CITY OF TEHACHAPI CALIFORNIA

Wells Education Center
300 South Robinson Street

AGENDA

TEHACHAPI CITY COUNCIL REGULAR MEETING,
TEHACHAPI REDEVELOPMENT SUCCESSOR AGENCY REGULAR MEETING,
TEHACHAPI PUBLIC FINANCING AUTHORITY REGULAR MEETING, AND
TEHACHAPI CITY FINANCING CORPORATION REGULAR MEETING
MONDAY, JUNE 20, 2016 - 6:00 P.M.

Persons desiring disability-related accommodations should contact the City Clerk no later than ten days prior to the need for the accommodation. A copy of any writing that is a public record relating to an open session item of this meeting is available at City Hall, 115 South Robinson Street, Tehachapi, California, 93561.

CALL TO ORDER

ROLL CALL

INVOCATION

Participation in the invocation is strictly voluntary. Each City Councilmember, city employee, and each person in attendance may participate or not participate as he or she chooses.

PLEDGE TO FLAG

CONSENT AGENDA/OPPORTUNITY FOR PUBLIC COMMENT

All items listed with an asterisk (*) are considered to be routine and non-controversial by city staff. Consent items will be considered first and may be approved by one motion if no member of the council or audience wishes to comment or ask questions. If comment or discussion is desired by anyone, the item will be removed from the consent agenda and will be considered in listed sequence with an opportunity for any member of the public to address the city council concerning the item before action is taken. Staff recommendations are shown in caps. Please turn all cellular phones off during the meeting.

AUDIENCE ORAL AND WRITTEN COMMUNICATIONS

The City Council welcomes public comments on any items within the subject matter jurisdiction of the Council. We respectfully request that this public forum be utilized in a positive and constructive manner. Persons addressing the Council should first state their name and area of residence, the matter of City business to be discussed, and the organization or persons represented, if any. To ensure accuracy in the minutes, please fill out a speaker's card at the podium. Comments directed to an item on the agenda should be made at the time the item is called for discussion by the Mayor. Questions on non-agenda items directed to the Council or staff should be first submitted to the City Clerk in written form no later than 12:00 p.m. on the Wednesday preceding the Council meeting; otherwise response to the question may be carried over to the next City Council meeting. No action can be taken by the Council on matters not listed on the agenda except in certain specified circumstances. The Council reserves the right to limit the speaking time of individual speakers and the time allotted for public presentations.

1. General public comments regarding matters not listed as an agenda item

2. Mayor to present a Certificate of Recognition to Major Michael T. Batchelor, Jr.

3. Introduction of new Tehachapi Police Department Dispatchers

CITY CLERK REPORTS

Tehachapi City Council Unassigned Res. No. 25-16
Tehachapi City Council Unassigned Ord. No. 16-05-735
Tehachapi Redevelopment Successor Agency Unassigned Res. No. 01-16
Tehachapi Public Financing Authority Unassigned Res. No. 01-16

*4. **ALL ORDINANCES SCHEDULED FOR INTRODUCTION OR ADOPTION AT THIS MEETING SHALL BE READ BY TITLE ONLY**

*5. Minutes for the Tehachapi City Council, Tehachapi Redevelopment Successor Agency, Tehachapi Public Financing Authority, and the Tehachapi City Financing Corporation regular meeting on June 6, 2016 – **APPROVE AND FILE**

FINANCE DIRECTOR REPORTS

*6. Disbursements, bills, and claims for June 1, 2016 through June 14, 2016 **– AUTHORIZE PAYMENTS**

*7. City of Tehachapi Treasurer's Report through May, 2016 – **APPROVE REPORT**

PUBLIC WORKS DIRECTOR REPORTS

8. 2015 update to the Regional Urban Water Management Plan – **ADOPT A RESOLUTION ADOPTING THE 2015 REGIONAL URBAN WATER MANAGEMENT PLAN**

9. 2015 Annual Water Quality Report – **PRESENTATION**

DEVELOPMENT SERVICES DIRECTOR REPORTS

10. Amendment #1 to consultant agreement with Lisa Wise Consulting to prepare the Oak Tree Village Specific Plan **– APPROVE AMENDMENT #1 TO THE AGREEMENT WITH LISA WISE CONSULTING FOR THE DEVELOPMENT OF THE OAK TREE VILLAGE SPECIFIC PLAN AND ASSOCIATED ENVIRONMENTAL IMPACT REPORT**

11. Active Transportation Program – Rail Corridor Pedestrian Safety Project: Specialized Consultant Services Agreement **– APPROVE THE AGREEMENT BETWEEN THE CITY OF TEHACHAPI AND MNS ENGINEERS, INC. AND AUTHORIZE THE MAYOR TO SIGN**

12. Active Transportation Program – Rail Corridor Pedestrian Safety Project: Union Pacific Preliminary Engineering Services draft agreement – **APPROVE THE DRAFT AGREEMENT BETWEEN THE CITY OF TEHACHAPI AND THE UNION PACIFIC RAILROAD SUBJECT TO REVIEW AND APPROVAL BY THE CITY ATTORNEY, AUTHORIZE THE DEVELOPMENT SERVICES DIRECTOR TO SIGN THE AGREEMENT AND TO REMIT PAYMENT TO THE UNION PACIFIC RAILROAD IN ACCORDANCE WITH THE FINAL AGREEMENT**

CITY ATTORNEY

13. The annual conference of the League of California Cities is scheduled for October 5-7 in Long Beach. The City Attorney's division of the League will hold two days of conferences involving municipal law matters. The registration fee is $525 if paid before August 10. The hotel rooms next to the convention center are $209 a night - **AUTHORIZE PAYMENT OF $245 TOWARD COST OF REGISTRATION AND LODGING FOR ONE NIGHT FOR THE CITY ATTORNEY TO ATTEND THE CONFERENCE**

CITY MANAGER REPORTS

14. **PUBLIC HEARING** - An action to order the levy of assessments within the Landscaping and Lighting District No. 1 for fiscal year 2016/2017 – **OPEN HEARING; NOTICE OF PUBLIC HEARING AND CORRESPONDENCE; STAFF REPORT; RECEIVE PUBLIC COMMENT; CLOSE HEARING; STAFF RECOMMENDATION; ADOPT A RESOLUTION AMENDING AND/OR APPROVING THE FINAL ENGINEER'S REPORT REGARDING THE LANDSCAPING AND LIGHTING ASSESSMENT DISTRICT NO. 1 AND THE LEVY AND COLLECTION OF ANNUAL ASSESSMENTS RELATED THERETO FOR FISCAL YEAR 2016-2017; ADOPT A RESOLUTION ORDERING THE LEVY AND COLLECTION OF ASSESSMENTS WITHIN THE LANDSCAPING AND LIGHTING DISTRICT NO. 1, FOR FISCAL YEAR 2016/2017**

15. **PUBLIC HEARING** - An action to order the levy of assessments within the Drainage Benefit Assessment District No. 2014-1 for fiscal year 2016/2017 – **OPEN HEARING; NOTICE OF PUBLIC HEARING AND CORRESPONDENCE; STAFF REPORT; RECEIVE PUBLIC COMMENT; CLOSE HEARING; STAFF RECOMMENDATION; ADOPT A RESOLUTION APPROVING THE ANNUAL ENGINEER'S REPORT AND ORDERING THE LEVY AND COLLECTION OF ASSESSMENTS WITHIN THE DRAINAGE BENEFIT ASSESSMENT DISTRICT NO 2014-1 FOR FISCAL YEAR 2016/2017, PURSUANT TO THE PROVISIONS OF THE BENEFIT ASSESSMENT ACT OF 1982**

16. **PUBLIC HEARING -** An action to order the levy of assessments within the Drainage Benefit Assessment District No. 1 for fiscal year 2016/2017- **OPEN HEARING; NOTICE OF PUBLIC HEARING AND CORRESPONDENCE; STAFF REPORT; RECEIVE PUBLIC COMMENT; CLOSE HEARING; STAFF RECOMMENDATION; ADOPT A RESOLUTION APPROVING THE ANNUAL ENGINEER'S REPORT AND ORDERING THE LEVY AND COLLECTION OF ASSESSMENTS WITHIN THE DRAINAGE BENEFIT ASSESSMENT DISTRICT NO 1 FOR FISCAL YEAR 2016/2017, PURSUANT TO THE PROVISIONS OF THE BENEFIT ASSESSMENT ACT OF 1982**

17. Report to Council regarding current activities and programs – **VERBAL REPORT**

COUNCILMEMBER REPORTS

On their own initiative, a Councilmember may ask a question for clarification, make a brief announcement, provide a reference to staff or other resources for factual information, take action to have staff place a matter of business on a future agenda, request staff to report back at a subsequent meeting concerning any matter, or make a brief report on his or her own activities. (Per Gov't. Code §54954.2(a))

CLOSED SESSION

1. Conference with Labor Negotiators per Government Code Section 54957.6
   City Designated Representative: Christopher Kirk
   Employee Organization: Federation of Public Service Employees

2. Conference with Labor Negotiators per Government Code Section 54957.6
   City Designated Representative: Christopher Kirk
   Employee Organization: Tehachapi Police Officers Association

ADJOURNMENT

Agenda

Wells
Education Center
300 South Robinson Street

MINUTES

TEHACHAPI CITY COUNCIL REGULAR MEETING, TEHACHAPI REDEVELOPMENT SUCCESSOR AGENCY REGULAR MEETING, TEHACHAPI PUBLIC FINANCING AUTHORITY REGULAR MEETING, AND TEHACHAPI CITY FINANCING CORPORATION REGULAR MEETING

Monday, June 6, 2016 – 6:00 P.M.

NOTE: Sm, Gr, Wi, Ni and Wa are abbreviations for Council Members Smith, Grimes, Wiggins, Nixon and Wahlstrom, respectively. For example, Gr/Sm denotes Council Member Grimes made the motion and Council Member Smith seconded it. The abbreviation Ab means absent, Abd abstained, Ns noes, and NAT no action taken.

	ACTION TAKEN
CALL TO ORDER	
Meeting called to order by Mayor Wiggins at 6:00 p.m.	
ROLL CALL	
Roll call by City Clerk Tori Marsh	
Present: Mayor Wiggins, Mayor Pro-Tem Nixon, Councilmembers Grimes, Smith and Wahlstrom	
Absent: None	
INVOCATION	
By Dennis Mann, St. Jude's in the Mountains Church	
PLEDGE TO THE FLAG	
Led by Councilmember Smith	
CONSENT AGENDA	
Approved consent agenda	Approved Consent Agenda
AUDIENCE ORAL COMMUNICATIONS	
1. General public comments regarding matters not listed as an agenda item were received from: a. No comments	
2. Mayor presented a Certificate of Recognition to the Tehachapi Mountain Bike Team	

	ACTION TAKEN
3. Mayor presented a Certificate of Recognition to the City of Tehachapi City Clerk's Department	
CITY CLERK REPORTS	
*4. **ALL ORDINANCES SCHEDULED FOR INTRODUCTION OR ADOPTION AT THIS MEETING SHALL BE READ BY TITLE ONLY.**	**All Ord. Read By Title Only**
*5. Minutes for the Tehachapi City Council, Tehachapi Redevelopment Successor Agency, Tehachapi Public Financing Authority, and the Tehachapi City Financing Corporation regular meeting on May 9, 2016 - **APPROVED AND FILED.**	**Approved & Filed Gr/Ni Ayes All**
*6. A General Municipal Election, consolidated with the Statewide General Election, will be held in the City of Tehachapi on Tuesday, November 8, 2016, for the following Officers: Two (2) members of the City Council, a City Clerk, and a City Treasurer, all with full four (4) year terms – **ADOPTED RESOLUTION 12-16 CALLING AND GIVING NOTICE OF THE HOLDING 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; ADOPTED RESOLUTION 13-16 REQUESTING THE BOARD OF SUPERVISORS OF THE COUNTY OF KERN 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 §10403 OF THE ELECTIONS CODE**	**Adopted Resolution 12-16 Calling And Giving Notice Of The Holding 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; Adopted Resolution 13-16 Requesting The Board Of Supervisors Of The County Of Kern 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 §10403 Of The Elections Code Gr/Ni Ayes All**
FINANCE DIRECTOR REPORTS	
*7. Disbursements, bills and claims for April 27, 2016 through May 31, 2016 – **AUTHORIZED PAYMENTS**	**Authorized Payments Gr/Ni Ayes All**
*8. City of Tehachapi Treasurer's Report through April, 2016 – **RECEIVED REPORT**	**Received Report Gr/Ni Ayes All**
*9. State Mandated Cost Reimbursement legislation allows for local government agencies to claim reimbursable expenditures mandated by the State. Since 2001/02, the City has contracted with Andy Nichols for SB90 Mandated Cost Claims filings – **APPROVED THE CONTRACT WITH NICHOLS CONSULTING FOR SB90 FILING SERVICES AND AUTHORIZED THE MAYOR TO SIGN**	**Approved The Contract With Nichols Consulting For Sb90 Filing Services And Authorized The Mayor To Sign Gr/Ni Ayes All**
ECONOMIC DEVELOPMENT COORDINATOR	
*10. Agreement with Kiddie Amusements for entertainment at the 4th of July Hotdog Festival - **APPROVED AN AGREEMENT BETWEEN KIDDIE AMUSEMENTS AND THE CITY OF TEHACHAPI AND AUTHORIZED THE MAYOR TO SIGN**	**Approved An Agreement Between Kiddie Amusements And The City Of Tehachapi And Authorized The Mayor To Sign Gr/Ni Ayes All**
*11. Agreement with Movin' On for entertainment at the July 4th Hotdog Festival - **APPROVED AN AGREEMENT BETWEEN MOVIN' ON AND THE CITY OF TEHACHAPI AND AUTHORIZED THE MAYOR TO SIGN**	**Approved An Agreement Between Movin' On And The City Of Tehachapi And Authorized The Mayor To Sign**

	ACTION TAKEN
	Gr/Ni Ayes All
*12. Agreement with Chris Fulton for entertainment at the July 4th Hotdog Festival - **APPROVED AN AGREEMENT BETWEEN CHRIS FULTON AND THE CITY OF TEHACHAPI AND AUTHORIZED THE MAYOR TO SIGN**	Approved An Agreement Between Chris Fulton And The City Of Tehachapi And Authorized The Mayor To Sign Gr/Ni Ayes All
*13. Agreement with T-Pops for entertainment at the July 4th Hotdog Festival – **APPROVED AN AGREEMENT BETWEEN TPOPS AND THE CITY OF TEHACHAPI AND AUTHORIZED THE MAYOR TO SIGN**	Approved An Agreement Between TPOPS And The City Of Tehachapi And Authorized The Mayor To Sign Gr/Ni Ayes All
*14. Agreement with Tehachapi Community Orchestra for entertainment at the July 4th Hotdog Festival – **APPROVED AN AGREEMENT BETWEEN TEHACHAPI COMMUNITY ORCHESTRA AND THE CITY OF TEHACHAPI AND AUTHORIZED THE MAYOR TO SIGN**	Approved An Agreement Between Tehachapi Community Orchestra And The City Of Tehachapi And Authorized The Mayor To Sign
DEVELOPMENT SERVICES MANAGER REPORTS	
15. Minor Services Consultant agreement with RRM Design Group, Inc. to update the City of Tehachapi Landscape Design Guidelines – **CITY ENGINEER JAY SCHLOSSER GAVE STAFF REPORT; INFORMATION ONLY**	
POLICE CHIEF REPORTS	
16. Agreement for the California Highway Patrol Bakersfield Communications Platform – **POLICE CHIEF KENT KROEGER GAVE STAFF REPORT; ADOPTED RESOLUTION 14-16 APPROVING THE MEMORANDUM OF UNDERSTANDING AND FREQUENCY USE AGREEMENT BETWEEN THE CALIFORNIA HIGHWAY PATROL AND THE TEHACHAPI POLICE DEPARTMENT AND AUTHORIZED THE CITY'S CHIEF OF POLICE TO EXECUTE SAME**	Adopted Resolution 14-16 Approving The Memorandum Of Understanding And Frequency Use Agreement Between The California Highway Patrol And The Tehachapi Police Department And Authorized The City's Chief Of Police To Execute Same Ni/Sm Ayes All
17. Agreement with the County of Kern for dispatch radio equipment space on the El Rancho communication site – **POLICE CHIEF KENT KROEGER GAVE STAFF REPORT; APPROVED THE COMMUNICATION SITE LEASE AGREEMENT BETWEEN THE COUNTY OF KERN AND THE CITY OF TEHACHAPI AND AUTHORIZED THE MAYOR TO SIGN, SUBJECT TO APPROVAL BY THE CITY ATTORNEY**	Approved The Communication Site Lease Agreement Between The County Of Kern And The City Of Tehachapi And Authorized The Mayor To Sign, Subject To Approval By The City Attorney Gr/Ni Ayes All
CITY ATTORNEY REPORTS	
*18. Legal Services Agreement with Richards, Watson and Gershon (RWG) to perform legal services from time to time as directed. RWG presently provides legal services regarding the successor agency to the City's redevelopment agency. RWG provides a wide range of other municipal legal services to cities throughout the state. From time to time, the City needs additional specialized legal services. - **APPROVED LEGAL SERVICES AGREEMENT WITH RICHARDS WATSON AND GERSHON**	Approved Legal Services Agreement With Richards Watson And Gershon Gr/Ni Ayes All

	ACTION TAKEN
CITY MANAGER REPORTS	
*19. Amendments to the Employee Personnel Manual to reflect changes in staffing, law or to clarify the document – **ADOPTED RESOLUTION 15-16 APPROVING AMENDED EMPLOYEE PERSONNEL MANUAL AND REPEALING RESOLUTION NO. 08-16**	**Adopted Resolution 15-16 Approving Amended Employee Personnel Manual And Repealing Resolution No. 08-16 Gr/Ni Ayes All**
20. An action to initiate the process and declare the City's intention to levy assessments within the Landscaping and Lighting District No. 1 – **CITY MANAGER GREG GARRETT GAVE STAFF REPORT; ADOPTED THREE RESOLUTIONS 19-16, 20-16, AND 21-16: (1) INITIATING PROCEDURES FOR LEVY AND COLLECTION OF ASSESSMENTS FOR THE FISCAL YEAR 2016/2017; (2) PRELIMINARY APPROVAL OF THE ENGINEER'S REPORT; (3) DECLARING THE CITY'S INTENTION TO LEVY AND COLLECT ASSESSMENTS, WHICH SETS THE TIME AND PLACE OF THE PUBLIC HEARING FOR MONDAY, JUNE 20, 2016 AT 6:00 PM**	**Adopted Three Resolutions 19-16, 20-16, And 21-16: (1) Initiating Procedures For Levy And Collection Of Assessments For The Fiscal Year 2016/2017; (2) Preliminary Approval Of The Engineer's Report; (3) Declaring The City's Intention To Levy And Collect Assessments, Which Sets The Time And Place Of The Public Hearing For Monday, June 20, 2016 At 6:00 Pm Sm/Ni Ayes All**
21. An action to initiate the process and declare the City's intention to levy assessments within the Drainage Benefit Assessment District No. 1 - **ADOPTED THREE (3) RESOLUTIONS 16-16, 17-16, AND 18-16: (1) INITIATING PROCEDURES FOR LEVY AND COLLECTION OF ASSESSMENTS FOR THE FISCAL YEAR 2016/2017; (2) PRELIMINARY APPROVAL OF THE ENGINEER'S REPORT; (3) DECLARING THE CITY'S INTENTION TO LEVY AND COLLECT ASSESSMENTS, WHICH SETS THE TIME AND PLACE OF THE PUBLIC HEARING FOR MONDAY, JUNE 20, 2016 AT 6:00 PM**	**Adopted Three (3) Resolutions 16-16, 17-16, And 18-16: (1) Initiating Procedures For Levy And Collection Of Assessments For The Fiscal Year 2016/2017; (2) Preliminary Approval Of The Engineer's Report; (3) Declaring The City's Intention To Levy And Collect Assessments, Which Sets The Time And Place Of The Public Hearing For Monday, June 20, 2016 At 6:00 Pm Sm/Ni Ayes All**
22. An action to initiate the process and declare the City's intention to levy assessments within the Drainage Benefit Assessment District No. 2014-1 - **ADOPTED THREE (3) RESOLUTIONS 22-16, 23-16, AND 24-16: (1) INITIATING PROCEDURES FOR LEVY AND COLLECTION OF ASSESSMENTS FOR THE FISCAL YEAR 2016/2017; (2) PRELIMINARY APPROVAL OF THE ENGINEER'S REPORT; (3) DECLARING THE CITY'S INTENTION TO LEVY AND COLLECT ASSESSMENTS, WHICH SETS THE TIME AND PLACE OF THE PUBLIC HEARING FOR MONDAY, JUNE 20, 2016 AT 6:00 PM**	**Adopted Three (3) Resolutions 22-16, 23-16, And 24-16: (1) Initiating Procedures For Levy And Collection Of Assessments For The Fiscal Year 2016/2017; (2) Preliminary Approval Of The Engineer's Report; (3) Declaring The City's Intention To Levy And Collect Assessments, Which Sets The Time And Place Of The Public Hearing For Monday, June 20, 2016 At 6:00 Pm Sm/Ni Ayes All**
23. Report to Council regarding current activities and programs – **VERBAL REPORT.**	
COUNCIL MEMBER ANNOUNCEMENTS OR REPORTS	
1. Councilmember Grimes announced the Tehachapi High School Warrior Football team will be selling tickets for the pancake breakfast on the 4th of July. 2. Mayor Pro Tem Nixon reported on the progress of the Medical Marijuana Ordinance committee. 3. Mayor Pro Tem Nixon would like City Staff to formulate a list of possible service projects for non-profits to work on. 4. Mayor Pro Tem Nixon reported on her tour of Edwards Air Force Base.	

ACTION TAKEN

ADJOURNMENT

The City Council/Boards adjourned at 7:40pm to a Tehachapi City Council, Tehachapi Redevelopment Successor Agency, Tehachapi Public Financing Authority and Tehachapi City Financing Corporation Regular Meeting to be held on Monday, June 20, 2016, at 6:00p.m.

TORI MARSH
City Clerk, City of Tehachapi

Approved this 20th day
Of June, 2016.

