I have personal knowledge of the information contained in the application, and that the information contained in the application is true and correct, and that the application was completed under the supervision of the Management Members.

Executed this _____ day of _____ 20___, at Adelanto California.

STATEMENT OF AUTHORIZATION TO INDEMNIFY CITY

Indemnity:
The undersigned, on behalf of _____
(Name of Corporation ("Applicant"))
hereby authorizes and agrees to indemnify the City of Adelanto (the "City"), its agents, officers, and employees, to the maximum extent permitted by law, as such may be amended from time to time, and to defend at its sole expense, any and all action against the City, its agents, officers, and employees because of any and all issues relating to the approval of said medical marijuana facility and related Ordinance(s) in the City.

Reimbursements:
The undersigned, on behalf of _____
(Name of Corporation ("Applicant"))
also agrees to reimburse the City for any court costs and attorney fees that the City may incur as payment for such action. The City may select any attorney it deems appropriate, in the City's exclusive discretion. Reimbursement of costs and fees, as set forth herein, shall be made payable to the "City of Adelanto," within thirty (30) days of written request for same. Failure of Applicant to make payment of reimbursement, as set forth herein, shall be grounds for revocation of permit to operate a medical marijuana facility in the City.

Counterparts:
This indemnity may be executed in two or more counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one and the same instrument. Facsimile signature(s) shall be deemed the equivalent of original signatures.

Declaration of Authorized Agents:
This form MUST be signed by each owner/shareholder or managing member of the applicant.
I declare under penalty of perjury that I have read the forgoing application and all information, statements, verifications, declarations and authorizations made, attached to and contained herein, and that I have personal knowledge of the information contained in the application, and that the information contained in the application is true and correct, and that we/I am duly authorized to enter into this Indemnity on behalf of Applicant.

_____ _____ _____
(Signature) (Printed Name & Title) (Date)

_____ _____ _____
(Signature) (Printed Name & Title) (Date)

_____ _____ _____
(Signature) (Printed Name & Title) (Date)

AUTHORIZATION TO INSURE ADELANTO MEDICAL MARIJUANA FACILITY

The undersigned, on behalf of _____,
(Name of Corporation (Applicant))

hereby agrees to carry insurance for the medical marijuana facility in an amount acceptable to the City of Adelanto.

The undersigned, on behalf of _____,
(Name of Corporation (Applicant))

also agrees to name the City of Adelanto as an additionally insured on said policy.

This form MUST be signed by each applicant Management Member.

_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)
_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)
_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)

This release may be executed in two or more counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one and the same instrument. Facsimile signature(s) shall be deemed the equivalent of original signatures.

I declare under penalty of perjury that I have read the forgoing application and all information, statements, verifications, declarations and authorizations made, attached to and contained herein, and that I have personal knowledge of the information contained in the application, and that the information contained in the application is true and correct, and that the application was completed under the supervision of the Management Members.

Executed this _____ day of _____ 20___, at Adelanto California.

STATEMENT OF AUTHORIZATION TO REIMBURSE THE CITY OF ADELANTO

The undersigned, on behalf of _____,
(Name of Corporation (Applicant))

hereby agrees to fully reimburse the City of Adelanto for any and all costs the City of Adelanto may incur as a result of the existence of medical marijuana facilities in the City of Adelanto and the implementation of the City of Adelanto Ordinance 545.

The undersigned, on behalf of _____,
(Name of Corporation (Applicant))

also agrees to provide the City with revenue to offset the potential deleterious effects of the location of the Medical Marijuana facility.

This form MUST be signed by each applicant Management Member.

_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)
_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)
_____	_____	_____
(Signature of Management Member)	(Printed Name & Title)	(Date)

This release may be executed in two or more counterparts, each of which shall be deemed an original, and all of which taken together shall constitute one and the same instrument. Facsimile signature(s) shall be deemed the equivalent of original signatures.

I declare under penalty of perjury that I have read the forgoing application and all information, statements, verifications, declarations and authorizations made, attached to and contained herein, and that I have personal knowledge of the information contained in the application, and that the information contained in the application is true and correct, and that the application was completed under the supervision of the Management Members.

Executed this _____ day of _____ 20___, at Adelanto California.

COVENANT TO SUPPORT CITY EFFORTS FOR BUSINESS TAX AND BUSINESS LICENSE FEES

Applicant_____ ("Applicant"), hereby understands that the City of Adelanto (the "City") is experiencing financial hardship;

Applicant hereby covenants to support the City in its efforts to become financially solvent.

Applicant hereby covenants to support, and not oppose, any initiative that the City or the voters of the City initiate to raise business taxes and business license fees.

The City hereby assures Applicant that any business tax or business license fee imposed on the Applicant will be reasonable and in compliance with all federal, state and local laws.

Applicant hereby covenants to assist the City with a reasonable monetary contribution for actual costs associated with any Special Election or General Election initiated by the City to raise business tax or business license fees. Applicant shall be responsible for a pro-rata share of any costs associated with any General or Special Election initiated by the City to raise business taxes and business license fees.

Date: _____ _____

(Signature of Applicant)

MEDICAL MARIJUANA APPLICATION CHECKLIST

1. Complete Application _____
    a. General Information, items I – VI _____
    b. Applying as a corporation _____
    c. Property owner/landlord disclosure _____
    d. Operating standards acknowledgement _____
    e. Information release form _____
    f. On-site member contact statement _____
    g. Indemnity statement _____
    h. Insurance statement _____
    i. Statement to reimburse _____
    j. Covenant to support city efforts _____
2. Site Plan _____
3. Security Plan _____
4. Live Scan, Applicants and Operators _____
5. Operations Plan in accordance with Ordinance 545 _____
    a. Statement of experience _____
    b. Statement of financial adequacy _____
    c. Statement of employment _____
    d. Statement of public benefit _____
6. Business Plan (recommended but not required by ordinance) _____