SUSAN WIGGINS
Mayor, City of Tehachapi

Agenda

yable

Checks by Date - Detail By Vendor Number

User: afrescas
Printed: 6/14/2016 - 4:12 PM

CITY OF TEHACHAPI CALIFORNIA

Vendor	Invoice No	Line Description		Check Amount
0017	American Business Machines			
Check No:	0	Check Date:		
	279562	PD/Toner-Blk-Cyan-Mag-Yel		8.00
			Check Total:	8.00
			Vendor Total:	8.00
0035	BC Laboratories Inc.			
Check No:	0	Check Date:		
	B235760	Swr/Influent-Effluent//Water Samples		325.00
	B235965	Wtr/Bacteriological/Tanglewood Ct/Oakeood St/		36.00
	B236160	Wtr/Curry Resevoir/Weekly Samples		15.00
	B236344	Wtr/Bacteriological/1305 Alder/221 Hayes/1317		36.00
	B236700	Swr/Influent-Effluent		325.00
	B236706	Wtr/Curry Resevoir/Weekly Samples		15.00
	B236785	Wtr/Bacteriological/309 I St/222 West D/1199 C		36.00
			Check Total:	788.00
			Vendor Total:	788.00
0041	Benz Propane Company Inc.			
Check No:	0	Check Date:		
	238388491	Wtr/1228102/800 Enterprise/Propane Delivery		52.25
	238388492	Wtr/1228102/750 Enterprise/Propane Delivery		97.53
	238388492-A	Land/1228102/750 Enterprise/Propane Delivery		12.19
	238388492-B	PW/1228102/750 Enterprise/Propane Delivery		12.19
			Check Total:	174.16
			Vendor Total:	174.16
0061	BSK Associates			
Check No:	0	Check Date:		
	A612158	Swr/Biosolids Sampling/May 2016		1,508.00
			Check Total:	1,508.00
			Vendor Total:	1,508.00
0223	Kern County Auditors Office			
Check No:	0	Check Date:		
	682016	Parking Citation Revenue/April 2016		33.00
			Check Total:	33.00
			Vendor Total:	33.00
0248	Klein's Fire Protection & Extinquisher			
Check No:	0	Check Date:		
	15194	PW/Fire Ext Annual Service		540.00

	Invoice No	Line Description		Check Amount
	15195	Swr/Fire Ext Annual Service		166.20
	15195-A	Wtr/Fire Ext Annual Service		166.19
	15196	Swr/Fire Ext Annual Service		91.20
	15196-A	Wtr/Fire Ext Annual Service		91.19
	15197	Const/Fire Ext Annual Service		173.70
	15198	Air/Fire Ext Annual Service		120.00
	15200	PD/Fire Ext Annual Service		384.98
	15201	GG/Fire Ext Annual Service		45.00
	15201-A	Eng/Fire Ext Annual Service		45.00
			Check Total:	1,823.46
			Vendor Total:	1,823.46
0300	Mission Linen & Uniform Service			
Check No:	0	Check Date:		
	502635176	Swr/Lg Dust Mop/Mats		49.40
			Check Total:	49.40
			Vendor Total:	49.40
0304	Mojave Sanitation			
Check No:	0	Check Date:		
	2735579	Swr/975428801/800 Enterprise/3yd Bin Cty/Rec		132.36
	2735986	Swr/975428801/800 Enterprise/Storage Contain		85.00
	2739806	Const/310163000May 2016 Gate Fee		1,827.78
	2743496	Const/310163000/Gate Fee/Large Truck		1,927.00
			Check Total:	3,972.14
			Vendor Total:	3,972.14
0362	RSI Petroleum Products			
Check No:	0	Check Date:		
	003081	PW/Reg Unleaded Gas/Diesel Fuel		348.10
	0294433	PW/Reg Unleaded Gas/Diesel Fuel		820.14
	0294845	PW/Reg Unleaded Gas/Diesel Fuel		883.52
			Check Total:	2,051.76
			Vendor Total:	2,051.76
0372	Southern California Edison			
Check No:	0	Check Date:		
	622016	Strts/3001191076/303 East Avenue D/May 1-Jun		13.77
	622016-A	Strts/3001191026/326 East D St/May 1-Jun1 201		23.52
	622016-B	LLD/3038368118/Tehachapi Blvd-Bailey Ave/M		76.05
	642016	Strts/3001190981/Highway 202/May 4-Jun3 201		55.61
	642016-A	Strts/3037091928/Highway 202/May 1-Jun1 201		27.65
			Check Total:	196.60
			Vendor Total:	196.60
0399	Sparkletts			
Check No:	0	Check Date:		
	4365880060116	Swr/5 Gal Wtr Bottles/2 Hot-Cold Cooler Rental		118.75
			Check Total:	118.75
			Vendor Total:	118.75

	Invoice No	Line Description		Check Amount
0424	Greater Tehachapi Chamber of Comm.			
Check No:	0	Check Date:		
	9094	GG/Business Outlook Conference Tickets 7 @ $		154.00
			Check Total:	154.00
			Vendor Total:	154.00
0426	Tehachapi-Cummings County Water D			
Check No:	0	Check Date:		
	16-011	Wtr/Cost Allocation for 2015 Urban Water Mgm		5,172.82
	632016	Wtr/Acct 005399/SL6A Chemtool/May 1-31 201		146.47
	632016-A	Wtr/Acct 005400/SL6B Henway/May 1-31 2016		4.50
	632016-B	Wtr/Acct 005401/SL4N Benz Sanitation/May 1-		4.50
	632016-C	Wtr/Acct 005402/DS1 TUSD/May 1-31 2016		4,563.32
	632016-D	LLD/Acct 005403/T10N Warrior Park/May 1-31		883.60
	632016-E	LLD/Acct 005404/DS2KB Landscaping/May 1-:		395.21
	632016-F	LLD/Acct 005405/DS2City Median/May 1-31 2		999.33
			Check Total:	12,169.75
			Vendor Total:	12,169.75
0446	Tehachapi Unified School Dist.			
Check No:	0	Check Date:		
	160263	City Council Meetings Mar-May 2016 5 @ $60		300.00
			Check Total:	300.00
			Vendor Total:	300.00
0476	WITTS Everything for the Office			
Check No:	0	Check Date:		
	141584-1	GG/3x3 Fanfold 12pk Post-it Notes		25.78
	141599-0	GG/Sm Binder Clips/Ink Cart/Push Pins		42.31
	141602-0	GG/GN Copy Paper-2 Reams		13.31
	141707-0	GG/8.5x11 Copy Paper		103.17
	141708-0	GG/8.5x14 Copy Paper		7.51
	141711-0	GG/Toner MFC9460CDN		236.48
			Check Total:	428.56
			Vendor Total:	428.56
0493	Kieffe & Sons Ford			
Check No:	0	Check Date:		
	23721	PD/2016 Ford Exp-Tire Rotation		13.95
			Check Total:	13.95
			Vendor Total:	13.95
0560	Kern Machinery			
Check No:	0	Check Date:		
	101-354842	Swr/JDC Valve-Maint-Oil Filter		83.09
	101-354843	Air/JDC Blade-Mower Blade-Oil Filter		188.71
			Check Total:	271.80
			Vendor Total:	271.80
0832	ACWA/JPIA			
Check No:	0	Check Date:		

	Invoice No	Line Description		Check Amount
	0419242	Medical Premium/July 2016		53,535.91
	0419242-A	Medical Premium Adjustment/July 2016		827.86
	0419242-B	Dental Premium/July 2016		7,740.92
	0419242-C	Dental Premium Adjustment/July 2016		258.28
	0419242-D	Vision Premium/July 2016		1,186.08
	0419242-E	Vision Premium Adjustment/July 2016		42.36
	0419242-F	Life Premium/July 2016		1,279.42
	0419242-G	Life Premium Adjustment/July 2016		67.12
			Check Total:	64,937.95
			Vendor Total:	64,937.95
0897	Mojave's #1 Service Center			
Check No:	0	Check Date:		
	1313117	PW/Tire Sealant/Back Hoe Tire Flat		561.39
			Check Total:	561.39
			Vendor Total:	561.39
1005	Quad Knopf Inc.			
Check No:	0	Check Date:		
	84645	East Tehachapi Traffic Signal & St Improv Proj		15,401.08
			Check Total:	15,401.08
			Vendor Total:	15,401.08
1055	Mercury Graphics			
Check No:	0	Check Date:		
	4786	GG/Full Color Stickers-Adpot A Flag/Art Work		102.34
			Check Total:	102.34
			Vendor Total:	102.34
1286	M&M's Sports Uniforms & Embroide			
Check No:	0	Check Date:		
	36419	PD/Short Sleeve Polo w/Patch and Name/Pants/		1,841.99
			Check Total:	1,841.99
			Vendor Total:	1,841.99
1413	Kern Turf Supply Inc.			
Check No:	0	Check Date:		
	341707	LLD/Gry822-080 Nipple/Dist Manifold/Manifol		100.36
	341707-A	LLD/Gry822-080 Nipple/Dist Manifold/Manifol		100.36
	341707-B	LLD/Gry822-080 Nipple/Dist Manifold/Manifol		100.36
	341707-C	LLD/Gry822-080 Nipple/Dist Manifold/Manifol		100.36
	341874	LLD/1800 Series 6" & 4" Pop-Up/Seal-A-Matic		150.36
	341874-A	LLD/1800 Series 6" & 4" Pop-Up/Seal-A-Matic		150.36
	341874-B	LLD/1800 Series 6" & 4" Pop-Up/Seal-A-Matic		150.37
	341874-C	LLD/1800 Series 6" & 4" Pop-Up/Seal-A-Matic		150.37
			Check Total:	1,002.90
			Vendor Total:	1,002.90
1480	Railroad Management Company			
Check No:	0	Check Date:		
	331318	Swr/12 in Sewer Line/Lic #0231646/Audit #S71		477.11

	Invoice No	Line Description		Check Amount
			Check Total:	477.11
			Vendor Total:	477.11
1505	Benz Construction Services			
Check No:	0	Check Date:		
	2741663	Swr/58021001/800 Enterprise/Roll Off Rental		202.57
	2741665	Swr/300421000/800 Enterprise/Gate Fee/Recycl		343.65
			Check Total:	546.22
			Vendor Total:	546.22
1695	Applegate Garden Florist			
Check No:	0	Check Date:		
	41281-1	GG/Nannette Keller		51.55
			Check Total:	51.55
			Vendor Total:	51.55
1724	Banks Pest Control Inc.			
Check No:	0	Check Date:		
	491216	GG/104 S Robinson/Bi-Monthly Svc 5-23-16		79.00
	491242	PD/220 C St/Bi-Monthly Svc 5-16-16		95.00
			Check Total:	174.00
			Vendor Total:	174.00
1729	Alpha Landscape Maintenance			
Check No:	0	Check Date:		
	12655	GG/City Office		50.00
	12655-A	GG/Market Place		25.00
	12655-B	GG/Union Pacific		85.00
	12655-C	Strts/Mill St		400.00
	12655-D	Strts/Capital Hills-South Island		270.00
	12655-E	Strts/South Curry		227.00
	12655-F	Strts/Street Trees		11.00
	12655-G	Strts/Dennison St		720.00
	12655-H	Land/Pioneer Park		553.00
	12655-I	GG/Downtown Planters		82.00
	12655-J	Land/Railroad Park		505.00
	12655-K	GG/Parking Lot & Wall		28.00
	12655-L	GG/Senior Center		105.00
	12655-M	Railroad Depot		128.00
	12655-N	GG/Tehachapi Blvd Phase 4		35.00
	12655-O	GG/Robinson St Parking Lot		25.00
	12655-P	PD/Police Department		35.00
	12655-Q	Strts/Voyager St Trees		10.00
	12655-R	GG/Centennial Plaza		40.00
	12655-S	LLD/Heritage Oaks		860.00
	12655-T	LLD/Clear View Estates		321.00
	12655-U	LLD/Autumn Hills		1,235.00
	12655-V	LLD/Alta Homes		7,790.00
	12655-W	LLD/Orchard Glen		3,632.00
	12655-X	LLD/Mill St Cottages		25.00
	12655-Y	LLD/Red Barn		95.00
	12656	Mar Pl/Un Pac		1.63
	12656-A	Strts/Mill Street Island		4.88
	12656-B	Strts/Capital Hills		3.25

	Invoice No	Line Description		Check Amount
	12656-C	LLD/Manzanita Park		4.88
	12656-D	LLD/KB Tract-Highland		1.63
	12656-E	LLD/Alta Tract-Warrior Park		37.39
	12656-F	LLD/Alta Parkways Lawns		3.25
	12656-G	LLD/Alta Planters-Highline & Tract		16.26
	12656-H	Strts/South Curry		3.25
	12656-I	LLD/Heritage Oaks		16.26
	12656-J	LLD/KB Dennison		45.48
	12656-K	Strts/Dennison Street		4.88
	12656-L	LLD/Clear View		1.63
	12656-M	Land/Pioneer Park		4.88
	12656-N	GG/Old Town Planter 1		1.63
	12656-O	LLD/Mill Street Cottage		0.81
	12656-P	PD/Tehachapi Police Station		1.63
	12656-Q	Land/Robinson Park		1.63
	12656-R	GG/Taco Samich		1.63
	12656-S	GG/Senior Center		1.63
	12656-T	Railroad Depot		3.25
	12656-U	GG/Robinson Parking Lot		0.81
			Check Total:	17,454.57
			Vendor Total:	17,454.57
1801	HD Supply Waterworks LTD			
Check No:	0	Check Date:		
	F130827	Wtr/Stock Meter Exchange/BL09 Meter		651.46
	F327595	Wtr/Meter Exchange		1,520.06
	F500714	Wtr/Di Pipe/Hex Bolt & Nut Kit/Flg Ring Non A		613.83
	F519109	Wtr/Meter Resetter No Lead		2,283.05
	F521671	Wtr/Di Pipe/Hex Bolt & Nut Kit/Flg Tee/Flg Adj		805.28
	F536717	Wtr/Monroe School/Backflow Preventor Assy		1,731.91
	F543505	Wtr/3x5 Stl Cplg Epoxy/Male Adpt/Solvent Wel		247.20
	F555599	Wtr/Monroe School/3x70 Di Spool/4x19 Di Spo		1,327.19
	F566039	Wtr/Tubing/Brass Bushing No Lead		152.96
	F566147	Wtr/Adpt Fipxpjcts No Lead		153.34
	F596021	Wtr/Meter Resetter No Lead		-51.62
	F610766	Wtr/6x2 IP d/s Br Saddle		138.32
			Check Total:	9,572.98
			Vendor Total:	9,572.98
1822	Ed Grimes			
Check No:	0	Check Date:		
	6102016	Solid Waste Mgmt Advisory/Bakersfield/Mileag		44.28
	622016	League of Cities-Pub Safe Policy/Sacramento/M		37.77
	622016-A	League of Cities-Pub Safe Policy/Sacramento/M		353.16
			Check Total:	435.21
			Vendor Total:	435.21
1855	Gemini Group L.L.C.			
Check No:	0	Check Date:		
	116-12635	Wtr/CCR Report Production/Mailing		2,753.57
			Check Total:	2,753.57
			Vendor Total:	2,753.57
1866	Bear Valley CSD			

	Invoice No	Line Description		Check Amount
Check No:	0	Check Date:		
	May 2016	PD/BV Dispatch Svcs for May 2016		35,381.95
			Check Total:	35,381.95
			Vendor Total:	35,381.95
1945	RST Cranes Inc.			
Check No:	0	Check Date:		
	16-0217	Swr/750 Enterprise/33 Ton Crane		706.20
			Check Total:	706.20
			Vendor Total:	706.20
1981	Duke's Root Control Inc.			
Check No:	0	Check Date:		
	11981	Pipe Sewer Root Control		11,338.29
			Check Total:	11,338.29
			Vendor Total:	11,338.29
2076	Lakeside Equipment Corporation			
Check No:	0	Check Date:		
	16-1270	Swr/Screw Pump/C 45031 60" Dia Screw x 37' I		48,387.90
			Check Total:	48,387.90
			Vendor Total:	48,387.90
2111	Swift Napa Auto Parts			
Check No:	0	Check Date:		
	87060	PD/2011 Crown Vic/Battery		158.03
			Check Total:	158.03
			Vendor Total:	158.03
2113	Fuel Controls Inc.			
Check No:	0	Check Date:		
	86954	Air/100 Octane/3980 Gal- Wholesale		18,809.08
			Check Total:	18,809.08
			Vendor Total:	18,809.08
2147	Coffee Break Service Inc.			
Check No:	0	Check Date:		
	234505	GG/Coffee Service/June 2016		219.20
	JUN4710	GG/Monthly Water Cooler Rental		26.95
			Check Total:	246.15
			Vendor Total:	246.15
2200	Argo Chemical			
Check No:	0	Check Date:		
	1605164	Wtr/Argo-Chlor Sol 12.5% NSF		1,053.85
			Check Total:	1,053.85
			Vendor Total:	1,053.85
2201	SC Communications Inc.			

	Invoice No	Line Description		Check Amount
Check No:	0	Check Date:		
	4840	PD/Quam Model Sys 5 Speakers/Volume Contro		4,418.88
			Check Total:	4,418.88
			Vendor Total:	4,418.88
2599	CPCA			
Check No:	0	Check Date:		
	599	PD/2016-17 Annual CPCA Membership Dues/Ju		331.00
			Check Total:	331.00
			Vendor Total:	331.00
2611	Municipal Maintenance Equipment			
Check No:	0	Check Date:		
	0110523-IN	Swr/Swivel		335.93
			Check Total:	335.93
			Vendor Total:	335.93
2695	Home Depot Credit Services			
Check No:	0	Check Date:		
	502452743	PW/Linen Maint		104.52
	502592141	PW/Linen Maint		99.10
	502592142	Swr/Lg Dust Mop/Mats		49.40
			Check Total:	253.02
			Vendor Total:	253.02
2707	MailFinance			
Check No:	0	Check Date:		
	H5956267	GG/Lease Payment/Mar 28-June 27 2016		454.50
			Check Total:	454.50
			Vendor Total:	454.50
2718	Media All Stars			
Check No:	0	Check Date:		
	154351	GG/Tehachapi High School Athletic Sponsorship		725.00
			Check Total:	725.00
			Vendor Total:	725.00
2743	Bakersfield Shingles Wholesale			
Check No:	0	Check Date:		
	106690	Freedom Plaza/60 Mill TPO Roofing System		14,220.00
			Check Total:	14,220.00
			Vendor Total:	14,220.00
2752	Fastenal Company			
Check No:	0	Check Date:		
	CATEH11005	Wtr/LG-XLG Lime Mesh Vest		16.11
			Check Total:	16.11

	Invoice No	Line Description		Check Amount
			Vendor Total:	16.11
2874	Department of Justice Accounting Offi			
Check No:	0	Check Date:		
	171009	PD/Fingerprint Apps-FBI/Cust of Rcrds/Child A		554.00
			Check Total:	554.00
			Vendor Total:	554.00
2893	Cardmember Service			
Check No:	0	Check Date:		
	2073	Fin/Fellows Galaxy 500 Binding Mach		443.96
	5524	GG/CCAC Banquet & Awards Dinner/Hyatt Reg		228.85
	5866	GG/Calpers Meeting/Water/C Copus		10.38
			Check Total:	683.19
			Vendor Total:	683.19
3173	Soto Tire & Wheels			
Check No:	0	Check Date:		
	00343	PW/Flat Tire Repair - Trailer		10.00
			Check Total:	10.00
			Vendor Total:	10.00
3174	Tehachapi Auto Glass			
Check No:	0	Check Date:		
	C6380	PD/2012 Chevy-Remove & Replace Windshield		227.12
			Check Total:	227.12
			Vendor Total:	227.12
3199	Slick Fish Marketing Co.			
Check No:	0	Check Date:		
	2303	GG/June Talk It Up/Loop Ad/Hot Dog Fest/Grap		249.00
	2303-A	FTB Order #312613192904136373/25% of 249.(		-62.25
			Check Total:	186.75
			Vendor Total:	186.75
3281	Statewide Traffic Safety & Signs Inc.			
Check No:	0	Check Date:		
	12003217	Strts/Blinker Sign/Wireless Radio/Alum Pole Ki		6,631.17
	12003224	Strts/18" Cone or/Blk 3lb w/6"Reel		1,005.13
			Check Total:	7,636.30
			Vendor Total:	7,636.30
3295	A-C Electric Company			
Check No:	0	Check Date:		
	34283	Strts/West Valley -Mt View/Electrician Fee		506.17
			Check Total:	506.17
			Vendor Total:	506.17
3355	Got Weeds?			
Check No:	0	Check Date:		

	Invoice No	Line Description		Check Amount
	1064	Wtr/Clean Up Well Sites/Spray Preemergents &		1,500.00
			Check Total:	1,500.00
			Vendor Total:	1,500.00
3408	Kern Asphalt Paving and Sealing Co. 1			
Check No:	0	Check Date:		
	2503069-740	Strts/Spray Tack/6,600 Sq Yd		4,334.00
			Check Total:	4,334.00
			Vendor Total:	4,334.00
3566	BlueLine Rental			
Check No:	0	Check Date:		
	31557090001	Strts/11 Ton Class Pneumatic Roller		2,331.23
			Check Total:	2,331.23
			Vendor Total:	2,331.23
3579	TransUnion Risk and Alternative			
Check No:	0	Check Date:		
	612016	PD/Acct ID 378193/Person Search/M Adams		50.00
			Check Total:	50.00
			Vendor Total:	50.00
3674	Secure On-Site Shredding			
Check No:	0	Check Date:		
	2735146	GG/Acct 300421002/115 S Robinson/Shredding		35.00
	2735147	Swr/Acct 300421004/750 Enterprise/Shredding		35.00
	2735148	PD/300421006/220 West C St/Shredding		35.00
			Check Total:	105.00
			Vendor Total:	105.00
3716	Ruettgers & Schuler Civil Engineers			
Check No:	0	Check Date:		
	562016	SRTS Gap Closure/Through Mar 31 2016		6,132.50
			Check Total:	6,132.50
			Vendor Total:	6,132.50
3730	Tractor Supply Credit Plan			
Check No:	0	Check Date:		
	2689	Strts/7 Pole RV Connector		10.74
			Check Total:	10.74
			Vendor Total:	10.74
3807	Diamond Technologies			
Check No:	0	Check Date:		
	16944	PD/Dispatch Battery Back-Ups		1,031.03
			Check Total:	1,031.03
			Vendor Total:	1,031.03
3837	CEMEX Construction Materials Pac L			

	Invoice No	Line Description		Check Amount
Check No:	0	Check Date:		
	9433362580	Wtr/Concrete/Fuel Surcharge		690.17
			Check Total:	690.17
			Vendor Total:	690.17
3838	Michael J. O'Day and Associates			
Check No:	0	Check Date:		
	060216	PD/Pre-Emp Background/J A Fager		1,125.76
	060216-A	PD/Pre-Emp Background/D C Kimball		1,092.93
			Check Total:	2,218.69
			Vendor Total:	2,218.69
3844	Franchise Tax Board			
Check No:	0	Check Date:		
	2303	Slick Fish Mktg/FTB Order #312613192904136.		62.25
			Check Total:	62.25
			Vendor Total:	62.25
3855	Central Valley Occupational Med Grp			
Check No:	0	Check Date:		
	5717-20	Wtr/Preplacement Exam/C Hall		59.33
	5717-20-A	Swr/Preplacement Exam/C Hall		59.33
	5717-20-B	PW/Preplacement Exam/C Hall		59.34
			Check Total:	178.00
			Vendor Total:	178.00
3903	South Street Digital Inc			
Check No:	0	Check Date:		
	10391	GF/Jersey Reveal 48x36 1 Original		64.76
	10440	GG/Color Flyer 8.5x11-Qty 80		25.00
			Check Total:	89.76
			Vendor Total:	89.76
4009	TESSCO			
Check No:	0	Check Date:		
	914782	PD/Fin Chg for Inv# 757148/Replacement Batte		14.20
			Check Total:	14.20
			Vendor Total:	14.20
4011	Babcock Laboratories, Inc.			
Check No:	0	Check Date:		
	BF60741-8827M	Swr/Weekly Sampling		344.00
			Check Total:	344.00
			Vendor Total:	344.00
			Report Total:	305,105.18

Agenda

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Computer Check Register

User: afrescas
Printed: 06/09/2016 - 3:21PM
Batch: 10910.06.2016
Bank Account: AP

CITY OF TEHACHAPI CALIFORNIA

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
45074	3925	Cal Prime Inc	6/9/2016		
				R14014-2	114,218.40
		Check 45074 Total:			114,218.40
		Report Total:			114,218.40

CITY OF TEHACHAPI
TREASURER'S REPORT
FY 2015-16

			MONTH END BANK STATEMENT BALANCE					
BANK ACCOUNTS	**Institution**	**Acct#**	**12/31/2015**	**1/31/2016**	**2/29/2016**	**3/31/2016**	**4/30/2016**	**5/31/2016**
General Checking	Bank of the Sierra	21002-06457	642,489.61	268,335.74	307,824.03	238,902.97	506,902.60	489,609.78
Water Deposit Trust	Bank of the Sierra	21002-08503	110,840.00	113,210.00	110,160.00	114,450.00	112,180.00	114,020.00
Payroll	Bank of the West	709-031215	94,679.62	94,189.80	93,793.44	93,459.54	93,089.77	92,665.85
AFLAC Flex Spending	Bank of the West	709-039747	14,619.38	14,907.33	15,679.09	15,775.51	16,081.85	16,419.28
Airport key Deposit/Cr Card Purch	Bank of the West	709-029821	158,624.77	164,294.36	177,240.31	189,235.05	206,789.64	221,821.93
Ashtown Water Escrow	Bank of the West	CD 709-000-855969	107,978.09	107,978.09	107,978.09	107,978.09	107,978.09	107,978.09
1994/2004 Refunding Bond	Bank of New York	870513-870517	0.00	0.00	0.00	0.00	48,235.50	1.32
LAIF	State of California	98-15-914	5,955,980.20	7,565,297.41	7,565,297.41	7,565,297.41	7,277,207.38	7,277,207.38
	Total Funds in Banks		7,085,211.67	8,328,212.73	8,377,972.37	8,325,098.57	8,368,464.83	8,319,723.63
INVESTMENTS								
CSJVRMA Investment Pool	Chandler Asset Mgt	1113	2,064,201.00	2,084,178.00	2,088,443.00	2,093,985.00	2,094,631.00	2,089,911.00
	Total Investments		2,064,201.00	2,084,178.00	2,088,443.00	2,093,985.00	2,094,631.00	2,089,911.00
	TOTAL PORTFOLIO		**9,149,412.67**	**10,412,390.73**	**10,466,415.37**	**10,419,083.57**	**10,463,095.83**	**10,409,634.63**
RDA SUCCESSOR AGENCY FUNDS								
RDA 2007	Bank of New York	870951/52/53/54	362,780.16	362,783.66	362,786.76	362,789.66	362,792.76	564,468.26
RDA 2005	Bank of New York	870711-16	322,176.25	322,179.34	322,182.09	322,184.66	322,187.41	496,773.82
Successor Agency RDA	LAIF	98-15-914 (2)	3,143,650.05	3,143,650.05	3,143,650.05	3,143,650.05	3,143,650.05	3,143,650.05
	Total RDA Successor Agency Funds		3,828,606.46	3,828,613.05	3,828,618.90	3,828,624.37	3,828,630.22	4,204,892.13

O:\Investment\[Treasurers Report FY15-16.xls]Bank Balance

Agenda

CITY OF TEHACHAPI CALIFORNIA

COUNCIL REPORTS

APPROVED

DEPARTMENT HEAD:

CITY MANAGER:

MEETING DATE: JUNE 20, 2016 **AGENDA SECTION:** PUBLIC WORKS DIRECTOR

TO: **HONORABLE MAYOR WIGGINS AND COUNCIL MEMBERS**

FROM: **JON CURRY, PUBLIC WORKS DIRECTOR**

DATE: **JUNE 14, 2016**

SUBJECT: **ADOPTION OF 2015 UPDATE TO THE REGIONAL URBAN WATER MANAGEMENT PLAN**

BACKGROUND

The California Water Code (CWC) requires urban water suppliers within the state to prepare and adopt Urban Water Management Plans (UWMPs) for submission to the Department of Water Resources (DWR). These plans, which must be filed every five years, must satisfy the requirements of the Urban Water Management Planning Act (UWMPA) of 1983 including amendments that have been made to the Act. The UWMPA requires that urban water suppliers servicing 3,000 or more connections, or supplying more than 3,000 acre-feet (AF) of water annually, to prepare an UWMP.

The Regional Urban Water Management Plan (RUWMP) describes and evaluates the practical and efficient uses of water, the degree of usage by the five agencies, reclamation and conservation activities and a detailed evaluation of water supply and demands pertaining to the five agencies for at least 20 years into the future. The RUWMP is prepared to ensure water service reliability during normal, dry, or multiple dry years, and is in compliance with the requirements of Water Code section 10620. The five agencies included in this RUWMP are: Tehachapi-Cummings County Water District (TCCWD- lead agency), Bear Valley Community Services District (Bear Valley CSD), Golden Hills Community Services District (Golden Hills CSD), Stallion Springs Community Services District (Stallion Springs CSD), and the City of Tehachapi (City).

A regional plan has been prepared, as opposed to separate individual plans, to share information, avoid duplication of efforts, reduce costs, and implement a more coordinated regional approach to water management. The draft RUWMP was made available and a public workshop was held for review of the draft document and to receive comments on June 8th, 2016 at Golden Hills CSD.

RECOMMENDATION

Adopt the 2015 update to the Regional Urban Water Management Plan

RESOLUTION NO.

A RESOLUTION OF THE CITY OF TEHACHAPI ADOPTING THE 2015 REGIONAL URBAN WATER MANAGEMENT PLAN

WHEREAS, the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water 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 City of Tehachapi (City) is a retail supplier of water; and

WHEREAS, the City of Tehachapi along with retail purveyors within Tehachapi Cummings County Water District (TCCWD) as a Regional Alliance, have jointly prepared a Regional Urban Water Management Plan; and

WHEREAS, the Plan shall be periodically reviewed at least once every five years, and that the City shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS, the updates Plan must be adopted by July 1, 2016, after public review and hearing, and filed with the California Department of Water Resources; and

WHEREAS, the City along with retail purveyors within TCCWD have therefore, prepared and circulated for public review a draft 2015 Regional Urban Water Management Plan, and a properly noticed public workshop regarding said Plan was held by the Regional Alliance on June 8, 2016; and

WHEREAS, The Board of Directors of the TCCWD received public comment regarding the 2015 Regional Urban Water Management Plan at its regular monthly Board meeting held on June 15, 2016;

NOW, THEREFORE, BE IT RESOLVED by the City Council that the 2015 Regional Urban Water Management Plan is hereby adopted and the City Manager is hereby authorized and directed to file the 2015 Regional Urban Water Management Plan with the California Department of Water Resources by July 1, 2016.

PASSED AND ADOPTED at a special meeting of the City Council of the City of Tehachapi on June 20, 2016 by the following vote:

AYES: COUNCILMEMBERS: _____

NOES: COUNCILMEMBERS: _____

ABSTAIN: COUNCILMEMBERS: _____

ABSENT: COUNCILMEMBERS: _____

_____
SUSAN WIGGINS, Mayor of the City of Tehachapi, California

ATTEST:

_____
TORI MARSH, City Clerk
of the City of Tehachapi, California

I hereby certify that the foregoing resolution was duly and regularly adopted by the City Council of the City of Tehachapi at a special meeting thereof held on June 20, 2016.

_____
TORI MARSH
City Clerk of the City of Tehachapi, California

Greater Tehachapi Area

2015 Regional Urban Water Management Plan

Public Workshop
June 8, 2016

UWMP Background

- Urban Water Management Planning Act
  - Urban water suppliers delivering 3,000 Acre-Ft of water per year or serve more than 3,000 customers
  - Update and Adopt Plan every 5 years
  - Guidebook Published by California DWR
- Objectives
  - Long-term planning by water agencies
  - Ensure adequate supplies in normal & dry years
  - Implement efficient use of urban water supplies

2010 RUWMP

- Tehachapi Water Availability Preservation Committee formed a Regional Alliance:
  - TCCWD – wholesaler (agreements with retail agencies for purchase of supplemental imported supplies)
  - Bear Valley CSD – retail agency
  - City of Tehachapi – retail agency
  - Golden Hills CSD – retail agency
  - Stallion Springs CSD – retail agency
- 2010 RUWMP prepared and adopted by Regional Alliance
- Goal – Efficient water management for Region

2010 RUWMP – Retail Agencies

- Water Conservation Bill of 2009 (SB X7-7)

  State goal of 20% reduction in urban water use by 2020

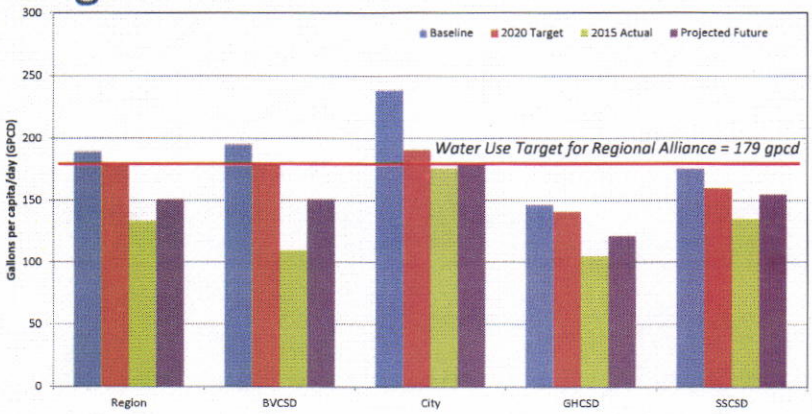
- Target and Baseline per capita water use for each retail agency and the Regional Alliance were determined in 2010 RUWMP

2015 Update

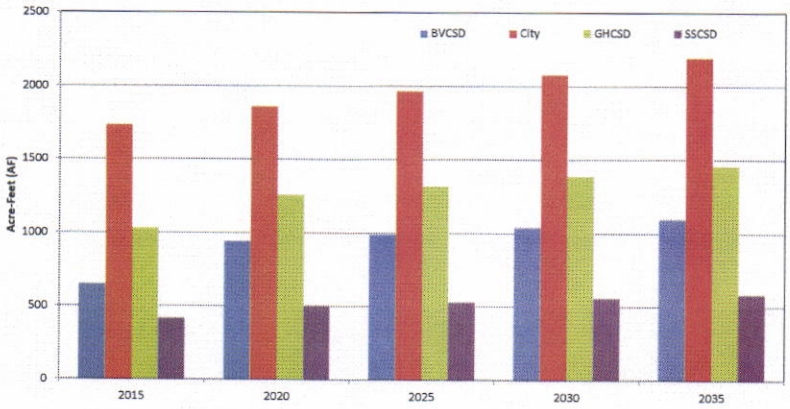
- Update service area descriptions - population projections, water demands, sources of water supplies
- Verify water use targets from 2010 Plan (Interim 2015 and 2020) and assess progress towards targets
- Discuss water supply reliability and water shortage contingency planning
- Describe water conservation (demand management) measures

Updated Plans due to DWR by July 1, 2016

Compliance with 2020 Water Use Targets



Retail Water Demand Projections



Assumes 1% annual population growth per Kern COG

Water Supply Reliability

- Agencies coordinate on a regular basis to provide a reliable water supply for the region
  - Adjudicated/managed groundwater basins
  - Imported State Water Project Supplies
  - Water Conservation Coordinator
  - Implemented water conservation measures
- Each agency has adopted a Water Shortage Contingency Plan
- Details are in the Draft RUWMP

RUWMP Adoption

- Draft RUWMP distributed for review on May 18, 2016
- Public Notice of Workshop published in Tehachapi News (May 18 and 25)
- Comments may be submitted on the Draft RUWMP
- Comments will be addressed as appropriate in Final RUWMP
- Final RUWMP will be adopted by each agency at upcoming Board/Council meetings
- Submittal to DWR by July 1, 2016

Questions?

Agenda

Greater Tehachapi Area - 2015 Regional Urban Water Management Plan

Draft - May 2016

Tehachapi-Cummings County Water District

Bear Valley Community Services District

City of Tehachapi

Golden Hills Community Services District

Stallion Springs Community Services District

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Appendices

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C Climate Change Vulnerability Assessment from Kern IRWMP
D Tables C15 and C16 Kern County Water Agency 2015 DCR ELT
E Groundwater Adjudication Judgments/Groundwater Management Plan
F Water Shortage Contingency Ordinances
G SB X7-7 Verification Forms
H AWWA Water Audit Reporting Worksheets
I Energy Intensity Calculations

List of Acronyms and Abbreviations

AB	Assembly Bill
Act	Urban Water Management Planning Act
AF	Acre-feet
BMP(s)	Best management practice(s)
BVCSD	Bear Valley Community Services District
BWRA	Banked Water Recovery Account
CBDA	California Bay-Delta Authority
CCI	California Department of Corrections and Rehabilitation Institution
CDP	Census Designated Place
CEQA	California Environmental Quality Act
City	City of Tehachapi
CII	Commercial, industrial, and institutional
Committee	Tehachapi Water Availability Preservation Committee
CSD	Community Services District
CUWCC	California Urban Water Conservation Council
CVP	Central Valley Project
CWC	California Water Code
CWSRF	Clean Water State Revolving Fund
DCR	2015 DWR State Water Project Delivery Capability Report
Department	California Department of Water Resources
DIRWM	Division of Integrated Regional Water Management
DMM(s)	Demand management measure(s)
DOF	Department of Finance
DOST	DWR online submittal tool
DWR	California Department of Water Resources
EC	Electrical Conductivity
ELT	Early Long Term Scenario from DCR
ET	Evapotranspiration
GHCSD	Golden Hills Community Services District
GHG	Greenhouse gas
GIS	Geographic Information System
GPCD	Gallons per capita per day
GTA	Greater Tehachapi Area
IRWM	Integrated Regional Water Management
IRWMP(s)	Integrated Regional Water Management Plan(s)
KCWA	Kern County Water Agency
Kern COG	Kern Council of Governments
MCL	Maximum Contaminant Level
M&I	Municipal and Industrial
MOU	Memorandum of Understanding
Plan (or RUWMP)	Regional Urban Water Management Plan
RUWMP (or Plan)	Regional Urban Water Management Plan
SB	Senate Bill
SCADA	Supervisory Control and Data Aquisition
SSCSD	Stallion Springs Community Services District
State Water Board	State Water Resources Control Board
SWP	State Water Project
SWPP	Source Water Protection Plan
TCCWD	Tehachapi-Cummings County Water District

TUSD	Tehachapi Unified School District
USC	Urban Stakeholders Committee
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment

Section 1: Introduction

1.01 Background and Purpose

The California Urban Water Planning Act (Act) requires urban water suppliers that have 3,000 or more service connections or supply 3,000 or more acre-feet (AF) of water per year to develop an Urban Water Management Plan (UWMP), which is submitted to the California Department of Water Resources (DWR) every five years. The UWMP is required to describe and evaluate water deliveries and uses, water supply sources, efficient water uses, demand management measures and water shortage contingency planning. . Since 2005, legislation has been implemented that interrelates with the Act. SB X7-7 (Water Conservation Bill of 2009) requires urban water suppliers to develop baseline daily per capita water use and urban water use targets with the goal of reducing per capita water use by 20 percent by 2020.

Five agencies, one wholesale supplier and four retail water suppliers, are included in this Regional Urban Water Management Plan (RUWMP or Plan):

- Tehachapi-Cummings County Water District (TCCWD) - lead agency and wholesale water supplier,
- Bear Valley Community Services District (BVCSD),
- City of Tehachapi (City),
- Golden Hills Community Services District (GHCSD), and
- Stallion Springs Community Services District (SSCSD).

These agencies cooperate on various regional issues and have formed the Tehachapi Water Availability Preservation Committee comprised of representatives from each of the five agencies. The 2015 RUWMP is an update to the 2010 RUWMP adopted by these agencies. Although not all of the agencies meet the threshold for the requirement to adopt an UWMP, they have all agreed to participate in the RUWMP process. Regional planning allows the agencies to share information, avoid duplication of efforts, reduce costs, and implement a more coordinated regional approach to water management.

TCCWD, the wholesale water supplier for the area, provides State Water Project (SWP) water supplies that are used primarily for agriculture with some commercial, industrial, and urban uses. TCCWD also acts as the court-appointed watermaster for the three adjudicated basins in the Greater Tehachapi Area (GTA), from which the retail water purveyors produce most of the water supplies delivered in their service areas. However, the TCCWD does not supply these agencies with native groundwater. The agencies have rights pursuant to the judgments to exercise their groundwater supplies. TCCWD does provide untreated imported SWP water for groundwater recharge that is then accessed by the retail water purveyors.

This 2015 RUWMP Update has been prepared in accordance with the DWR “2015 Urban Water Management Plans Guidebook for Urban Water Suppliers” (Guidebook). The format of the Plan generally follows the recommended organization in Chapter 1.4 of the Guidebook and incorporates the required standardized tables for each of the participating agencies as numbered and shown in the Guidebook and as appropriate for the wholesale and retail agencies. Some of the tables are not applicable to the various agencies and are not included as noted in the text. As with the previous Plan, this RUWMP update includes a regional alliance (see **Table 1:2-2)**. The letter agreement for the formation of the Regional Alliance is included in **Appendix A**.

Table 1:2-2: Plan Identification			
Select Only One	Type of Plan		Name of RUWMP or Regional Alliance
☐	Individual UWMP		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☑	Regional Urban Water Management Plan (RUWMP)		Tehachapi Regional Plan
NOTES:			

1.02 Report Organization

The RUWMP contains six sections as outlined below:

- Section 1 – Introduction
- Section 2 – Tehachapi-Cummings County Water District
- Section 3 – Bear Valley Community Services District
- Section 4 – City of Tehachapi
- Section 5 – Golden Hills Community Services District
- Section 6 – Stallion Springs Community Services District

Section 1 of this document addresses information presented in Chapter 1 of the Guidebook. Within the section for each agency are nine subsections that align with Chapters 2 through 10 in the Guidebook, as shown below:

- Subsection 1 – Plan Preparation
- Subsection 2 – System Description
- Subsection 3 – System Water Use
- Subsection 4 – Baselines and Targets
- Subsection 5 – System Supplies
- Subsection 6 – Water Supply Reliability Assessment
- Subsection 7 – Water Shortage Contingency Planning
- Subsection 8 – Demand Management Measures
- Subsection 9 – Plan Adoption, Submittal, and Implementation

More detailed descriptions of information that pertains to all of the agencies, such as location, climate, climate change impacts, groundwater basins, energy intensity, and Demand Management Measures are included in Section 2. The TCCWD serves as watermaster for the adjudicated groundwater basins and, through an agreement among the agencies, has taken the lead on implementation of a regional water conservation program.

Also included in Section 2 is the discussion of the update of the calculations of baseline daily per capita water use and urban water use targets from the 2010 RUWMP for the Regional Alliance. As with the 2010

RUWMP, targets have been calculated for the Regional Alliance and for each of the participating agencies. This is to permit the participating agencies to show compliance with their individual targets should the regional alliance targets not be met.

1.03 Compliance with 2015 Water Use Targets

In the 2015 Plan, water agencies must demonstrate compliance with their established water use targets for the year 2015. The Regional Alliance, and each participating agency individually, is in compliance with its respective Interim 2015 Target. In every case, the 2015 daily per capita water use is in compliance with the 2020 Targets as well. The targets and compliance daily per capita water use for each agency and the Regional Alliance are summarized in **Table 1:5-3**.

The SB X7-7 verification forms for each agency and the Regional Alliance are included in **Appendix G**. The update of the calculations of baseline daily per capita water use and urban water use targets from the 2010 RUWMP for each agency is discussed in their individual Plan sections.

Table 1:5-3: Water Use Targets Compliance Summary Regional Alliance and Participating Agencies

Agency	2015 Interim Target*	Confirmed 2020 Target*	2015 Actual Water Use*
Regional Alliance	*185*	*179*	*135*
BVCSD	*187*	*179*	*110*
COT	*213*	*191*	*176*
GHCSD	*144*	*141*	*105*
SSCSD	*168*	*160*	*135*
*All values are in Gallons per Capita per Day (GPCD)			
NOTES: See SB X7-7 Verification Forms in Appendix G.			

Section 2 Tehachapi Cummings-County Water District

2.01 Plan Preparation

2.01.1 Agency Identification

TCCWD is a wholesaler. Its information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 2:2-3**.

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

2.01.2 Coordination and Outreach

Law

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 (10620(d)(2)).

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 (10642).

Urban water suppliers that rely 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(j)).

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 (10621(b)).

TCCWD provides a supplemental imported water supply from the State Water Project (SWP) to retail water suppliers in the GTA. The TCCWD provides untreated water for groundwater recharge that is then accessed by the retail water purveyors.

Table 2:2-4 lists the water suppliers that were informed of SWP water supply projections as a part of the RUWMP development process. TCCWD provides wholesale imported water supplies to these agencies.

Table 2:2-4 Wholesale: Water Supplier Information Exchange
Supplier has informed the following water suppliers of water supplies available in accordance with CWC 10631.
Water Supplier Name
Bear Valley Community Services District
City of Tehachapi
Golden Hills Community Services District
Stallion Springs Community Services Districts
NOTES: Agencies are participants in this RUWMP.

In addition to the water suppliers listed in **Table 2:2-4**, the Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 2.09**. Copies of notices are included in **Appendix A**.

2.02 System Description

2.02.1 General Description

Law

Describe the service area of the supplier (10631(a)).

The TCCWD is located within the Tehachapi mountain range east of Bakersfield in southeastern Kern County, and encompasses approximately 266,000 acres. The TCCWD provides imported water supplies (SWP), water resources management, and flood protection within several improvement districts in the Tehachapi Basin. The TCCWD serves as watermaster for three adjudicated groundwater basins: Brite Valley, Cummings Valley, and Tehachapi Valley. TCCWD sells imported SWP supplies to agricultural lands, the California Department of Corrections and Rehabilitation's Correctional Institution in Tehachapi (CCI), and to retail water agencies within TCCWD through conjunctive use. The service area boundaries for TCCWD

and the four retail water suppliers covered by this RUWMP Update, along with the boundaries of the groundwater basins, are shown in **Figure 2-1**.

The TCCWD Imported Water Project takes delivery of water supplies from the California Aqueduct upstream of the Edmonston Pumping Plant (Reach 16A). Water is pumped from the Aqueduct to the Cummings Basin, where it is used for agriculture and the conjunctive use program for retail water purveyors. The TCCWD main pipeline is 31 miles in length and ranges from 18 to 30 inches in diameter. The nominal operating capacity of the line is 9,400 gallons per minute (21 cfs). The TCCWD system includes four pumping stations serving three pressure zones, and Jacobsen Reservoir (Brite Lake) which serves as a both a storage facility and recreational lake.

There are a number of entities within the TCCWD service area that use local groundwater but are not a party to the RUWMP. These include agricultural users, rural homes, mutual water companies, industrial facilities, and the CCI. These entities pump from the three adjudicated basins and from outside of these basins. Estimated groundwater usage by these entities has been included as necessary to understand the regional groundwater conditions.

2.02.2 Service Area Climate

Law

Describe the climate of the supplier (10631(a)).

The GTA is located in the mountains with elevations ranging from about 3,900 feet to almost 8,000 feet. Precipitation mainly occurs during the months of November through April, with occasional thunderstorms during the summer months. The area typically receives about 15-20 inches of snow annually. **Table 2:3-0** presents the average rates of evapo-transpiration (Eto), temperature, and precipitation of the service area.

Table 2:3-0: Climate

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Monthly Eto[(a)]	1.55	2.24	3.72	5.10	6.82	7.80	8.68	7.75	5.70	4.03	2.10	1.24	56.73
Average Precipitation (inches)[(b)]	2.01	1.77	1.96	0.92	0.40	0.09	0.08	0.27	0.24	0.38	1.23	1.62	10.97
Average Max Temperature (Fahrenheit)[(b)]	51.3	54.0	56.0	62.6	70.6	79.7	87.1	86.3	80.4	70.8	56.6	52.3	67.6
Average Min Temperature (Fahrenheit)[(b)]	29.6	31.6	33.5	37.5	43.8	51.5	57.2	54.9	48.1	40.7	34.4	30.4	41.1

Sources:
[(a)] CIMIS Reference Evapotranspiration Zones, November 2005. Standard Monthly Average Eto is for Zone 14, Mid-Central Valley, Southern Sierra Nevada, Tehachapi and High Desert Mountains.
[(b)] Western Regional Climate Center, Tehachapi Station (048826), Period of Record General Climate Summary.

2.02.3 Service Area Population

Law

> *(Describe the service area) current and projected population . . . 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 . . . (10631(a)).*
>
> *. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).*
>
> *Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).*

The State of California Department of Finance (DOF) prepares reports with population estimates for Cities and Counties on an annual basis. These estimates were used for the City of Tehachapi and the CCI for 2015. The 2015 population estimates for the participating CSDs were developed based on 2010 Census data and the population per connection method (using 2010 Census data for the Bear Valley Springs CDP, Golden Hills CDP, and the Stallion Springs CDP). The population for the remainder of the TCCWD was calculated based on the 2010 Census data and the percentage increase in population for the City of Tehachapi from 2010 to 2015. The population within the TCCWD service area was estimated to be about 35,700 in 2015 as shown in **Table 2:3-1.**

Population projections for the participating agencies for the years 2020 through 2035 were based on population projections for the City of Tehachapi (1.1% growth per year), and the unincorporated areas (1% growth per year) from the Kern COG 2014 Regional Transportation Plan. No change in population is anticipated for the CCI. By the year 2035 the population within the TCCWD service area is projected to be approximately 42,847.

Table 2:3-1 TCCWD: Population - Current and Projected

Population Served	2015[1]	2020[2]	2025[2]	2030[2]	2035[2]
Bear Valley CSD	5,314	5,585	5,870	6,169	6,484
City of Tehachapi	8,815	9,311	9,834	10,387	10,971
Golden Hills CSD	8,787	9,235	9,706	10,201	10,721
Stallion Springs CSD	2,782	2,924	3,073	3,230	3,395
CCI (TCCWD)	4,213	4,213	4,213	4,213	4,213
Remaining TCCWD	5,789	6,084	6,394	6,720	7,063
Total TCCWD	**35,700**	**37,352**	**39,090**	**40,920**	**42,847**

NOTES:
1. 2015 population for the City of Tehachapi and CCI from California DOF Population Estimate Report E-5. 2015 population for the participating CSDs were developed using the population per connection method. The remainder of TCCWD was estimated based on 2010 Census data and the percentage increase in population for the City from 2010 to 2015.
2. Population projections for 2020 through 2035 based on population projections of 1.1% per year for the City of Tehachapi and 1% for the unincorporated area from Kern COG (Regional Transportation Plan June 2014), except no change in population is assumed for the CCI.

2.03 System Water Use

2.03.1 Water Use

Law

> *Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), 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 (10631(e)(1) and (2)).*
>
> *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 (10631.1(a)).*

TCCWD makes water deliveries of imported SWP water supplies which may be used as follows:

- Direct delivery to agricultural, commercial, and industrial customers overlying the Cummings Valley, Tehachapi Valley, and Brite Valley groundwater basins.
- Groundwater recharge delivery in the Cummings Valley Basin for ultimate use by M&I customers: BVCSD, SSCSD, and CCI. Evaporation losses from this recharge are estimated at 6 percent (Tehachapi-Cummings, 2010).
- Groundwater recharge delivery in the Tehachapi Valley Basin for ultimate use by M&I customers: City of Tehachapi and GHCSD. Evaporation losses from this recharge are estimated at 6 percent (Tehachapi-Cummings, 2010).
- Storage in Jacobsen Reservoir (Brite Lake).

In addition, TCCWD receives ownership of return flow water from agricultural application of SWP supplies, which are calculated as 15 percent of all metered imported water applied for agricultural use. These supplies can be delivered anywhere in the TCCWD for agricultural and M&I customers.

Water use data within the TCCWD for 2015 is summarized in **Table 2:4-1**. 2015 was an extremely dry year, so reduced SWP supplies were available to TCCWD for groundwater recharge. TCCWD makes no deliveries of water for saline intrusion barriers. The deliveries by the participating agencies for retail water usage are included in their respective sections of the Plan.

Table 2:4-1 TCCWD: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume[1]
Sales to other agencies	Imported water sales	Raw Water	262
Sales to other agencies	Conjunctive use sales	Raw Water	1,048
Sales to other agencies	Wheeled water sales	Raw Water	60
Sales to other agencies	Recycled water sales	Raw Water	158
Agricultural irrigation		Raw Water	8,892
Groundwater recharge		Raw Water	37
Other	Estimated Other M&I[2]	Drinking Water	4,914
TOTAL			**15,371**

NOTES:
1. Demands shown are for entire TCCWD service area. From TCCWD water demand summary.
2. Estimated Other M&I use is met through groundwater pumping by retail water suppliers or other overlying landowners.

Table 2:4-2 includes projections of TCCWD's water demands for the years 2020 through 2035 in five year increments. For retail water suppliers, projections for future water use are based on historic deliveries and projected growth rates. Descriptions of water usage projections for each of the participating agencies are included in their respective sections of the Plan. Projections of low income housing water use needs for single-family and multifamily residential housing will be addressed by the retail water suppliers in their Plan sections.

Agricultural water deliveries are anticipated to have minimal growth in the next ten to fifteen years with a possible decrease over the next twenty to thirty years. The water delivery projections in **Table 2:4-2** show consistent quantities through 2035. It is projected that in the long-term more agricultural land will convert to urban uses.

Table 2:4-2 TCCWD: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Sales to other agencies	Imported water sales[1]	570	570	570	570
Sales to other agencies	Conjunctive use sales[1]	2,100	2,100	1,600	1,600
Sales to other agencies	Wheeled water sales	80	80	80	80
Sales to other agencies	Recycled water sales	800	800	800	800
Agricultural irrigation		9,500	9,500	9,500	9,500
Other	Estimated Other M&I[2]	5,172	5,493	6,331	6,687
TOTAL		**18,222**	**18,543**	**18,881**	**19,237**

NOTES:
1. For M&I use. Deliveries are made to retail suppliers in most years so that adequate storage (5 year average SWP demand) is in place for recovery in dry years.
2. Estimated Other M&I demands are for retail water suppliers or other overlying landowners to be met by groundwater pumping. Demands are for the entire TCCWD.

Table 2:4-3 summarizes TCCWD's total water demands from **Tables 2:4-1 and 2:4-2**.

Table 2:4-3 TCCWD: Total Water Demands					
Description	2015	2020	2025	2030	2035
Potable and Raw Water *From Tables 2:4-1 and 2:4-2*	15,371	18,222	18,543	18,881	19,237
Recycled Water Demand *From Table 2:6-4*	158	800	800	800	800
TOTAL WATER DEMAND	**15,529**	**19,022**	**19,343**	**19,681**	**20,037**
NOTES:					

2.03.2 Distribution System Water Losses

Law

> *Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:. . . (J) Distribution system water loss. (10631(e)(1) and (2)).*
>
> *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.*
>
> *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 (10631(e)(3)).*

TCCWD's historical water loss rate (2002 – 2014) is 12.3 percent, and over the last five years is 10.9 percent. Losses are due primarily to evaporation losses and seepage from its storage reservoir (Jacobsen Reservoir), which also functions as the regional recreational lake (Brite Lake). While these losses cannot be fully mitigated due to the nature and use of open-air reservoirs, TCCWD continues to manage the reservoir to reduce evaporative losses as much as possible. In 2011, a bi-directional meter was installed to isolate the reservoir from the rest of the transmission system so as to identify how much of the overall loss is truly attributed to the reservoir evaporation. A detailed accounting of reservoir management in 2012 indicated that evaporation/seepage accounted for 30.1% of total system losses. Every 2 to 3 years, the shoreline is compacted while the water level is low to minimize seepage losses.

Prior to 2015, TCCWD had repaired only about 8 leaks throughout the pipeline's 40 year history. However, in 2015, five leaks were repaired in one year. Four of them occurred in the lower section of pipeline between the SWP aqueduct turnout and Pumping Plant 1. Additionally, system performance degradation occurred in 2015 that was speculated to be due to trapped air in that section of pipe. Leak detection was performed on the lower 7.2 miles of pipe by Pure Technologies using a SmartBall® in November 2015. One small leak was found (less than two gallons per minute) as well as five sections of pipe with entrained air. TCCWD is moving ahead with leak repair and exploring options to reduce trapped air to minimize future leaks.

TCCWD's goal is to reduce overall losses to no more than 12 percent of SWP imports and losses other than those due to the reservoir to no more than 7 percent.

Table 2:4-4 summarizes the results of TCCWD's water loss audit for 2015 using the AWWA water audit reporting worksheet. As a wholesaler delivering water for agricultural and groundwater recharge uses, many of the inputs on the standard AWWA water loss audit reporting worksheet are not applicable. A copy of the TCCWD's water audit reporting worksheet for its importation system is included in **Appendix H**.

Table 2:4-4 TCCWD: 12 Month Water Loss Audit Reporting

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	769.6
NOTES: TCCWD Importation System water loss from AWWA water audit worksheet. See Appendix H.	

2.03.3 Climate Change

A Climate Change Vulnerability Assessment was completed as a part of the Tulare Lake Basin Portion of Kern County Integrated Regional Water Management Plan (Kern IRWMP) and is included in **Appendix C**. Climate change adaptation and mitigation was included as a part of prioritization of projects in the IRWMP. Discussion of the potential climate change impacts to water supplies is included in **Section 2.05.1, Section 2.05.10,** and **Section 2.07.2**.

2.04 Baselines and Targets

The TCCWD does not need to adopt baselines and targets as a wholesale supplier. However, baselines and targets for the Regional Alliance were adopted as a part of the 2010 RUWMP. The update of the calculations of baselines and targets for the Regional Alliance is included in this section. Measures and policies adopted by the TCCWD that help the retail water suppliers in its wholesale service area achieve their SB X7-7 targets are described in **Section 2.08**.

2.04.1 Updating Calculations from 2010 UWMP

Law

> *An urban retail water supplier shall include in its urban water management plan due in 2010 . . .the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*
>
> *An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).*

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. The Regional Alliance targets have been calculated based on Option 2 (RA2). The SB X7-7 verification form tables for the Regional Alliance (RA2) and the participating retail water suppliers are included in **Appendix G.** As with the 2010 RUWMP, targets have been calculated for the Regional Alliance and for each of the

participating agencies. This is to permit the participating agencies to show compliance with their individual targets should the regional alliance targets not be met.

2.04.2 Baseline Periods

Law

"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 supplier that meets at least 10 percent of its 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 reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The Regional Alliance will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP (see **SB X7-7 RA2 Table 1**).

2.04.3 Service Area Population

Law

When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).

The City population estimates were taken from State DOF Table E-8 and population estimates for the CSDs were developed based on the persons per connection method and U.S. Census data for 2000 and 2010 for each Census Designated Place (see descriptions in each agency's respective section of the Plan). The Regional Alliance population estimate is the sum of the data for the four participating retail urban water suppliers (see **SB X7-7 RA2 Table 5**).

2.04.4 Gross Water Use

Law

"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 (10608.12(g)).*

The gross water use for the Regional Alliance is the total gross water use of the four participating retail urban water suppliers as described in their respective sections of the Plan (see **SB X7-7 RA2 Table 5**).

2.04.5 Baseline Daily Per Capita Water Use

The baseline daily per capita water use for the Regional Alliance (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in **SB X7-7 RA2 Table 5**.

2.04.6 2015 and 2020 Targets

The 2020 Target for the Regional Alliance was calculated using Target Method 3 (95% of the Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010) as shown in **SB X7-7 RA2 Table 7E**. The calculated target of 179 gpcd is the same as determined for the Regional Alliance in the 2010 RUWMP. The confirmation of the 2020 Target is shown in **SB X7-7 RA2 Table 7F**. The baseline and target information for the Regional Alliance is summarized in **Table 2:5-1**. Targets for the participating retail urban water suppliers are included in their respective sections of the Plan.

Table 2:5-1 Baselines and Targets Summary
Regional Alliance

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target*	Confirmed 2020 Target*
10-15 year	*2000*	*2009*	*190*	*185*	*179*
5 Year	*2003*	*2007*	*190*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: See SB X7-7 RA2 tables in Appendix G.					

2.04.7 2015 Compliance Daily per Capita Water Use (GPCD)

Law

> *"Compliance daily per capita water use" means the gross water use during the final year of the reporting period (10608.12(e)).*
>
> *Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a)*

The actual 2015 daily per capita water use for the Regional Alliance was 134 gpcd. The Regional Alliance is in overall compliance with the Regional Alliance 2015 Interim Target of 185 gpcd as shown in **Table 2:5-2.** The Alliance was also able to achieve compliance with the 2020 Target of 179 gcpd. The 2015 daily per

capita water use (134 gpcd) for the Regional Alliance is a reduction of approximately 30% from the 2000 to 2009 baseline period, and is 25% lower than the 2020 Target of 179 gpcd.

Table 2:5-2: 2015 Compliance *Regional Alliance**		
Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
134	185	Yes
**All values are in Gallons per Capita per Day (GPCD)*		
NOTES See SB X7-7 RA2 tables in Appendix G:		

2.05 System Supplies

2.05.1 Purchased or Imported Water

TCCWD purchases imported water from the SWP through contracts with the Kern County Water Agency (KCWA). Currently, TCCWD has two contracts with the KCWA for SWP entitlement (Table A), one for 4,300 acre-feet/year of agricultural water and the other for 15,000 acre-feet/year of M&I water. TCCWD is also able to purchase additional SWP supplies from the KCWA (such as Article 21 and turnback pool water) when available. Deliveries of imported SWP water for 2015 are included in **Table 2:6-8** in **Section 2.05.9**.

Projections for future deliveries of SWP water are estimated based on DWR's 2015 update of the State Water Project Delivery Capability Report (DCR), a biennial report to assist SWP contractors and local planners in assessing the near and long-term availability of supplies from the SWP. 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 that simulates monthly operations of the SWP and Central Valley Project 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.

This RUWMP uses the ELT scenario analyzed in DWR's 2015 DCR as deemed to be the most conservative and appropriate study to use for long term planning estimates of future SWP supply availability. The ELT scenario is based on existing facilities, current operations, and regulatory constraints, with hydrology adjusted for the expected effects of climate change. This scenario is consistent with the studies DWR has used in its previous SWP Delivery Reliability Reports for supply availability under future conditions. Tables C.15 and C.16 from the 2015 DCR show the results of the ELT scenario for the KCWA's Ag and M&I Table A supplies and have been included as **Appendix D**.

The average annual percentage of Table A entitlement as shown in Tables C.15 and C.16 of the 2015 DCR is 60%. This results in an average entitlement allocation of about 11,580 acre-feet per year for TCCWD. Projections of future SWP deliveries are included in **Table 2:6-9** in **Section 2.05.9**.

2.05.2 Groundwater

Law

> *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:*
>
> *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 (10631(b)(1)).*
>
> *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).*
>
> *For those basins for which 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 (10631(b)(2)).*
>
> *A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).*
>
> *For basins that have not been adjudicated, (provide) 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 (10631(b)(2)).*
>
> *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 (10631(b)(3)).*

TCCWD serves as the court-appointed watermaster for the three adjudicated basins (the Cummings Valley, Brite Valley, and Tehachapi Valley groundwater basins as shown on **Figure 2-1**) from which the participating retail water purveyors produce most of the water supplies delivered in their service areas. However, the TCCWD does not supply these agencies with native groundwater. The agencies have rights pursuant to the

judgments to exercise their groundwater supplies. TCCWD does provide untreated water for groundwater recharge that is then accessed by the retail water purveyors.

The Tehachapi Water Availability Preservation Committee (Committee) is made up of representatives from the five participating urban water suppliers and meets on a regular basis to plan for and manage available water supplies in the Greater Tehachapi area. The Committee adopted an update to the Tehachapi Source Water Protection Plan (SWPP) in April 2013. The purpose of the SWPP is to identify possible contaminating activities and provide specific recommendations to manage these potential threats in order to maintain the quality of water in the groundwater basins that are the source of drinking water for the Greater Tehachapi Area.

The descriptions of the groundwater basins and the pumping rights outlined in the various adjudications are included in this section. The overall pumping for all groundwater users is summarized in this section as well. The amount of pumping by each of the participating retail agencies is included in their individual sections of the Plan. The adjudication judgment documents are included in **Appendix E**.

Tehachapi Valley Basin:

The Tehachapi Valley Groundwater Basin is described as two basins by the DWR in California's Groundwater Bulletin 118 (2006). The Tehachapi Valley West Groundwater Basin (DWR Basin No. 5-28) encompasses the western half of the Tehachapi Valley, with a surface area of about 14,800 acres. The basin is bounded on the north by the Sierra Nevada and on the south by the Tehachapi Mountains. A low-lying ridge connecting these two ranges forms the western boundary. A similar ridge with a narrow gap separates Brite Valley from Tehachapi Valley. Alluvial deposits are estimated to be 600 feet in depth.

The DWR notes that an alluvial high (surface drainage divide) forms the boundary between this basin and the adjacent Tehachapi Valley East Basin. However, this surface drainage divide does not create a boundary within the groundwater basin. The Tehachapi Valley East Basin (DWR Basin No. 6-45) encompasses a surface area of about 24,000 acres. The basin is bounded on the east by the Tehachapi Mountains.

Groundwater in the western portion of the Tehachapi Valley Basin is recharged primarily through percolating stream flows from Antelope, China and Brite Creeks, as well as artificial recharge of imported SWP supplies at Antelope Dam and China Hill. Blackburn and Mendiburu Creeks are the primary sources of recharge in the eastern portion of the basin.

Groundwater adjudication proceedings were initiated in 1966 in response to the decline in groundwater levels that had been experienced in the Tehachapi Valley Basin since 1950. The Tehachapi Basin adjudication judgment was filed in 1971, with an amended judgment filed in 1973 (Superior Court Case No. 97210). The adjudicated Tehachapi Basin includes portions of both the Tehachapi Valley West and East Basins. The physical solution in the judgment created "allowed pumping allocations" for each party which restricted total annual extractions within the Tehachapi Basin to the safe yield of 5,500 acre-feet. Exports from the groundwater basin are not allowed. Allowed pumping allocations per the judgment are as follows:

- City of Tehachapi – 1,822 Acre-feet
- Golden Hills CSD – 874 Acre-feet
- Other pumpers – 2,828 Acre-feet.

Groundwater in the Tehachapi Basin has an average electrical conductivity (EC) of 520 µmhos/cm and an average TDS of 315 milligrams/liter (DWR Bulletin 118, 2006). Some areas have experienced high levels of nitrogen, with some of the City's wells removed from service due to high nitrogen levels. Measures have been undertaken to attempt to reduce nitrogen concentration levels, including pumping wells with high nitrogen concentrations for agricultural use and improvements to the City's Wastewater Treatment Facility.

As noted in the 2010 RUWMP, a groundwater nitrogen (nitrate) level monitoring program has been proposed for the Tehachapi Basin.

A groundwater modeling study of the Tehachapi Basin was completed by Fugro West, Inc. in 2009 to provide a better understanding of the hydrogeology of the basin. The study found the safe yield of the basin to be about 5,317 acre-feet per year, with annual extractions averaging about 3,591 acre-feet. The TCCWD monitors selected wells seasonally for groundwater levels. Groundwater levels have increased since the adjudication and are now close to 1950 levels. The basin is not considered to be in overdraft.

Cummings Valley Basin:

The Cummings Valley Groundwater Basin (DWR Basin No. 5-27) is an alluvial basin bounded by the Tehachapi Mountains to the south and the Sierra Nevada to the north with low lying ridges connecting the two ranges on the east and west. Alluvium in the valley was deposited by Cummings Creek to the south, Chanac Creek to the east, and intermittent streams to the north. Coarser materials (gravels and cobbles) are found at the edges of the valley and finer grained materials (clay and sandy clay) are found near the center of the valley. The thickness of the alluvium increases from approximately 50 feet in the southern part of the valley to 450 feet in the northeast. The surface area of the Cummings Basin is about 10,000 acres (DWR Bulletin 118, 2006).

The Cummings Basin adjudication judgment was filed in 1972 (Superior Court Case No. 97209). Since groundwater pumping at the time of the judgment was less than the designated safe yield of the basin, the judgment did not include restrictions on pumping for overlying use within the basin. Exports of groundwater from the basin are not allowed. The judgment established a safe yield of 4,090 acre-feet per year.

The CCI, Fairview Ranch MWC, various private entities, agricultural interests, and residences pump from the basin for overlying use. Stallion Springs CSD and Bear Valley CSD purchase surface water from TCCWD that is recharged within the basin. These agencies then recover this water from wells within the basin for delivery to portions of their service area located outside of the basin. The CCI also purchases imported supplies from the TCCWD through conjunctive use of groundwater recharge.

Groundwater in the Cummings Basin has an average electrical conductivity (EC) of 530 µmhos/cm and an average TDS of 344 milligrams/liter (DWR Bulletin 118, 2006). Some areas have experienced high levels of nitrates. Active monitoring and mitigation programs for MTBE and perchlorate in surface soils are in place to avoid potential future water quality impacts.

The Cummings Basin has been in overdraft since 2002. As watermaster, the TCCWD is developing mitigation measures to correct this overdraft. A Groundwater Model Update, Cummings Groundwater Basin was completed in March 2015 by Fugro Consultants, Inc. The results of this model report indicate a perennial yield of 3,750 AF/year and a native safe yield of 2,990 AF/year. The native safe yield will be used as the safe yield of the Cummings Basin in this RUWMP. The watermaster submits annual reports to the Court on a calendar year basis.

Brite Valley Basin:

The Brite Valley Groundwater Basin (DWR Basin No. 5-80) is a small (3,170 acres of surface area) alluvial basin bounded by the Tehachapi Mountains to the south and the Sierra Nevada to the north with low lying ridges connecting the two ranges on the east and west. Alluvium in the valley was deposited by Brite Creek in the south and east portions of the basin and intermittent streams in the north and west. Coarser materials (gravels and cobbles) are found at the edges of the valley and finer grained materials (clay and sandy clay) are found near the center of the valley. Average thickness of alluvium is estimated to be 119 feet with a maximum of 500 feet on the northeast side of the basin (DWR Bulletin 118, 2006).

The Brite Basin adjudication judgment was filed in 1970 (Superior Court Case No. 97211). The adjudication determined the "natural safe yield" of the basin to be 500 acre-feet per year and the "base rights of pumpers" to be 631 acre-feet annually. Current pumping in the Brite Basin averages about 328 acre-feet per year. Groundwater levels are stable and no restrictions on groundwater production have been established.

SWP water is distributed from the Jacobsen Reservoir (Brite Lake) which is located within the Brite Basin. The use of groundwater in the Brite Basin is primarily by several agricultural and small M&I pumpers. There are no reported issues with groundwater quality.

Bear Valley Basin:

The Bear Valley Basin is located entirely within the boundary of the Bear Valley CSD. Bear Valley CSD's Groundwater Management Plan (also included in **Appendix E**) estimates their safe yield to be 600 acre-feet per year (200 acre-feet per year for their alluvial wells and 400 acre-feet per year for their bedrock wells). This water is the Bear Valley CSD's least expensive supply and is pumped preferentially. More information about the Bear Valley Basin is included in **Section 3.05.2**.

Summary of Groundwater Pumping

Table 2:6-1 summarizes the total groundwater pumping for the various groundwater basins within the TCCWD for 2015. This pumping includes both recovery of conjunctive use water and native groundwater. Details about each participating agency's groundwater pumping are included in their respective sections of the Plan.

Table 2:6-1 TCCWD: Groundwater Volume Pumped

Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Tehachapi Basin	5,089	4,704	5,931	5,705	5,681
Alluvial Basin	Cummings Basin	3,955	3,849	4,732	4,403	4,537
Alluvial Basin	Brite Basin	346	347	347	347	347
Alluvial Basin	Bear Valley Basin	187	158	153	162	167
Fractured Rock	Bear Valley Basin	404	353	377	323	378
TOTAL		**9,981**	**9,411**	**11,540**	**10,940**	**11,110**

NOTES: This is a summary of all estimated groundwater pumping in the TCCWD and does not represent pumping by the TCCWD.

2.05.3 Surface Water

TCCWD does not utilize sources of surface supply other than imported SWP supplies.

2.05.4 Stormwater

While the TCCWD does provide flood control in certain improvement districts and the recharge of stormwater

supplies contributes to groundwater storage within the TCCWD, the TCCWD does not intentionally divert stormwater directly for beneficial use. Stormwater and other native surface waters that recharge the groundwater basin contribute to the safe yield of the groundwater basins, and become part of the area's groundwater supplies as described in **Section 2.05.2**.

2.05.5 Wastewater and Recycled Water

Law

> *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. (16033)*

TCCWD does not collect or treat wastewater. It does have a contract with the CCI to purchase Tertiary Treated (Title 22) recycled water. The contract calls for delivery of between 1,000 and 1,200 acre-feet of recycled water to be made available to the TCCWD annually. Problems with the CCI wastewater facility, including a catastrophic failure during 2015, have reduced the quantities of recycled water available to the TCCWD. Projections of future recycled water supplies from the CCI are 800 AF/year. Other agencies within TCCWD do collect, treat, and distribute recycled water, and the use of recycled water is expected to increase. Listed below are agencies within the TCCWD that collect and treat wastewater. The existing and planned recycled water usage of these retail agencies is discussed in their individual sections of the Plan.

- Bear Valley CSD
- City of Tehachapi
- Golden Hills Sanitation Company
- Stallion Springs CSD

TCCWD's current and projected use of recycled water is summarized in **Table 2:6-4**. The comparison of 2015 actual recycled water use to that projected in the 2010 RUWMP is included in **Table 2:6-5**. As noted above, there was a catastrophic failure at the CCI wastewater treatment plant which greatly reduced the quantity of recycled water available to the TCCWD in 2015.

Table 2:6-4 TCCWD: Current and Projected Retailers Provided Recycled Water Within Service Area

Direct Use	Level of Treatment	2015	2020	2025	2030	2035
Golf course and agricultural irrigation	Tertiary	158	800	800	800	800
Total		**158**	**800**	**800**	**800**	**800**

NOTES: Delivered under contract with the CCI. 2015 recycled water usage was reduced due to a catastrophic failure of the CCI Wastewater Treatment Plant.

Table 2:6-5 TCCWD: 2010 RUWMP Recycled Water Use Projection Compared to 2015 Actual		
Direct Use	2010 Projection for 2015	2015 actual use[1]
Golf course and agricultural irrigation	900	158
Total	**900**	**158**
NOTES: 2015 recycled water usage was reduced due to a catastrophic failure of the CCI Wastewater Treatment Plant.		

2.05.6 Desalinated Water Opportunities

Law

> *Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))*

TCCWD has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. TCCWD has determined that desalination is not a cost-effective solution for its water supply needs due to the water resource opportunities that are available at a much lower cost.

2.05.7 Exchanges and Transfers

Law

> *Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))*

The TCCWD has entered into short term banking/exchange programs with its excess SWP supplies in years with SWP allocations greater than the needs of the TCCWD. In 2011, 6,131 AF were placed in storage in the Kern Water Bank on a second-priority basis. Recovery capacity is available to the TCCWD once the needs of the primary banking participants have been met. As of the end of 2015, 2,520 AF of TCCWD banked water remains in storage in the KWB.

An additional 6,750 AF were placed in storage during 2011 in the West Kern Water District's banking project under a 2-for-1 exchange agreement. Under this agreement, one-half of the water became the property of the West Kern Water District and one-half of the water was banked for recovery by the TCCWD in future years. The water banked for the TCCWD was all recovered over a two year period. The TCCWD will investigate banking and exchange programs in future years when supplies are available in excess of the TCCWD's demands.

2.05.8 Future Water Projects

Law

> *(Describe) 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, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), 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 (10631(g)).

The TCCWD is installing new natural gas engines to power its pumps that will allow it to import as much as 13,000 acre-feet per year of its annual SWP entitlement. The TCCWD is pursuing expansion of groundwater recharge areas in both the Cummings Valley and Tehachapi Basins in order to import the maximum possible amount of SWP water available annually for in-basin recharge and storage. Other future water projects include potential exchanges as described in **Section 2.05.7,** the joint Snyder Well Project with the City (see **Section 4.05.8**), and the Indirect Potable Reuse project under investigation by the City (see **Section 4.05.5**). The TCCWD will participate in the Cal WaterFix project if the KCWA participates.

2.05.9 Summary of Existing and Planned Sources of Water

Law

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) (10631(b)).

(Provide) 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 (10631(b)(4)).

TCCWD's existing and planned sources of water are summarized in **Tables 2:6-8 and 2:6-9**. Projected supplies include 60% of the TCCWD's SWP Table A allocation, recycled water from the CCI, and the safe yield of all groundwater basins. Recovery of stored groundwater is not included.

Table 2:6-8 TCCWD: Water Supplies — Actual

Water Supply Source	Additional Detail on Water Supply	2015	
		Actual Volume	Water Quality
Purchased or Imported Water	SWP	5,160	Raw Water
Recycled Water	From CCI	158	Recycled Water
Groundwater	M&I Use	5,510	Drinking Water
Groundwater	Agricultural use	4,543	Raw Water
Total		15,371	

NOTES: From annual summary prepared by the TCCWD.

Table 2:6-9 TCCWD: Water Supplies — Projected					
Water Supply Source	Additional Detail on Water Supply	Projected Water Supply *Reasonably Available Volume*			
		2020	2025	2030	2035
Purchased or Imported Water	SWP	11,580	11,580	11,580	11,580
Recycled Water	From CCI	800	800	800	800
Groundwater	Safe Yield - All Basins	9,614	9,614	9,614	9,614
Total		21,994	21,994	21,994	21,994
NOTES: Does not include recovery of stored groundwater.					

2.05.10 Climate Change Impacts to Supply

The potential climate change impacts to the Kern Region's water supplies are described in the Climate Vulnerability Assessment prepared as a part of the Kern IRWMP (see **Appendix C**). These are summarized as follows:

- Groundwater:
  - Changes in local hydrology could affect natural recharge to the local groundwater aquifers and the quantity of groundwater that could be pumped sustainably over the long-term.
  - Decreased inflow from runoff, increased evaporative losses, warmer and shorter winter seasons can alter natural recharge of groundwater, as well as conjunctive use operations.
  - If more precipitation occurs as rain, short-term high flows could result, and will require the Region to adapt to the faster runoff which will impact the timing of conjunctive uses.
  - Additional reductions in the imported water imposed by climate change would lead to more reliance on local groundwater.
- Imported Water:
  - Potential impacts on SWP water availability resulting from climate change will directly affect the amount of imported water supply delivered to the Greater Tehachapi Area.

Potential climate change impacts to SWP supplies are discussed in **Section 2.05.1** and **Section 2.07.2**.

2.06 Water Supply Reliability Assessment

2.06.1 Constraints on Water Sources

Law

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 (10631(c)(2)).

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 (10634).

The TCCWD anticipates that its sources of supplies will be available at a consistent level of use during the planning horizon of this Plan. The TCCWD is projected to have the capacity to meet normal year demands based on the average water delivery forecast of 60% of Table A amounts. Groundwater supplies for the GTA are from adjudicated basins, which should stabilize the availability of groundwater for the participating agencies throughout the Plan period. Future groundwater banking of excess SWP supplies would provide additional water supplies in years of SWP shortages.

2.06.2 Reliability by Type of Year

Law

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 (10631(c)(1)).

An ongoing planning effort to increase long-term supply reliability for both the SWP and Central Valley Project (CVP) is taking place through the BDCP process. The co-equal goals of the BDCP are to improve water supply reliability and restore the Delta ecosystem. The BDCP is being prepared through a collaboration of state, federal, and local water agencies, state and federal fish agencies, environmental organizations, and other interested parties. Several “isolated conveyance system” alternatives are being considered in the plan that would divert water from the north Delta to the south Delta where water is pumped into the south-of-Delta stretches of the SWP and CVP. The new conveyance facilities would allow for greater flexibility in balancing the needs of the estuary with the reliability of water supplies. The plan would also provide other benefits, such as reducing the risk of long outages from Delta levee failures.

The BDCP has been in development since 2006 and is currently undergoing extensive environmental review. The Draft BDCP and its associated Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) were released for public review in December 2013. In response to public comments, the BDCP was reevaluated, and in April 2015 the lead agencies announced a modified alternative which effectively split the project into two parts: the conveyance portion (known as Cal WaterFix), and the restoration portion (known as EcoRestore). The Cal WaterFix alternative is evaluated in a partially recirculated draft environmental document (Recirculated Draft EIR/Supplemental Draft EIS) that was released for public review in July 2015. That environmental document is anticipated to be finalized during 2016.

While there is widespread support for the BCDP/Cal WaterFix project, plans are currently in flux and environmental review is ongoing. Additionally, several regulatory and legal requirements must be met prior to any construction. Because of this uncertainty, any improvements in SWP reliability or other benefits that could result from this proposed project are not included in this Plan.

Tables C.15 and C.16 from the 2015 SWP Delivery Capacity Report (DCR) show the KCWA’s forecasted Ag and M&I supplies, respectively, for the ELT scenario and are included in **Appendix D**. For reliability of the TCCWD’s SWP supplies, the average water delivery forecast of 60% of Table A amounts for the ELT scenario was used for the average water year. Selection of the single dry water year and multiple dry water years is described below.

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. October through December 2012 was one of the wettest fall periods on record, but was followed by the driest consecutive 12 months on record. Accordingly, the 2013 State Water Project (SWP) supply allocation was a low 35% 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% 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. 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, this UWMP uses a conservative assumption that a 5% allocation of SWP Table A amounts represents the "worst case" scenario and will be used for the single dry water year condition. The multiple dry year period of 1990 through 1992 was selected based on the ELT forecasted SWP allocations of 14%, 16%, and 24% of Table A amounts (the "worst case" three year period from that scenario for KCWA M&I supplies as shown in Table C.16 in **Appendix D**).

The basis of SWP water year supplies for the various year types are summarized in **Table 2:7-1**.

Table 2:7-1 TCCWD: Basis of Water Year Data for SWP Supplies

Year Type	Base Year	Available supplies if year type repeats[1]	
		Volume available	% of avg supply
Average Year[2]	Average	11,580	100%
Single-Dry Year[3]	2014	970	8%
Multiple-Dry Years 1st Year[4]	1990	2,700	23%
Multiple-Dry Years 2nd Year[4]	1991	3,090	27%
Multiple-Dry Years 3rd Year[4]	1992	4,630	40%

NOTES:
1. Estimates for SWP Table A supplies.
2. Average SWP Table A allocation of 60% from ELT scenario in 2015 SWP Delivery Capacity Report. See Tables C.15 and C.16 in Appendix D.
3. Single dry year based on Table A allocation of 5% (actual 2014).
4. Multiple dry years based on Table A allocations of 14%, 16%, and 24% for KCWA M&I supply from ELT scenario. See Table C.16 in Appendix D.

TCCWD's SWP supplies are a supplemental source of supply to the GTA. The retail urban water suppliers rely on groundwater, both native groundwater and banked SWP supplies, to meet their demands in any one year. As a result, they are not directly subject to the reductions in SWP supplies for the year types noted in **Table 2:7-1**. The reliability of the groundwater supplies of the participating retail water suppliers are discussed in their respective sections of the Plan.

2.06.3 Supply and Demand Assessment

Law

> *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 (10632(c)).*

The comparison of TCCWD's supply and demand projections for the normal year is shown in **Table 2:7-2**. The projected water supplies are sufficient to meet demands for the normal year scenario throughout the twenty year planning horizon.

Table 2:7-2 TCCWD: Normal Year Supply and Demand Comparison

Description	2020	2025	2030	2035
Supply totals *(from Table 2:6-9)*	21,994	21,994	21,994	21,994
Demand totals *(from Table 2:4-3)*	19,022	19,343	19,681	20,037
Difference	2,972	2,651	2,313	1,957
NOTES:				

The comparison of TCCWD's supply and demand projections for the single dry year and multiple dry year scenarios are shown in **Tables 2:7:3 and 2:7-4** respectively. In the single dry year and multiple dry year scenarios, the quantity of SWP supplies available to TCCWD are reduced and limited supplies are available for sale to the retail water suppliers. However, sales of SWP water from previous years will have been stored as banked water for use by these agencies in dry years. Supply and demand comparisons for each retail agency are presented in their respective sections of the Plan.

TCCWD's surface deliveries to agricultural users would also be reduced in the dry year scenarios due to the reductions in SWP supplies. Additional groundwater pumping to meet agricultural demands would occur in those years, subject to limitations from the applicable adjudication judgments.

Table 2:7-3 TCCWD: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals[1]	11,384	11,384	11,384	11,384
Demand totals[2]	16,461	16,781	17,118	17,474
Difference[3]	(5,077)	(5,397)	(5,734)	(6,090)

NOTES:
1. Includes estimated SWP supply from Table 2:7-1, and recycled water supply and safe yield of all groundwater basins from Table 2:6-9.
2. Ag and M&I Demands from Table 4-2 (does not include imported water sales demand).
3. Difference is proposed to be made up by recovery of previously banked groundwater supplies and/or reductions in demand due to dry year conditions.

Table 2:7-4 TCCWD: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals[1]	13,114	13,114	13,114	13,114
	Demand totals[2]	16,461	16,781	17,118	17,474
	Difference[3]	(3,347)	(3,667)	(4,004)	(4,360)
Second year	Supply totals[1]	13,504	13,504	13,504	13,504
	Demand totals[2]	16,461	16,781	17,118	17,474
	Difference[3]	(2,957)	(3,277)	(3,614)	(3,970)
Third year	Supply totals[1]	15,044	15,044	15,044	15,044
	Demand totals[2]	16,461	16,781	17,118	17,474
	Difference[3]	(1,417)	(1,737)	(2,074)	(2,430)

NOTES:
1. Includes estimated SWP supply from Table 2:7-1, and recycled water supply and safe yield of all groundwater basins from Table 2:6-9.
2. Ag and M&I Demands from Table 4-2 (does not include imported water sales demand).
3. Difference is proposed to be made up by recovery of previously banked groundwater supplies and/or reductions in demand due to dry year conditions

2.06.4 Regional Water Supply Reliability

Law

> *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 (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The agencies have formed the Tehachapi Water Availability Preservation Committee which meets on a regular basis to plan for and manage available water supplies in the Greater Tehachapi area. More details regarding these efforts are included in other sections of the Plan.

2.07 Water Shortage Contingency Planning

2.07.1 Stages of Action

Law

> *The plans 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:*
>
> *Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The TCCWD is a wholesale supplier providing a supplemental, imported water supply for the GTA. Deliveries for urban use are made through groundwater recharge and conjunctive use. The retail urban water suppliers rely on groundwater pumping for their water supplies.

The TCCWD's Board of Directors imposes Rules and Regulations regarding the delivery of imported water and recycled water, and use of its facilities. Part L of TCCWD's rules and regulations for water service states:

> *"SHORTAGES. District retains the right and power to later provide, consistent with any then applicable provisions of law, for priorities, restrictions, prohibitions and exclusions in the event of shortage or other emergency, including cessation or interruption of sale of water to particular users."*

The Board considers an emergency water shortage ordinance on an annual basis, if necessary. The TCCWD adopted a water shortage ordinance in 2015 (Ordinance 2015-1) which outlines the priorities for the sale and use of its available imported SWP supplies. Copies of the TCCWD's Rules and Regulations and its Ordinance 2015-1 are included in **Appendix F**.

Stages of action are not directly applicable to the TCCWD's water shortage policies. The TCCWD's water shortage contingency planning is summarized in **Table 2:8-1**. Water shortage contingency planning for the retail urban water suppliers are covered in their respective sections of the Plan.

Table 2:8-1 TCCWD Stages of Water Storage Contingency Plan		
Stage	Percent Supply Reduction[1]	Water Supply Condition
1	50%	*Reduction in SWP Allocation Below Current Demand. See notes.*
[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES: TCCWD's Rules and Regulations outline their policies regarding water shortages. TCCWD supplies are supplemental to the retail urban water suppliers, who rely on groundwater pumping for their water supplies. A water shortage ordinance (Ordinance 2015-1) outlines the TCCWD's priorities for the sale and use of SWP supplies for 2015. Copies of TCCWD's Rules and Regulations and its Ordinance 2015-1 are included in Appendix F.		

2.07.2 Consumption Reduction Measures

Law

> *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 (10632(a)(5)).*

TCCWD has adopted a number of consumption reduction measures to help retail water suppliers reduce water usage. These are described in **Section 2.08: Demand Management Measures**.

2.07.3 Determining Water Shortage Reductions

Law

> *A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).*

TCCWD deliveries are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

2.07.4 Revenue and Expenditure Impacts

Law

> *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 (10632(7)).*

TCCWD reviews its revenues and expenditures on an annual basis and evaluates the need to increase water rates in order to provide adequate revenues in times of water shortages. If necessary, the TCCWD may utilize reserves to address decreased water sales during a water shortage.

2.07.5 Resolution or Ordinance

Law

> *A draft water shortage contingency resolution or ordinance (10632(8)).*

TCCWD's Ordinance 2015-1 is included in **Appendix F**.

2.07.6 Catastrophic Supply Interruption

Law

> *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 (10632(a)(3)).*

Response to a catastrophic event will include contact and coordination with TCCWD's customers. All customers (M&I and agriculture) will be notified when deliveries become unavailable and will be provided with an estimate of how soon water deliveries may be resumed. TCCWD personnel will survey and assess damage and respond accordingly with shutdowns and repairs. TCCWD's supplies are a supplemental source of supply, and the retail urban water suppliers rely on groundwater pumping to meet the demands of their customers. Details of the retail agencies' catastrophic supply interruption plans are included in their respective Plan sections.

Possible catastrophes affecting TCCWD's water supply may include:

- Widespread Power Outage/Natural Gas Supply Failure
- TCCWD Pump or Pipeline Failure
- Local Earthquake, Landslide or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

Failure of the Aqueduct or Delta levees could result in significant outages and potential interruption in SWP service for six months or longer. The DWR has estimated that in the event of a major earthquake in or near the Delta, regular water supply deliveries from the SWP could be interrupted for up to three years, posing a substantial risk to the California business economy. Accordingly, a post-event strategy has been developed which would provide necessary water supply protections. The plan has been coordinated through DWR, the Army Corps of Engineers (Corps), Bureau of Reclamation, California Office of Emergency Services (Cal OES), the Metropolitan Water District of Southern California, and the State Water Contractors. Full implementation of the plan would enable resumption of at least partial deliveries from the SWP in less than six months.

DWR has developed the Delta Flood Emergency Management Plan to provide strategies for a response to Delta levee failures, which addresses a range of failures up to and including earthquake-induced multiple island failures during dry conditions when the volume of flooded islands and salt water intrusion are large. Under such severe conditions, the plan includes a strategy to establish an emergency freshwater pathway from the central Delta along Middle River and Victoria Canal to the export pumps in the south Delta. The plan includes the pre-positioning of emergency construction materials at existing and new stockpiles and warehouse sites in the Delta, and development of tactical modeling tools (DWR Emergency Response Tool) to predict levee repair logistics, water quality conditions, and timelines of levee repair and suitable water quality to restore exports. The Delta Flood Emergency Management Plan has been extensively coordinated

with state, federal and local emergency response agencies. DWR, in conjunction with local agencies, the Corps and Cal OES, regularly conduct simulated and field exercises to test and revise the plan under real time conditions.

DWR and the Corps provide vital Delta region response to flood and earthquake emergencies, complementary to an overall Cal OES structure. Cal OES is preparing its Northern California Catastrophic Flood Response Plan that incorporates the DWR Delta Flood Emergency Management Plan. These agencies utilize a unified command structure and response and recovery framework. DWR and the Corps, through a Draft Delta Emergency Operations Integration Plan (April 2015), would integrate personnel and resources during emergency operations.

The DWR Delta Levees Subvention Program has prioritized, funded, and implemented levee improvements along the emergency freshwater pathway and other water supply corridors in the central and south Delta region. These efforts have been complementary to the DWR Delta Flood Emergency Management Plan, which along with use of pre-positioned emergency flood fight materials in the Delta, relies on pathway and other levees providing reasonable seismic performance to facilitate restoration of the freshwater pathway after a severe earthquake. Together, these two DWR programs have been successful in implementing a coordinated strategy of emergency preparedness for the benefit of SWP and CVP export systems.

Significant improvements to the central and south Delta levee systems along Old and Middle Rivers began in 2010 and are continuing to the present time at Holland Island, Bacon Island, Upper and Lower Jones Tracts, Palm Tract and Orwood Tract. This complements substantially improved levees at Mandeville and McDonald Islands and portions of Victoria and Union Islands. Together, levee improvements along the pathway and Old River levees consisting of crest raising, crest widening, landside slope fill and toe berms, meet the needs of local reclamation districts and substantially improve seismic stability to reduce levee slumping and create a more robust flood-fighting platform.

2.07.7 Minimum Supply Next Three Years

Law

> *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 (10632(a)(2)).*

An estimate of the minimum supplies available to the TCCWD in each of the next three years is given in **Table 2:8-4.** The estimated minimum supply includes the estimated SWP supply for the driest three year period from Table 7-1, and recycled water supply and safe yield of all groundwater basins from Table 6-9. In addition, the TCCWD currently has 13,082 acre-feet banked in groundwater storage. It is assumed that 1/5 of the total groundwater storage would be reasonably available for each of the next three years.

The minimum available supplies for each participating retail agency are discussed and presented in their respective Plan sections.

Table 2:8-4 TCCWD: Minimum Supply Next Three Years			
Available Water Supply	2016	2017	2018
	15,730	16,120	17,660

NOTES:
Includes the following:
1. Estimated Multiple Dry Year SWP supply from Table 2:7-1
2. Recycled water supply and safe yield of all groundwater basins from Table 2:6-9
3. 1/5 of TCCWD current groundwater storage of 13,082 AF

2.08 Demand Management Measures

Law

Provide a description of the (wholesale) water supplier's water demand management measures. This description will include all of the following (10631(f)):

The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures: (ii) metering. (iv) public education and outreach. (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 (10631(f)(1)(B)).

(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).

For an urban wholesale water supplier, as defined in Section 10608.12, (provide) 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 (10631(f)(2)).

The agencies as a region realize the importance of demand management. The agencies are committed to implementing water conservation strategies and water recycling programs to maximize sustainability in meeting future water needs for their respective customers. As the need for more robust water conservation programs became apparent, an unofficial agreement among the agencies identified TCCWD to take the lead in expanding a regional water conservation program. TCCWD applied for and obtained a grant from DWR to implement toilet replacement programs, and also hired a Water Conservation Coordinator. On December 9, 2015, TCCWD was ratified as a new member of CUWCC.

TCCWD is a wholesale water agency importing water to the GTA, but does provide direct deliveries to industrial and commercial users such as Cal-Portland Cement Plant, a cemetery, high school athletic fields and for temporary construction uses. There are several Demand Management Measures (DMM)s that are not applicable to TCCWD as a wholesale agency, but are implemented by TCCWD on behalf of the retail agencies.

2.08.1 Metering

This DMM requires water meters for all new construction and billings by volume of use, as well as establishing a program for retrofitting any existing unmetered connections. TCCWD has metered all

connections and currently implements this DMM. In the last several years, the TCCWD has installed between 3 and 7 new meters and replaced between 12 and 16 old meters each year.

2.08.2 Public Education and Outreach

TCCWD contracts with JS Strategic Consulting to provide Project WET (Water Education for Teachers) training for Tehachapi Unified School District teachers. Initially, TCCWD funded one Project WET workshop in 2013. More recently, TCCWD's three-year funding commitment includes Tehachapi area-specific curriculum materials for second and fifth graders. Under this funding, one Project WET training was provided to 18 TUSD teachers on September 3, 2015, and development of area-specific curriculum materials and scheduling of additional training is ongoing.

Through 2012, school education programs were provided by Kern County Water Agency on a rotating basis. Tehachapi came up in the rotation in 2012 and water education was provided at four schools. The number of teachers from Tehachapi that attended Project WET workshops and the number of students that participated in Water Awareness Poster Contests between 2010 and 2012 are not known. Due to funding changes, KCWA no longer provided water education after 2012.

TCCWD conservation staff and traveling booth regularly attend the Tehachapi Farmers Market during summertime, providing free low flow showerheads and faucet aerators, as well as flyers for programs and events. TCCWD conservation staff also attended community events such as 4th of July Hot Dog Festival, Apple Festival, Fall Business Showcase, Bear Valley 4th of July Celebration, and the Stallion Springs Oktoberfest.

TCCWD partnered with Tehachapi Area Association of Realtors to produce a workshop titled "What's Up With Water?" on the evening of April 30, 2015. The event included several speakers, and water conservation giveaways. Several hands-on activities were also planned, but the speakers took up all the time. The event was very well attended, and participants had a number of questions for the speakers.

The water conservation coordinator provides a regular biweekly column in the local community tabloid newspaper, The Loop. The TCCWD conservation staff also provided occasional "guest commentary" articles to The Tehachapi News. Additionally, Tehachapi News did a special pull-out section commemorating TCCWD 50th Anniversary that included; mission, history, facilities, and focus on water conservation. This section included purchased advertising space to promote our programs. TCCWD regularly contributes to the three CSD newsletters and City outreach information.

TCCWD provides speaker services and has presented information on water conservation and water issues in general to Tehachapi Audubon Society, Tehachapi Area Association of Realtors, Tehachapi Democratic Club, Rotary Club, and other groups.

TCCWD's website contains links to water conservation sites as well as program specific information. TCCWD also contributes information to websites of the retail agencies. TCCWD printed and distributed table toppers to local restaurants using the design available from Save Our Water.

TCCWD supports several organizations that disseminate water conservation information. TCCWD is a member of the Water Education Foundation, the California Water Awareness Campaign, and the Water Association of Kern County. TCCWD also provides financial support for the mobile irrigation lab of the Northwest Kern Resources Conservation District.

2.08.3 Water Conservation Program Coordination and Staffing Support

This DMM requires agencies to designate a water conservation coordinator to oversee water conservation program implementation. A water conservation coordinator was hired on May 27, 2014. Many of the DMMs

included in this section were implemented since then, and program development and implementation will continue to expand. Contact information for the Water Conservation Coordinator is as follows:

Liz Block, TCCWD Water Conservation Coordinator,
lblock@tccwd.com, 661-822-5504

Program staffing support is provided specifically by the full time water conservation coordinator and one part time staff member on an as-needed basis. However, many of the other staff have supported water conservation in a variety of different ways. The bookkeeper issues rebate checks, the receptionist handles class registrations. Maintenance staff moved the TCCWD water truck to different areas and parked it with a toilet water savings banner. Other support is provided by consultants and contractors as appropriate.

Initial funding for the Water Conservation Program was based on a Proposition 84 grant to retrofit toilets. More recently, funding for general water conservation is included as a line item in the annual budget. Funding for Fiscal Year ending June 30, 2015 was $30,000, and ending June 30, 2016 is $50,000 plus labor costs. Because the water conservation program is relatively new, an appropriate amount of regular funding has not been identified.

2.08.4 Other Demand Management Measures

This category provides wholesale agencies the ability to report additional or innovative approaches to demand management that do not belong in the categories above. Many of TCCWD's programs are provided for the benefit of the retail urban water suppliers and are described in **Section 2.08.6**. The TCCWD's turf replacement rebate program is described below.

A major outreach effort was instigated when DWR opened the turf replacement rebate program in August 2015. Neither TCCWD nor the retail agencies had turf rebate programs, and the GTA is in the 10-county San Joaquin Valley area identified by DWR for additional funding. In July and August 2015, TCCWD provided a 4-part workshop on lawn removal, irrigation conversion, and landscape design to specifically support turf rebate participants as well as gardeners in general. Signups for the Saturday classes filled quickly, and a set of Thursday evening classes was added. A total of 77 people attended classes. Funding was provided in part by a $2,000 grant from CUWCC to provide Outdoor Water Use Workshops. Classes will be offered on an ongoing basis until rebates or class demand declines.

To compliment the classes, no cost consultations were offered to residential homes to assist with landscape retrofit plans that meet DWR turf rebate requirements. A total of 23 homeowners (5 in BVCSD, 5 in COT, 5 in GHCSD, 2 in SSCSD, and 6 in unincorporated County areas) requested consultations in 2015. This program will also be ongoing.

The DWR turf rebate program includes an option to support government institutions to convert turf to low water use landscape and include an education component. TCCWD does not have appropriate property so the District has been working with Kern County Fire Department to re-landscape a local fire station. The landscape make-over is scheduled for implementation in spring 2016 and includes an educational brochure on low water landscaping.

Because the GTA climate is different from most of populated California, an area specific low water use plant list was developed that includes plants native to the Tehachapi Mountains. A booklet of Native Plants for Tehachapi was produced that includes pictures and details on 59 plants. The list and booklet are available on the TCCWD's web site, and are also distributed at workshops and events.

Finally, TCCWD removed the lawn at its office in 2014 and replaced it with a water conservation demonstration landscape that includes low water use plants and micro-irrigation.

2.08.5 Asset Management

TCCWD actively manages its infrastructure through a variety of methods. O&M manuals have been prepared for all system components and are updated when conditions warrant. Maintenance checklists are used for preventative maintenance. System operation is controlled via SCADA system which can be monitored and adjusted via controls at pumping plants, main office and with mobile devices. A GIS system is currently being developed which will be utilized to manage system maintenance, repairs and upgrades.

TCCWD's main distribution pipe system is comprised of approx. 31 miles of bar wrapped, steel cylinder pipe (cement mortar lined and coated). The pipeline diameter varies between 18" and 30". The system was installed at one time and is approaching 45 years of service. TCCWD has embarked upon a multi-phase, multi-year inspection and analysis project to determine needed repairs and life cycle analysis. The first phase of this project is described in **Section 2.03.2**. The pipeline route is inspected for visible signs of leakage regularly and after every seismic event greater than 2.5 on the Richter scale with an epicenter within 15 km of any portion of the line.

TCCWD operates four, natural gas fired, internal combustion engine, pumping plants that raise the elevation of imported water approx. 3,500 vertical feet. These plants have recently undergone $6,000,000 in upgrades. Maintenance and repairs are performed on a regular basis by in-house mechanics. System operation is continuously monitored via SCADA system. Emissions compliance is ensured by regular testing and operating permit compliance and is certified annually by the regulatory agencies.

TCCWD owns and operates Jacobsen Reservoir (Brite Lake) which serves as a storage facility and recreational lake. Additionally, TCCWD operates flood retention structures and other facilities that are utilized for groundwater recharge. The dams that form the lake and other retention structures are inspected annually by the State of California Division of Dam Safety and also by the Natural Resource Conservation Service. Seepage from Jacobsen Reservoir is monitored monthly via a system of Piezometers. Horizontal and vertical movement is accurately measured by a Professional Surveyor on a regular basis. All of these facilities are inspected after seismic events greater than 2.5 on the Richter scale with an epicenter within 15 km of the facility.

2.08.6 Wholesale Supplier Assistance Programs

An unofficial agreement among the agencies identified TCCWD to take the lead in expanding a regional water conservation program. The programs actively implemented by the TCCWD for the benefit of the retail urban water suppliers are described below.

Water Survey Programs

This program consists of offering water audits to residential and non-residential customers. Audit components include reviewing water usage history with the customer, identifying leaks inside and outside, and recommending improvements. Indoor water surveys are available upon request at no cost. To date, few indoor surveys have been conducted.

Outdoor water surveys, termed Irrigation Check-ups, are provided regularly throughout the spring, summer, and fall at no cost. Irrigation Check-ups include zone by zone inspection, identification of leaks and other inefficiencies, repairs, a site specific watering schedule, and assistance to reset the irrigation timer. A hand written report is provided at the end of the Check-up.

Outreach for Irrigation Check-ups has been through newspaper ads, TCCWD web site, and word of mouth. Rental agencies and realtors were contacted directly. Also, when the City started implementing and enforcing watering days, the TCCWD provided them with door hangers to accompany enforcement warnings.

Between August 6 and September 29, 2014, 17 Irrigation Check-ups were conducted (14 residential and 3 commercial), as follows:

- Bear Valley CSD - 5
- City of Tehachapi – 6
- Golden Hills CSD – 3
- Stallion Springs – 3
- Unincorporated County – 0

Between March 1 and November 9, 2015, 26 Irrigation Check-ups, all residential, were conducted as follows:

- Bear Valley CSD - 4
- City of Tehachapi – 19
- Golden Hills CSD – 2
- Stallion Springs – 0
- Unincorporated County – 1

Residential Plumbing Retrofit

This program consists of installing physical devices to reduce the amount of water used and to limit the amount of water be served to its customers. TCCWD conducted showerhead exchange programs throughout summer and fall of 2015. Low flow faucet aerators were provided along with showerheads. Outreach included retail agency bill stuffers, ads in the Tehachapi News, and event announcements in The Loop (local entertainment tabloid). Specific events included Tehachapi Farmers Market, August 7 and 14, 2014; Stallion Springs Oktoberfest, October 4, 2014; and Tehachapi Apple Festival, October 11 and 12, 2014.

Showerhead Exchanges had low participation. For all events, only 23 residents exchanged showerheads. Remaining stock was, and will continue to be, given away at events and other resident contact situations. TCCWD also provides showerheads and faucet aerators for a local energy conservation group who include them in their door prize package.

An upcoming program will begin January 1, 2017. Senate Bill 407 (October 2009) established this date as the deadline for residential real property to retrofit noncompliant indoor fixtures (toilets, showerheads, and bathroom faucet aerators) with low flow fixtures. During a property sale, the seller must disclose if indoor fixtures are non-compliant. Direct outreach to owners of pre-1992 homes for sale will include no cost installation of low flow showerheads and faucet aerators as well as information on the ongoing toilet rebate program.

Large Landscape Conservation Programs

TCCWD supplies raw water directly to several large landscapes along our pipelines. Landscaped area and Evapotranspiration (ET)-based demand have been estimated for eight active accounts. Water use compared to estimated demand is checked a couple of times during the irrigation season, and landowners are contacted if demand is excessive. For the most part, irrigation use has been reasonable, but the use by two accounts is high, and will be addressed in the beginning of spring, 2016. This program is ongoing.

High Efficiency Washing Machine Rebate Programs

This program generally provides a financial incentive (rebate offer) to qualifying customers who install a high efficiency washing (HEW) machine in their home. To support retail agencies, TCCWD plans to work with local energy suppliers to develop a High Efficiency Washing Machine Rebate Program in 2016.

Ultra-Low Flush Toilet Replacement Program

TCCWD applied for and received a Proposition 84 grant from DWR on March 20, 2013 to conduct a low flow toilet rebate and direct install program. In many ways, the low flow toilet program has been TCCWD's flagship water conservation program, as it triggered the hiring of a water conservation coordinator to implement the grant and develop additional programs to assist retail agencies reduce demand.

The low flow toilet grant funded both a rebate program and a direct install program. TCCWD runs project implementation, outreach, and data management as well as maintaining grant eligibility and providing quarterly and final reports. Requirements for both programs were that the building must be older than 1992 and the existing toilet(s) must use more than three gallons per flush (gpf).

For the low flow toilet direct install program, TCCWD contracted with a toilet installation company (Southwest Environmental, Inc.) and coordinated applications and scheduling. The direct install program was initially available only within the City of Tehachapi, as it is a disadvantaged community. Later it was expanded to include multi-family buildings in Golden Hills CSD. This program installed low flow toilets (892), showerheads (337), and bathroom faucet aerators (390) in 337 residential, multi-family, and commercial buildings. The majority of toilets installed were Niagara Stealth 0.8 gpf toilets. Estimated water savings based on previous fixture flow and number of people in the house is 29 acre feet per year. The program closed July 31, 2015. Toilets were distributed as follows:

- City of Tehachapi – 758
- Golden Hills CSD – 134

The low flow toilet rebate program started in June, 2014 and is available to anyone within the TCCWD water service area, including those on wells. Rebates are $150 for the Niagara Stealth 0.8 gpf toilet and $125 for 1.28 gpf toilets with EPA WaterStar Certification. To date, just over 500 toilets have been rebated. Water savings analysis is not yet available as it will be based on billing records. The rebate program was developed to rebate 1000 toilets, and will continue through 2017. Rebates were distributed as follows:

- Bear Valley CSD – 157 toilets
- City of Tehachapi – 63
- Golden Hills CSD – 159
- Stallion Springs CSD – 53

- Unincorporated County - 74

GTA residents and businesses were slow to respond to these programs. Extensive and repeated outreach effort was needed to reach participation goals. The outreach efforts included:

- Bill stuffers sent two different times for all retail agencies except for Stallion Springs, which sends the water bill on post cards
- Tehachapi News: regular advertising, web site advertising, and front page stick-on
- Movie theater advertising
- Flyers available in offices of all retail agencies and other miscellaneous locations
- Door hangers delivered to City of Tehachapi residents in older neighborhoods
- Direct mail-out to residents of unincorporated county areas
- Direct mail-outs to owners of multi-family property
- Door-to-door outreach to businesses in older Tehachapi commercial districts
- Direct contact to manufactured home park managers
- Announcements at City and CSD board meetings

2.08.7 Implementation over the Past Five Years

The extent and nature of the implementation of the DMMs has been discussed in the previous sections.

2.08.8 Planned Implementation to Achieve Water Use Targets

As a wholesale agency, TCCWD does not have specific water use targets.

2.08.9 Members of the California Urban Water Conservation Council

On December 9, 2015, TCCWD was ratified as a new member of CUWCC.

2.08.10 Voluntary Reporting of Energy Intensity

Water use in the Greater Tehachapi Area has an exceptionally high embedded energy cost because supplemental water used to supply agriculture and maintain groundwater levels is pumped 3,425 vertical feet from the California Aqueduct. The energy component of water use includes three aspects; energy used to move water through the SWP, energy used to move water from the Aqueduct turnout up the mountain to the GTA by TCCWD, and energy used to pump water by the four major distributors: City of Tehachapi and three CSDs.

The American Council for Energy Efficient Economy has estimated energy to pump water from the Harvey O. Banks Pumping Plant at the south edge of the Bay-Delta to the Wind Gap Pump Station (Reach 16) to be about 1,610 kWh/AF. The TCCWD pumps water up the mountain with the use of three large pumping stations and one smaller pumping station at the Jacobsen Reservoir. During peak agricultural demand, supplemental water is pumped from wells.

TCCWD distributes water to the City of Tehachapi and the three CSDs conjunctively, so all of the urban water providers use electricity to pump wells. Differences between retail agencies are due to elevation changes within their water service area. The City water service area has the least elevation change with only two pressure zones. The three CSDs use booster pumps to move water to residences at higher elevations. Bear Valley CSD has the largest gradient. Twelve booster stations push water from 4000 to 6300 feet of elevation.

Energy intensity estimates for the TCCWD and the four participating agencies are summarized in **Table 2:8-1**. Calculations of the 2015 energy intensity for the TCCWD, BVCSD, City of Tehachapi, and GHCSD are included in **Appendix I**. Information for the SSCSD and the SWP was included as part of a January 2015 grant application (based on 2014 data) developed by the TCCWD.

Table 2:8-1: Estimated Energy Intensity for Greater Tehachapi Area (kWh/AF/year)

Agency	Total
SWP[1]	1,610
TCCWD[2]	10,455
BVCSD[3]	3,183
COT[4]	1,113
GHCSD[5]	1,136
SSCSD[1]	1,105

NOTES:
1. From January 2015 TCCWD grant application
2. TCCWD 2015 Energy Intensity Calculations (see Appendix I) less SWP
3. From BVCSD 2015 Energy Intensity Calculations (see Appendix I)
4. From COT 2015 Energy Intensity Calculations (see Appendix I)
5. From GHCSD 2015 Energy Intensity Calculations (see Appendix I)

2.09 Plan Adoption, Submittal and Implementation

2.09.1 Public Notice

Law

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to 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 (10621(b)).

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 (10642).

The efforts TCCWD has taken to involve appropriate agencies and the general public in the planning process are summarized below. The City of Tehachapi is a participant in this RUWMP. No separate notice was provided to the City. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at TCCWD Office on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

2.09.2 Plan Adoption, Submittal, and Implementation

Law

> *After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).*
>
> *An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).*
>
> *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 (10635(b)).*
>
> *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 (10644(a)(1).*
>
> *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. (10645).*
>
> *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) (10621(c)).*
>
> *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 (10644(a)(1)).*

The 2015 RUWMP update plan was adopted by the TCCWD at the Regular Meeting of the Board of Directors on June 15, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 15, 2016. The intent of the Public Hearing was to gather input from the public that is served by TCCWD as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

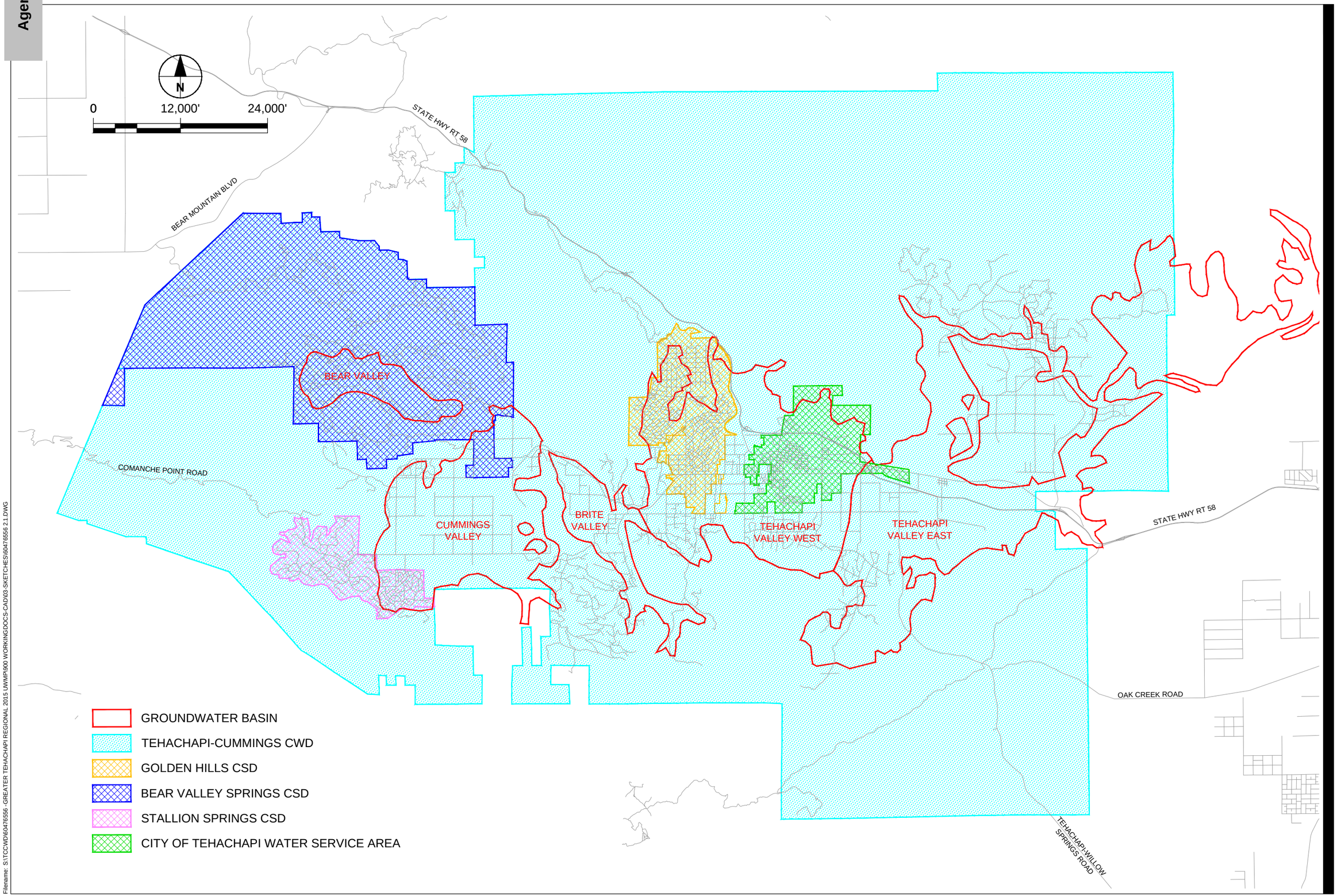
The Plan will be submitted to the California Department of Water Resources, the California State Library, and the County no later than July 1, 2016 which is within 30 days of adoption by the TCCWD on June 15, 2016.

Commencing no later than July 1, 2016, the TCCWD will have a copy of the 2015 RUWMP available for public review at the TCCWD Office (see address below) during normal business hours.

Tehachapi-Cummings County Water District
22901 Banducci Road
Tehachapi, CA 93561

The 2015 RUWMP will also be posted on the TCCWD's website at www.tccwd.com.

Agenda



AECOM

FIGURE 2-1

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

SERVICE AREAS AND GROUNDWATER BASINS

60476556

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Section 3 Bear Valley CSD

3.01 Plan Preparation

3.01.1 Agency Identification

BVCSD is a retail water supplier. In 2015, its service area consisted of 2,953 municipal connections and it supplied a volume of 654 acre-feet of water to its service area. Its information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 3:2-1**.

Table 3:2-1 BVCSD: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015[1]
CA1510038	Bear Valley CSD	2,953	654
TOTAL		**2,953**	**654**

NOTES:
1. BVCSD groundwater production.

3.01.2 Coordination and Outreach

Law

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 (10620(d)(2)).

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 (10642).

Urban water suppliers that rely 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(j)).

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 (10621(b)).

BVCSD purchases imported SWP water from the TCCWD to augment its groundwater supplies. TCCWD was informed of BVCSD's water use projections as a part of the RUWMP development process (See **Table 3:2-4**). The Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 3.09**. Copies of notices are included in **Appendix A**.

Table 3:2-4 BVCSD: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Tehachapi-Cummings County Water District
NOTES: TCCWD is a participant in this RUWMP.

3.02 System Description

3.02.1 General Description

Law

Describe the service area of the supplier (10631(a)).

The BVCSD was formed in 1970 and provides water and wastewater services to a 25,000 acre area in the Tehachapi Mountains known as Bear Valley Springs. Approximately 8,500 acres of the District are set aside for wilderness and greenbelt areas. BVCSD produces and distributes water for domestic and commercial use. Groundwater supplies from the Bear Valley basin are supplemented by conjunctive use programs (groundwater banking) with the TCCWD in the Cummings Basin. The service area boundary for BVCSD is shown on **Figure 2-1** in **Section 2.02.1,** which also includes more information on the Greater Tehachapi area.

3.02.2 Service Area Climate

Law

Describe the climate of the supplier (10631(a)).

See **Section 2.02.2**

3.02.3 Service Area Population

Law

> *(Describe the service area) current and projected population . . . 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 . . . (10631(a)).*
>
> *. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).*
>
> *Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).*

The 2015 population estimates for the BVCSD were developed based on 2010 Census data for the Bear Valley Springs CDP and the population per connection method. Population projections for the BVCSD are based on projections for the unincorporated areas of Kern County (1% growth per year) from the Kern COG 2014 Regional Transportation Plan. See **Table 3:3-1.**

Table 3:3-1 BVCSD: Population - Current and Projected

	2015[1]	2020[2]	2025[2]	2030[2]	2035[2]
Population Served	5,314	5,585	5,870	6,169	6,484

NOTES:
1. 2015 population calculated per 2010 census data for the Bear Valley Springs CDP and population per connection method (1.8 persons/connection).
2. Population projections for 2020 through 2035 based on population projections for the unincorporated area from Kern COG (Regional Transportation Plan June 2014).

3.03 System Water Use

3.03.1 Water Use

Law

> *Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), 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 (10631(e)(1) and (2)).*

Water use data within the BVCSD for 2015 is summarized in **Table 3:4-1**. 2015 was an extremely dry year. Water use restrictions and water conservation measures were enacted by the BVCSD to meet the conservation standard set for the BVCSD by the State. The BVCSD makes no deliveries of water for saline intrusion barriers. Total water use for the BVCSD water service area in 2015 was 23% less than the water use in 2014 and 33% less than the water use in 2013.

Table 3:4-1 BVCSD: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Other	Residential	Drinking Water	572
Commercial		Drinking Water	16
Institutional/Governmental		Drinking Water	4
Losses		Drinking Water	61
Other	Lake fill	Raw Water	266
TOTAL			**919**
NOTES:			

Table 3:4-2 includes projections of BVCSD's water demands for the years 2020 through 2035 in five year increments. Projections for future water use are based on historic deliveries and projected population growth from **Table 3:3-1**.

Table 3:4-2 BVCSD: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Other	All M&I uses (potable water) See notes.	947	995	1,045	1,099
Other	Lake fill (raw water)	150	150	150	150
TOTAL		**1,097**	**1,145**	**1,195**	**1,249**
NOTES: Projected M&I water usage based on population projections and average 2011-2015 water use of 151 gpcd.					

Table 3:4-3 summarizes BVCSD's total water demands from **Tables 3:4-1 and 3:4-2**.

Table 3:4-3 BVCSD: Total Water Demands					
Description	2015	2020	2025	M&2030	2035
Potable and Raw Water *From Tables 3:4-1 and 3:4-2*	919	1,097	1,145	1,195	1,249
Recycled Water Demand *From Table 3:6-4*	30	30	30	30	30
TOTAL WATER DEMAND	**949**	**1,127**	**1,175**	**1,225**	**1,279**
NOTES:					

3.03.2 Distribution System Water Losses

Law

Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:. . . (J) Distribution system water loss. (10631(e)(1) and (2)).

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.

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 (10631(e)(3)).

Table 3:4-4 includes the results of BVCSD's water system audit for 2015. The audit was completed according to Appendix L of the Guidebook using the AWWA's Water Audit Software. A copy of the BVCSD's water audit reporting worksheet is included in **Appendix H**.

Table 3:4-4 BVCSD: 12 Month Water Loss Audit Reporting

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	53.77
NOTES: Water loss from AWWA Water Audit Reporting Worksheet (see Appendix H)	

3.03.3 Water Use for Lower Income Households/Future Water Savings

Law

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 (10631.1(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 (10631 (e)(4)(A)).

. . . Water use projections that do not account for these water savings shall be noted of that fact (10631 (e)(4)(B)).

The projection for affordable residential housing needs (combined low income and very low income) was estimated to be 38% of the total Residential Housing Needs Allocation for the City of Tehachapi in the 2014

Regional Transportation Plan prepared by Kern COG. Therefore, due to its proximity to the City of Tehachapi, low income housing water use needs for single-family and multifamily residential uses within the BVCSD are estimated to be 38% of its total residential water use.

The water use projections for the BVCSD do not account for water savings from codes, standards, ordinances, or transportation and land use plans. See **Table 3:4-5.**

Table 3:4-5 BVCSD: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

3.03.4 Climate Change

See **Section 2.03.3**.

3.04 Baselines and Targets

3.04.1 Updating Calculations from 2010 UWMP

Law

An urban retail water supplier shall include in its urban water management plan due in 2010 . . .the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).

An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. This section summarizes the calculations for the BVCSD. The calculations for the Regional Alliance are described in **Section 2.04**. The SB X7-7 verification form tables for the Regional Alliance and the BVCSD are included in **Appendix G.**

3.04.2 Baseline Periods

Law

"Base daily per capita water use" means any of the following:

4) *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.*
5) *For an urban retail supplier that meets at least 10 percent of its 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.

6) *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 reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The BVCSD will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP as shown in their **SB X7-7 Table 1**.

3.04.3 Service Area Population

Law

When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).

The BVCSD population estimates were developed based on the persons per connection method and census data for 2000 and 2010 for the Bear Valley Springs CDP. Population per connection was calculated at 2.16 based on 2000 census data and 2.21 based on 2010 census data per the 2010 RUWMP. Population estimates for the BVCSD are shown in its **SB X7-7 Table 3**.

3.04.4 Gross Water Use

Law

"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:

5) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
6) *The net volume of water that the urban retail water supplier places into lon term storage*
7) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*
8) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

BVCSD's gross water use as shown in its **SB X7-7 Table 4** consists of its groundwater well production, with the exception of water pumped directly from wells to lakes for recreational use.

3.04.5 Baseline Daily Per Capita Water Use

BVCSD's baseline daily per capita water use (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in its **SB X7-7 Table 5**.

3.04.6 2015 and 2020 Targets

The 2020 Target for the BVCSD was calculated using Target Method 3 (95% of the Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010) as shown in its **SB X7-7 Table 7E**. The confirmation of the 2020 Target is shown in its **SB X7-7 Table 7F**. The baseline and target information for BVCSD is summarized in **Table 3:5-1**. The 2020 target calculated for the BVCSD is the same as calculated for the Regional Alliance.

Table 3:5-1 Baselines and Targets Summary
Bear Valley CSD

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*2000*	*2009*	*196*	*187*	*179*
5 Year	*2004*	*2008*	*189*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: See BVCSD SB X7-7 Tables in Appendix G.					

3.04.7 2015 Compliance Daily per Capita Water Use (GPCD)

Law

> *"Compliance daily per capita water use" means the gross water use during the final year of the reporting period (10608.12(e)).*
>
> *Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a)*

BVCSD is in compliance with the 2015 Interim Target as shown in **Table 3:5-2.** BVCSD has also achieved compliance with the 2020 Target. BVCSD's daily per capita water use for 2015 (110 gpcd) is a reduction of 44% from its average per capita water usage for the 2000 to 2009 baseline period (196 gpcd), and is about 39% lower than its 2020 Target (179 gpcd).

Table 3:5-2: 2015 Compliance
*Bear Valley CSD**

Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
110	187	Yes
**All values are in Gallons per Capita per Day (GPCD)*		
NOTES: See BVCSD SB X7-7 Tables in Appendix G.		

3.05 System Supplies

3.05.1 Purchased or Imported Water

The BVCSD purchases imported SWP water from TCCWD to meet demands in excess of its groundwater supplies. SWP purchases are delivered to the BVCSD through groundwater recharge.

Deliveries of imported SWP water for 2015 are included in **Table 3:6-8** in **Section 3.05.9**. Projections of future SWP purchases are included in **Table 3:6-9** in **Section 3.05.9**. TCCWD's imported SWP supply is described in **Section 2.05.1**.

3.05.2 Groundwater

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:

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 (10631(b)(1)).

A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).

For those basins for which 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 (10631(b)(2)).

A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).

For basins that have not been adjudicated, (provide) 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 (10631(b)(2)).

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 (10631(b)(3)).

The BVCSD pumps groundwater from the Bear Valley Groundwater Basin and the Cummings Basin. The Bear Valley Basin is located entirely within the boundary of the BVCSD. The BVCSD's Groundwater Management Plan (included in **Appendix E**) estimates the safe yield of the Bear Valley Basin to be 600 acre-feet per year (200 acre-feet per year for their alluvial wells and 400 acre-feet per year for their bedrock wells). This water is the BVCSD's least expensive supply and is pumped preferentially. Groundwater quality is generally of good quality with few issues. There are two alluvial wells that are unused for potable water due to high nitrates and two bedrock wells that are unused for potable water due to high radioactivity issues.

BVCSD purchases surface water from TCCWD that is recharged within the Cummings Basin. This water is recovered from wells within the Cummings Basin and exported for delivery to its service area. More information on the Cummings Basin is included in **Section 2.05.2**.

BVCSD's groundwater supply is obtained through 18 production wells, 5 of which are located in the Cummings Basin. Due to the limited groundwater supply available in the Bear Valley Basin, additional water supplies to meet future growth will need to come from expansion of the Cummings Basin conjunctive use operations. Five non-potable wells are used to pump groundwater for lake fill.

BVCSD's total groundwater pumping for the last five years is included in **Table 3:6-1.**

Table 3:6-1 BVCSD: Groundwater Volume Pumped

Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Bear Valley Basin	187	158	153	162	167
Fractured Rock	Bear Valley Basin	404	353	377	323	378
Alluvial Basin	Cummings Basin	343	555	642	568	374
TOTAL		**934**	**1,066**	**1,172**	**1,053**	**919**

NOTES: Includes pumping for lake fill and recovery of previously banked SWP supplies.

3.05.3 Surface Water

BVCSD does not utilize surface water as a source of its urban water supply.

3.05.4 Stormwater

BVCSD does not utilize stormwater as a source of its urban water supply.

3.05.5 Wastewater and Recycled Water

Law

> *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. (16033)*

BVCSD collects and treats wastewater from within its service area. Recycled water from the treatment plant is used for irrigation of a golf course from early spring to late fall. Treated effluent that does not go to the golf course is discharged for recharge within Sycamore Creek. These uses of wastewater and recycled water are expected to continue in the future.

The wastewater collected within the BVCSD service area for 2015 is summarized in **Table 3:6-2.**

Table 3:6-2 BVCSD: Wastewater Collected Within Service Area in 2015						
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?
Bear Valley CSD	Metered	55	Bear Valley CSD	WWTP	Yes	No
Total Wastewater Collected from Service Area in 2015:		**55**				
NOTES:						

Wastewater treatment and discharge within the BVCSD service area for 2015 is summarized in **Table 3:6-3**. Current and projected use of recycled water within the BVCSD service area is summarized in **Table 3:6-4**. A comparison of the projected recycled water use from the 2010 RUWMP and the actual recycled water use for 2015 is included in **Table 3:6-5**. Since expansion of recycled water use is not planned, **Table 3:6-6** is not included in this report.

Table 3:6-3 BVCSD: Wastewater Treatment and Discharge Within Service Area in 2015						
Wastewater Treatment Plant Name	Method of Disposal	Treatment Level	2015 volumes			
			Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Bear Valley CSD	Golf course irrigation	Tertiary	30		30	
Bear Valley CSD	Sycamore Creek outfall	Tertiary	25	25		
Total			**55**	**25**	**30**	**0**
NOTES: Distribution of wastewater effluent discharges estimated by the BVCSD.						

Table 3:6-4 BVCSD: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area						
Name of Agency Producing (Treating) the Recycled Water:	BVCSD					
Name of Agency Operating the Recycled Water Distribution System:	BVCSD					
Supplemental Water Added in 2015	None					
Beneficial Use Type	Level of Treatment	2015	2020	2025	2030	2035
Golf course irrigation	Tertiary	30	30	30	30	30
Total:		**30**	**30**	**30**	**30**	**30**
NOTES:						

Table 3:6-5 BVCSD: 2010 RUWMP Recycled Water Use Projection Compared to 2015 Actual		
Use Type	2010 Projection for 2015	2015 actual use
Golf course irrigation	35	30
Total	**35**	**30**
NOTES:		

3.05.6 Desalinated Water Opportunities

Law

Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))

BVCSD has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. Desalination is not a cost-effective solution for the water supply needs of the GTA due to the water resource opportunities that are available at a much lower cost.

3.05.7 Exchanges and Transfers

Law

Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))

The BVCSD cannot transfer or exchange its groundwater supplies. Discussion of transfer opportunities on a regional basis is included in **Section 2.05.7**.

3.05.8 Future Water Projects

Law

> *(Describe) 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, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), 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 (10631(g)).*

BVCSD will develop and implement future water projects as necessary to maintain its groundwater supplies to meet its customers' potable water demands. The BVCSD is investigating options to provide treatment to wells that it currently cannot use due to high radioactivity issues. Discussion of future regional water projects for the GTA is included in **Section 2.05.8**.

3.05.9 Summary of Existing and Planned Sources of Water

Law

> *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) (10631(b)).*
>
> *(Provide) 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 (10631(b)(4)).*

BVCSD's existing and planned sources of water are summarized in **Tables 3:6-8 and 3:6-9**. Projections for future purchases of SWP supplies are estimated to meet projected demands.

Table 3:6-8 BVCSD: Water Supplies — Actual

Water Supply Description	Additional Detail on Water Supply	2015	
		Actual Volume	Water Quality
Purchased or Imported Water	Conjunctive use[1]	372	Raw Water
Groundwater	From District Wells	547	Drinking Water
Recycled Water	WTTP Effluent	30	Recycled Water
Total		**949**	

NOTES:
1. From TCCWD BWRA Summary

Table 3:6-9 BVCSD: Water Supplies — Projected					
Water Supply Description	Additional Detail on Water Supply	Projected Water Supply *Reasonably Available Volume*			
		2020	2025	2030	2035
Groundwater	Service to overlying lands in Cummings Basin	22	22	22	22
Groundwater	Bear Valley Basin safe yield	600	600	600	600
Purchased or Imported Water	Purchased SWP supplies[1]	475	523	573	627
Recycled Water	Golf course irrigation	30	30	30	30
Total		**1,127**	**1,175**	**1,225**	**1,279**

NOTES:
1. Purchased SWP supplies are estimated to meet projected demands.

3.06 Water Supply Reliability Assessment

3.06.1 Constraints on Water Sources

Law

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 (10631(c)(2)).

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 (10634).

Due to the ongoing management of its groundwater supplies, the BVCSD anticipates that adequate groundwater supplies would be available at a consistent level of use during the planning horizon of this Plan.

3.06.2 Reliability by Type of Year

Law

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 (10631(c)(1)).

The BVCSD relies on groundwater pumping to meet the demands of its customers, which includes pumping of groundwater from the Bear Valley Basin and recovery of previously recharged SWP supplies from the Cummings Basin. The BVCSD anticipates that the safe yield and water quality of the Bear Valley Basin will remain at close to current conditions for the next twenty years and beyond. The reliability of SWP supplies is discussed in **Section 2:06.2**. With average SWP deliveries at 60% long-term, the BVCSD anticipates that sufficient supplies will be reasonably available for purchase from the TCCWD as needed by the BVCSD.

The BVCSD currently purchases water supplies from the TCCWD in dry years. Starting in 2017, the BVCSD will begin accumulating banked supplies for use in dry years. The BVCSD will purchase additional water supplies from the TCCWD when available and develop a Banked Water Reserve Account (BWRA) equal to, at a minimum, five times the annual average of the BVCSD's SWP water demand over the previous five years. It is anticipated that water supplies through the BWRA will be available for recovery by the BVCSD during the single dry year and multiple dry years scenarios.

The reliability of BVCSD's groundwater supplies for the various water year types are summarized in **Table 3:7-1**.

Table 3:7-1 BVCSD: Basis of Water Year Data

Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	--	100%
Single-Dry Year	2014	100%
Multiple-Dry Years 1st Year	2013	100%
Multiple-Dry Years 2nd Year	2014	100%
Multiple-Dry Years 3rd Year	2015	100%

NOTES:
The BVCSD pumps groundwater to meet its demands. Imported SWP supplies are purchased and recharged in the Cummings Basin to meet the District's projected demands beyond the safe yield of the Bear Valley Basin. It is anticipated that 100% of the average groundwater supplies will be available in every year.

3.06.3 Supply and Demand Assessment

Law

> *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 (10632(c)).*

The comparison of BVCSD's supply and demand projections for the normal year, single dry year and multiple dry year scenarios are shown in **Tables 3:7-2, 3:7:3, and 3:7-4** respectively.

Table 3:7-2 BVCSD: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals *(from Table 3:6-9)*	1,127	1,175	1,225	1,279
Demand totals *(from Table 3:4-3)*	1,127	1,175	1,225	1,279
Difference	0	0	0	0
NOTES:				

Table 3:7-3 BVCSD: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals	1,127	1,175	1,225	1,279
Demand totals	1,127	1,175	1,225	1,279
Difference	0	0	0	0
NOTES:				

Table 3:7-4 BVCSD: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals	1,127	1,175	1,225	1,279
	Demand totals	1,127	1,175	1,225	1,279
	Difference	0	0	0	0
Second year	Supply totals	1,127	1,175	1,225	1,279
	Demand totals	1,127	1,175	1,225	1,279
	Difference	0	0	0	0
Third year	Supply totals	1,127	1,175	1,225	1,279
	Demand totals	1,127	1,175	1,225	1,279
	Difference	0	0	0	0
NOTES:					

3.06.4 Regional Water Supply Reliability

Law

> *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 (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The Water Availability Preservation Committee meets on a regular basis to plan for and manage available water supplies. More details regarding these efforts are included in other sections of the Plan.

3.07 Water Shortage Contingency Planning

3.07.1 Stages of Action

Law

> *The plans 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:*
>
> *Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The BVCSD Water Shortage Contingency Plan is included in **Appendix F**. Water shortage regulations have been adopted in order to reduce consumption and reserve a sufficient supply of water for public health and safety. BVCSD also has in place more aggressive measures to support water supply interruptions in excess of 30% and up to 50% from catastrophic failure due to earthquake fire or extensive power failure.

The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by BVCSD and/or its consumers. When staff determines that water supply condition warrants activating a water alert or stage change, the General Manager will approve and notify the board. Presently there are not any defined triggers (i.e., water allocations, snow pack levels, etc.) for moving from one stage to the next. Any decision to change stages will however be based on the combination of water supplies, weather conditions, trends in water usage, groundwater levels, and water production.

Conservation measures gradually increase with each stage. The consumers are given opportunities to voluntarily reduce consumption in Stage 1. If these efforts are not sufficient, then Stage 2 is implemented which includes additional mandatory and voluntary measures. If these are not sufficient, then Stage 3, which includes several other mandatory regulations, is implemented.

The State of California requires that an urban water shortage contingency plan include up to a 50% reduction in consumption. It is not known how much the existing water shortage regulations will reduce consumption. The mandatory measures alone would not reduce consumption by 50% and this goal could probably only be achieved with strict enforcement and significant voluntary reductions.

The stages of action from BVCSD's Water Shortage Contingency Plan are summarized in **Table 3:8-1**.

Table 3:8-1 BVCSD Stages of Water Shortage Contingency Plan		
Stage	Percent Supply Reduction[1]	Water Supply Condition
Stage 1	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
Stage 2	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
Stage 3	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES: BVCSD is completely supplied by groundwater. The decision to declare a water shortage stage is based on the combination of water supplies, weather conditions, water usage trends, groundwater levels, water tank levels, and water production. A 50% reduction in supply would be addressed through Stage 3.		

3.07.2 Prohibitions on End Users/Consumption Reduction Methods

Law

> *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 (10632(a)(4)).*
>
> *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 (10632(a)(5)).*

The prohibitions on end users for the various stages of the BVCSD's Water Shortage Contingency Plan are summarized in **Table 3:8-2**.

Consumption Reduction Methods are summarized in **Table 3:8-3**. Water conservation surcharges were adopted by the Board in 2014. See **Section 3.07.5**.

Table 3:8-2 BVCSD: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Landscape - Restrict or prohibit runoff from landscape irrigation		No
1	Landscape - Prohibit certain types of landscape irrigation	Use of drip irrigation	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		No
1	Other - Prohibit use of potable water for washing hard surfaces		No
1	Other - Require automatic shut of hoses	Shutoff valves for vehicle washing	No
1	Other	Use of low flow shower heads and toilets	No
1	Other	Water consumption reductions for bathing, hand dishwashing and irrigation	No
1	Other	Running only full loads in the washing machine	No
1	CII - Restaurants may only serve water upon request	At the Oak Tree Country Club and Mulligan Room	No
2	Other	All Stage I Restrictions apply	Yes
2	Landscape - Limit landscape irrigation to specific times	Watering permitted only Monday through Saturday between 5 PM and 8 AM. Watering Prohibited on Sundays	Yes
2	Other	No BVCSD construction water permitted unless metered	Yes
2	Other - Require automatic shut off of hoses	Vehicle washing prohibited without an automatic shutoff valve	Yes
3	Other	All Stage I and Stage II Restrictions apply	Yes
3	Other	High volume water users (above 4,000 CF) shall submit water use curtailment plans for at least 30% reduction	Yes
NOTES: Any person violating any of the provisions of this chapter or willfully and knowingly refusing to comply with the rules, regulations, and determinations of BVCSD shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished according to Section 1-4-1 of the Bear Valley CSD Code			

Table 3:8-3 BVCSD: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference
1, 2, 3	Expand Public Information Campaign	District informs the public of the desired reductions
1, 2, 3	Implement or Modify Drought Rate Structure or Surcharge	Rates and surcharges shall be as established by resolution of the board of directors[1]
NOTES: 1. Water conservation rate surcharges were adopted by the BVCSD board in 2014. See Section 3.07.5.		

3.07.3 Penalties, Charges, and Other Enforcement of Prohibitions

Law

Penalties or charges for excessive use, where applicable 10632(a)(6).

The BVCSD's Water Shortage Contingency Plan allows for the imposition of penalties as follows:

> "Remedies for violations of this chapter are not exclusive and may be imposed cumulatively in the discretion of the district. For example, a violator may pay a surcharge, be subject to a flow restrictor, have water service be discontinued, and be prosecuted criminally."

3.07.4 Determining Water Shortage Reductions

Law

A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).

The BVCSD's deliveries are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

3.07.5 Revenue and Expenditure Impacts

Law

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 (10632(7)).

The BVCSD has established surcharges for basic residential water rates when water shortage conditions are declared. The purposes of the surcharge include to encourage additional water conservation and to help defray the costs of constructing, maintaining and operating the District's water system as reduced usage of water lowers the revenues received. The currently adopted surcharges are as follows:

1. Stage One Condition Schedule (Moderate Water Shortage): During a stage one condition, the basic normal water rate schedule for residential customers will be increased by ten percent (10%) for all water used each month in excess of 10 units (1,000 cubic feet).
2. Stage Two Condition Schedule (Severe Water Shortage): During a stage two condition, the basic normal water rate schedule for residential customers will be increased by twenty percent (20%) for all water used each month in excess of 10 units (1,000 cubic feet).
3. Stage Three Condition Schedule (Critical Water Shortage): During a stage three condition, the basic normal water rate schedule for residential customers will be increased by thirty percent (30%) for all water used each month in excess of 10 units (1,000 cubic feet).

3.07.6 Resolution or Ordinance

Law

A draft water shortage contingency resolution or ordinance (10632(8)).

The BVCSD's water shortage contingency plan (Ordinance Code 7-4) is included in **Appendix F**.

3.07.7 Catastrophic Supply Interruption

Law

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 (10632(a)(3)).

BVCSD has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply. The water shortage regulations would be used to reduce consumption after a catastrophic supply interruption until more stringent methods such as strict water rationing could be put in place.

The emergency activities that are undertaken by BVCSD depend upon the severity of the problem and how quickly the problem can be remedied. Possible catastrophes affecting water supply may include:

- Widespread Power Outage
- Local Earthquake, Landslide, or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

In the event of power loss, BVCSD has emergency power generation equipment that can be used to maintain water operations. In the event of an earthquake or other disaster, BVCSD personnel will survey and assess damage and respond accordingly with repairs. Work will be scheduled to minimize the impacts to potable water system customers.

Failure of the Aqueduct or Delta levees is discussed in **Section 2.07.6**

3.07.8 Minimum Supply Next Three Years

Law

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 (10632(a)(2)).

The BVCSD's minimum supply for the next three years is assumed to be the same as its 2015 supply as shown in **Table 3:8-4**.

Table 3:8-4 BVCSD: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply	919	919	919

NOTES:
Minimum available supply is assumed to be the same as utilized in 2015.

3.08 Demand Management Measures

Law

. . .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 (10631(f)(1)(A)).

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.*

3.08.1 Water Waste Prevention Ordinances

BVCSD Ordinance Code 7-1-6 (B) Water Waste states "No customer shall knowingly permit leaks or waste of water. Where water is wastefully or negligently used on a customer's premises seriously affecting the general service, the district may discontinue the service if such conditions are not corrected within five (5) days after giving the customer written notice."

3.08.2 Metering

BVCSD charges all customers based on metered readings and established rate schedules. All current and new connections including temporary connections are required to be metered and billed per volume of use. Existing meters are checked on a regular basis for leakage and accuracy.

3.08.3 Conservation Pricing

The BVCSD's rate schedule includes a monthly service charge and a tiered rate structure for water volume charges (quantity rates increase with higher volumes of water usage). The BVCSD board has also adopted water conservation surcharges for its residential water rates. See **Section 3.07.5**.

3.08.4 Public Education and Outreach

The TCCWD provides Public Education and Outreach on a regional basis for all of the participating retail urban water suppliers. See **Section 2.08.4** for a description of these efforts.

3.08.5 Programs to Assess and Manage Distribution System Real Loss

The BVCSD monitors pumping rates and water sales to identify average system water loss. Unusual water loss is investigated for possible leakage. BVCSD field personnel have the necessary equipment to locate and repair leaks in a timely manner. Customer water usage is also recorded and monitored in order to identify anomalies in water sales and usage that may be attributable to leakage or waste.

3.08.6 Water Conservation Program Coordination and Staffing Support

The TCCWD provides water conservation program coordination and staffing support for all of the participating retail urban water suppliers. See **Section 2.08.6**.

3.08.7 Other Demand Management Measures

The BVCSD's demand management measures are discussed in other sections of the Plan.

3.08.8 Implementation over the Past Five Years

Law

> *(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

See **Section 2.08** for narrative descriptions of the nature and extent of the demand management measures implemented by the TCCWD on behalf of the participating agencies over the past five years.

3.08.9 Planned Implementation to Achieve Water Use Targets

Law

> *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 (10631(f)(1)(A)).*

While the BVCSD has achieved its water use reduction targets, it will continue with the implementation of its existing DMMs and look for ways to improve water use efficiency.

3.08.10 Members of the California Urban Water Conservation Council

Law

> *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 (10631(i)).*

BVCSD is a member of the California Urban Water Conservation Council (CUWCC) and a signatory to the MOU.

3.09 Plan Adoption, Submittal and Implementation

3.09.1 Public Notice

Law

> *Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to 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 (10621(b)).*
>
> *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 (10642).*

The efforts BVCSD has taken to involve appropriate agencies and the general public in the planning process are summarized below. The City of Tehachapi is a participant in this RUWMP. No separate notice was provided to the City. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at BVCSD Office on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

3.09.2 Plan Adoption, Submittal, and Implementation

Law

> *After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).*
>
> *An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).*
>
> *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 (10635(b)).*
>
> *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 (10644(a)(1).*
>
> *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. (10645).*
>
> *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) (10621(c)).*
>
> *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 (10644(a)(1)).*

The 2015 RUWMP update plan was adopted by the BVCSD at the Regular Meeting of the Board of Directors on June 23, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 23, 2016. The intent of the Public Hearing was to gather input from the public that is served by BVCSD as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

The Plan will be submitted to the California Department of Water Resources, the California State Library, and the County no later than July 1, 2016 which is within 30 days of adoption by the BVCSD on June 23, 2016.

Commencing no later than July 1, 2016, the BVCSD will have a copy of the 2015 RUWMP available for public review at the BVCSD Office (see address below) during normal business hours.

Bear Valley CSD
28999 South Lower Valley Road
Tehachapi, CA 93561

The 2015 RUWMP will also be posted on the BVCSD's website at www.bvcsd.com.

Section 4 City of Tehachapi

4.01 Plan Preparation

4.01.1 Agency Identification

The City of Tehachapi is a retail water supplier. In 2015, its service area consisted of 3,085 municipal connections and it supplied a volume of 1,737 acre-feet of water to its service area. The City's information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 4:2-1.**

Table 4:2-1 COT: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015[1]
1510020	City of Tehachapi	3,085	1,737
TOTAL		**3,085**	**1,737**

NOTES:
1. City of Tehachapi groundwater production.

4.01.2 Coordination

Law

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 (10620(d)(2)).

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 (10642).

Urban water suppliers that rely 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(j)).

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 (10621(b)).

The City purchases imported SWP water from the TCCWD to augment its groundwater supplies. TCCWD was informed of the City's water use projections as a part of the RUWMP development process (See **Table 4:2-4**). The Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 4.09**. Copies of notices are included in **Appendix A**.

Table 4:2-4 COT: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Tehachapi-Cummings County Water District
NOTES: TCCWD is a participant in this RUWMP.

4.02 System Description

4.02.1 General Description

Law

Describe the service area of the supplier (10631(a)).

The City of Tehachapi was incorporated in 1909. The City's water service area covers approximately 4,800 acres, not including the CCI which operates its own water and wastewater systems. The City operates six wells serving five pressure zones. Land use within the City is primarily residential, commercial, light industrial, schools, and parks. The City also provides wastewater collection and treatment for the lands within its service area. The service area boundary for the City is shown on **Figure 2-1** in **Section 2.02.1,** which also includes more information on the Greater Tehachapi area.

4.02.2 Service Area Climate

Law

Describe the climate of the supplier (10631(a)).

See **Section 2.02.2.**

4.02.3 Service Area Population

Law

(Describe the service area) current and projected population . . . 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 . . . (10631(a)).

. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).

Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).

The State of California Department of Finance (DOF) prepares reports with population estimates for Cities on an annual basis. This population estimate was used for the City of Tehachapi for 2015. Population projections for City for the years 2020 through 2035 were based on a 1.1% growth per year as included in 2014 Regional Transportation Plan prepared by Kern COG. See **Table 4:3-1.**

Table 4:3-1 COT: Population - Current and Projected

	2015	2020	2025	2030	2035
Population Served	8,815	9,311	9,834	10,387	10,971

NOTES:
1. Population figures above do not include California Correctional Facility (CCI).
2. 2015 population for the City of Tehachapi from California DOF Population Estimate Report E-5.
3. Growth at 1.1% per year per KernCOG 2014 Regional Transportation Plan.

4.03 System Water Use

4.03.1 Water Use

Law

Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), 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 (10631(e)(1) and (2)).

Water use data within the City of Tehachapi service area for 2015 is summarized in **Table 4:4-1**. The City water service area includes a variety of commercial, governmental, institutional, and industrial water users in addition to its residential customers. As a result, the City's per capita water usage is higher than the other retail water suppliers in the area which serve primarily residential customers. The City's per capita residential water usage for 2015 was about 100 gpcd.

2015 was an extremely dry year. Water use restrictions and water conservation measures were enacted by the City to meet the conservation standard set for the City by the State. The City makes no deliveries of water for saline intrusion barriers. Total water use for the City water service area in 2015 was 21% less than the water use in 2014 and 26% less than the water use in 2013.

Table 4:4-1 COT: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	811
Multi-Family		Drinking Water	175
Commercial	See Note 1	Drinking Water	233
Industrial		Drinking Water	16
Institutional/Governmental		Drinking Water	4
Landscape		Drinking Water	109
Other	Hydrant meters	Drinking Water	24
Other	Internal (Non-revenue)	Drinking Water	147
Sales/Transfers/Exchanges to other agencies	Sale to Union Pacific	Drinking Water	18
Losses		Drinking Water	236
TOTAL			**1,755**

NOTES:
1. Includes: General Commercial, Hospital, Cemeteries, Churches, Hotel/Motels, Restaurants, and schools

Table 4:4-2 includes projections of the City's water demands for the years 2020 through 2035 in five year increments. Projections for future water use are based on the projected population growth from **Table 4:3-1** and a water use of 179 gpcd (the 2020 daily per capita water use target for the Regional Alliance).

Table 4:4-2 COT: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description *(as needed)*	Projected Water Use			
		2020	2025	2030	2035
Other	Total Water Use for all Categories	1,867	1,972	2,083	2,200
TOTAL		**1,867**	**1,972**	**2,083**	**2,200**

NOTES: Projected water use estimated using the 2020 Target of 179 GPCD for the Regional Alliance.

Table 4:4-3 summarizes the City's total water demands from **Tables 4:4-1 and 4:4-2**.

Table 4:4-3 COT: Total Water Demands					
	2015	2020	2025	2030	2035
Potable and Raw Water *From Tables 4:4-1 and 4:4-2*	1,755	1,867	1,972	2,083	2,200
Recycled Water Demand *From Table 4:6-4*	220	375	375	375	375
TOTAL WATER DEMAND	**1,975**	**2,242**	**2,347**	**2,458**	**2,575**
NOTES:					

4.03.2 Distribution System Water Losses

Law

Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:. . . (J) Distribution system water loss. (10631(e)(1) and (2)).

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.

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 (10631(e)(3)).

Table 4:4-4 includes the results of the City's water system audit for 2015. The audit was completed according to Appendix L of the Guidebook using the AWWA's Water Audit Software. A copy of the City's water audit reporting worksheet is included in **Appendix H.**

Table 4:4-4 COT: 12 Month Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	259.9
NOTES: From AWWA Water Audit Worksheet WAS v5.0 (see Appendix H)	

4.03.3 Water Use for Lower Income Households/Future Water Savings

Law

> *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 (10631.1(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 (10631 (e)(4)(A)).*
>
> *. . . Water use projections that do not account for these water savings shall be noted of that fact (10631 (e)(4)(B)).*

The projection for affordable residential housing needs (combined low income and very low income) was estimated to be 38% of the total Residential Housing Needs Allocation for the City of Tehachapi in the 2014 Regional Transportation Plan prepared by Kern COG. Therefore, low income housing water use needs for single-family and multifamily residential uses within the City are estimated to be 38% of its total residential water use.

The water use projections for the City do not account for water savings from codes, standards, ordinances, or transportation and land use plans. See **Table 4:4-5.**

Table 4:4-5 COT: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

4.03.4 Climate Change

See **Section 2.03.3**.

4.04 Baselines and Targets

4.04.1 Updating Calculations from 2010 UWMP

Law

> *An urban retail water supplier shall include in its urban water management plan due in 2010 . . .the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*
>
> *An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).*

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. This section summarizes the calculations for the City. The calculations for the Regional Alliance are described in **Section 2.04**. The SB X7-7 verification form tables for the Regional Alliance and the City are included in **Appendix G.**

4.04.2 Baseline Periods

Law

"Base daily per capita water use" means any of the following:

7) *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.*
8) *For an urban retail supplier that meets at least 10 percent of its 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.*
9) *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 reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The City will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP as shown in their **SB X7-7 Table 1**.

4.04.3 Service Area Population

Law

When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).

The City's population estimates are from the State DOF Table E-8 as shown in its **SB X7-7 Table 3**.

4.04.4 Gross Water Use

Law

"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:

9) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
10) *The net volume of water that the urban retail water supplier places into lon term storage*
11) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*
12) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

The City's gross water use as shown in its **SB X7-7 Table 4** consists of its groundwater well production.

4.04.5 Baseline Daily Per Capita Water Use

The City's baseline daily per capita water use (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in its **SB X7-7 Table 5**.

4.04.6 2015 and 2010 Targets

The City's 2020 target is calculated using Target Method 1 (20% reduction in baseline water use) as shown in its **SB X7-7 Table 7A**. The confirmation of the 2020 Target is shown in its **SB X7-7 Table 7F**. The 2015 interim target for the City is 213 gpcd. The baseline and target information for the City is summarized in **Table 4:5-1**. The City's calculated targets are greater than the targets for the Regional Alliance of 179 gpcd for 2020 and 185 for 2015.

Table 4:5-1 COT Baselines and Targets Summary

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*2000*	*2009*	*239*	*213*	*191*
5 Year	*2004*	*2008*	*246*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES:					

4.04.7 2015 Compliance Daily per Capita Water Use (GPCD)

Law

> *"Compliance daily per capita water use" means the gross water use during the final year of the reporting period (10608.12(e)).*
>
> *Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a)*

The City is in compliance with its 2015 Interim Target as shown in **Table 4:5-2.** The City has also achieved compliance with its 2020 Target (191 gpcd) as well as the 2015 and 2020 targets for the Regional Alliance (185 and 179 gpcd). The City's daily per capita water use for 2015 (176 gpcd) is a reduction of 26% from its average per capita water usage for the 2000 to 2009 baseline period (239 gpcd), and is 8% lower than its 2020 Target.

Table 4:5-2: 2015 Compliance City of Tehachapi*		
Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
176	215	Yes
**All values are in Gallons per Capita per Day (GPCD)*		
NOTES: From SB X7-7 Table 6		

4.05 System Supplies

4.05.1 Purchased or Imported Water

The City purchases imported SWP water from TCCWD to meet demands in excess of its groundwater allocation. These supplies are delivered to the City through groundwater recharge. The City has an agreement with the TCCWD to maintain a Banked Water Reserve Account (BWRA) equal to, at a minimum, five times the annual average of the City's SWP water demand over the previous five calendar years. The City recovers water from its BWRA whenever SWP supplies are unavailable for purchase (due to drought, damage to SWP or TCCWD facilities, or any other event). The City's estimated BWRA balance as of December 31, 2015 is 1,295 acre-feet.

Due to TCCWD's reduced SWP allocation, the City did not purchase any SWP water from TCCWD in 2015. Projections of future SWP purchases are included in **Table 4:6-9** in **Section 4.05.9**. TCCWD's imported SWP supply is described in **Section 2.05.1**.

4.05.2 Groundwater

Law

> *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:*
>
> *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 (10631(b)(1)).*
>
> *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).*
>
> *For those basins for which 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 (10631(b)(2)).*
>
> *A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).*
>
> *For basins that have not been adjudicated, (provide) 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 (10631(b)(2)).

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 (10631(b)(3)).

The City pumps groundwater from the adjudicated Tehachapi Groundwater Basin. Groundwater adjudication proceedings were initiated in 1966 in response to the decline in groundwater levels that had been experienced in the Tehachapi Basin since 1950. The Tehachapi Basin adjudication judgment was filed in 1971, with an amended judgment filed in 1973 (Superior Court Case No. 97210). The judgment created "allowed pumping allocations" for each party which restricted total annual extractions within the Tehachapi Basin to the safe yield of 5,500 acre-feet. Exports from the groundwater basin are not allowed.

A groundwater modeling study of the Tehachapi Basin was completed by Fugro West, Inc. in 2009 to provide a better understanding of the hydrogeology of the basin. The study found the safe yield of the basin to be about 5,317 acre-feet per year, with annual extractions averaging about 3,591 acre-feet. The TCCWD monitors selected wells seasonally for groundwater levels. Groundwater levels have increased since the adjudication and are now close to 1950 levels. The basin is not considered to be in a state of overdraft or projected to become overdrafted.

Allowed pumping allocations per the judgment are as follows:

- City of Tehachapi – 1,822 Acre-feet
- Golden Hills CSD – 874 Acre-feet
- Other pumpers – 2,828 Acre-feet.

The adjudication judgment documents are included in **Appendix E**. More information on the Tehachapi Basin is included in **Section 2.05.2**.

Some areas have experienced high levels of nitrogen (nitrate), with some of the City's wells removed from service due to nitrogen levels exceeding the Maximum Contaminant Level (MCL). Measures have been undertaken to attempt to reduce nitrogen concentrations, including pumping wells with high nitrogen concentrations for agricultural use and improvements to the City's Wastewater Treatment Facility.

In addition to its allowable pumping allocation from the adjudication judgment, the City purchases surface water from TCCWD that is recharged into the groundwater basin and available for future recovery by the City's wells. The City's groundwater supply is obtained through six wells serving five pressure zones. The City's groundwater pumping for the last five years is included in **Table 4:6-1.**

Table 4:6-1 COT: Groundwater Volume Pumped

Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Tehachapi Basin	1,953	2,150	2,362	2,202	1,755
TOTAL		**1,953**	**2,150**	**2,362**	**2,202**	**1,755**

NOTES: From COT groundwater production records

4.05.3 Surface Water

The City does not have sources of surface supply other than imported SWP supplies it purchases from TCCWD.

4.05.4 Stormwater

The City does not intentionally divert stormwater directly for beneficial use.

4.05.5 Wastewater and Recycled Water

Law

> *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. (16033)*

The City collects and treats wastewater from within its service area. Recycled water from the treatment plant is used for agricultural irrigation and percolates in storage ponds within its reclamation area. Based on the City's Annual Reports for the Wastewater Treatment Facility, about 53 acres have been used for disposal of effluent by irrigation of alfalfa and pasture (grasses and poplar trees). The City primarily uses alfalfa for effluent reclamation, with pasture accounting for about 20 percent of the land area. Effluent irrigation on the reclamation area is limited to the period from April through September. The recycled water use for irrigation within the reclamation area during 2015 is estimated to be about 220 acre-feet. Over the last six years, the estimated irrigation demand of the reclamation fields has averaged about 250 acre-feet per year.

The City currently uses an average of 125 acre-feet per year of potable water for process water at its WWTP. It has installed a recycled water system to utilize effluent for process water at its WWTP which is planned to begin operations in 2016.

The wastewater collected within the City's service area for 2015 is summarized in **Table 4:6-2.** Wastewater treatment and discharge within the City service area for 2015 is summarized in **Table 4:6-3**. Current and projected use of recycled water within the City service area is summarized in **Table 4:6-4**.

Table 4:6-2 COT: Wastewater Collected Within Service Area in 2015

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?
City of Tehachapi	Metered	930	City of Tehachapi	City WWTP	Yes	No
Total Wastewater Collected from Service Area in 2015:		930				
NOTES: From COT WWTP Annual Report						

Table 4:6-3 COT: Wastewater Treatment and Discharge Within Service Area in 2015						
Wastewater Treatment Plant Name	Method of Disposal	Treatment Level	2015 volumes			
			Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
COT WWTP	Land disposal, agricultural irrigation	Secondary, Undisinfected	930	930	220	0
Total			930	930	220	0
NOTES: From COT WWTP Annual Report						

Table 4:6-4 COT: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area							
Name of Agency Producing (Treating) the Recycled Water:	City of Tehachapi						
Name of Agency Operating the Recycled Water Distribution System:	City of Tehachapi						
Beneficial Use Type	General Description of 2015 Uses	Level of Treatment	2015	2020	2025	2030	2035
Agricultural irrigation[1]	Alfalfa and pasture fields	Secondary, Undisinfected	220	250	250	250	250
Industrial use[2]	WWTP Process Water	Secondary, Undisinfected		125	125	125	125
Total:			220	375	375	375	375

NOTES:
1. Future agricultural irrigation usage based on average agricultural irrigation demand over the last six years.
2. Estimated to be 125 acre-feet per year based on historic potable water usage at WWTP. Projected to begin operations in 2016.

A comparison of the City's projected recycled water use from the 2010 RUWMP and the estimated actual recycled water use for 2015 (as agricultural irrigation) is included in **Table 4:6-5**. The City is investigating options for other uses of recycled water including indirect potable reuse (IPR) and landscape irrigation. These programs are in the feasibility study phase and will involve improvements to the City's wastewater treatment processes. The time frame for implementation and probable increase in recycled water usage for these projects are unknown at this time (see **Table 4:6-6**).

Table 4:6-5 COT: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual		
Use Type	2010 Projection for 2015	2015 actual use
Agricultural irrigation	629	220
Total	629	220
NOTES: From 2010 UWMP and COT WWTP Annual Report		

Table 4:6-6 COT: Methods to Expand Future Recycled Water Use		
Name of Action/Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Landscape Irrigation Facilities	unknown	unknown
IPR, Groundwater Recharge	unknown	unknown
Total		-
NOTES: These programs are currently in the feasibility study phase. Implementation dates and expected increase in recycled water use are unknown at this time.		

4.05.6 Desalinated Water Opportunities

Law

Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))

The City has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. Desalination is not a cost-effective solution for the water supply needs of the GTA due to the water resource opportunities that are available at a much lower cost.

4.05.7 Exchanges and Transfers

Law

Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))

The City cannot transfer or exchange its groundwater supplies outside of the groundwater basin. Discussion of transfer opportunities on a regional basis is included in **Section 2.05.7**.

4.05.8 Future Water Projects

Law

> *(Describe) 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, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), 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 (10631(g)).*

Through the IRWMP process, the City has entered into a partnership with the TCCWD and the Tehachapi Unified School District (TUSD) to implement the Snyder Well Intertie Project. This project will connect an existing City well, which was removed from City's system for high nitrogen concentration levels, to the TCCWD's non-potable water system. The well, located adjacent to Jacobsen Middle School, will provide water for irrigation at the school site and be available as an additional water supply source for the TCCWD when not used for the school. It is hoped that utilizing the well for irrigation will reduce the nitrogen concentrations to below the MCL and allow the well to be reconnected to the City's system for potable use. Although this is a joint project with the TCCWD, it is included within the City's portion of the Plan since it will decrease demand on the City's potable water system. The Snyder Well Project is summarized in **Table 4:6-7**.

Discussion of future regional water projects for the GTA is included in **Section 2.05.8**.

Table 4:6-7 COT: Expected Future Water Supply Projects or Programs

Name of Future Projects or Programs	Joint Project with other agencies?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type	Expected Increase in Water Supply to Agency
Snyder Well Intertie Project	Yes	TCCWD, TUSD	Connection of existing City well with high nitrogen levels to TCCWD system for non-potable use. Removal of school irrigation system from City's potable water system.	2016	All year types	70
NOTES: The project will result in a reduction in water demand due to removal of the school's irrigation system from the City's potable water system.						

4.05.9 Summary of Existing and Planned Sources of Water

Law

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) (10631(b)).

(Provide) 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 (10631(b)(4)).

The City's existing and planned sources of water are summarized in **Tables 4:6-8 and 4:6-9**. Projections for purchase of SWP supplies are estimated to meet projected demands.

Table 4:6-8 COT: Water Supplies — Actual

Water Supply Source	Additional Detail on Water Supply	2015		
		Actual Volume	Water Quality	Total Right or Safe Yield[1]
Groundwater	Pumping from Tehachapi Basin	1,755	Drinking Water	1,822
Total		**1,755**		**1,822**

NOTES:
1. Adjudicated pumping allocation. Does not include the City's right to recover its previously recharged SWP supplies.

Table 4:6-9 COT: Water Supplies — Projected

Water Supply Source	Additional Detail on Water Supply	**Projected Water Supply** *Reasonably Available Volume*			
		2020	**2025**	**2030**	**2035**
Groundwater	Tehachapi Basin Pumping Allocation	1,822	1,822	1,822	1,822
Purchased or Imported Water	Purchased SWP supplies[1]	45	150	261	378
Recycled Water	Agricultural irrigation	250	250	250	250
Recycled Water	WWTP process water	125	125	125	125
Total		**2,242**	**2,347**	**2,458**	**2,575**

NOTES:
1. Purchased SWP supplies are estimated to meet projected demands.

4.06 Water Supply Reliability Assessment

4.06.1 Constraints on Water Sources

Law

> *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 (10631(c)(2)).*
>
> *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 (10634).*

Due to the ongoing management of its groundwater supplies, the City anticipates that adequate groundwater supplies would be available at a consistent level of use during the planning horizon of this Plan.

4.06.2 Reliability by Type of Year

Law

> *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 (10631(c)(1)).*

The COT relies on groundwater pumping from the adjudicated Tehachapi Basin to meet the demands of its customers. The City has an adjudicated allocation of 1,822 acre-feet/year in addition to the right to recovery of previously recharged SWP supplies purchased from the TCCWD in its BWRA. Based on ongoing monitoring of the Tehachapi Basin, the City anticipates that the safe yield and water quality will remain at close to current conditions for the next twenty years and beyond.

The reliability of SWP supplies is discussed in **Section 2:06.2**. With average SWP deliveries at 60% long-term, the City anticipates that sufficient supplies will be reasonably available for purchase from the TCCWD and will have been previously recharged for recovery during the average year, single dry year, and multiple dry years scenarios. As of December 31, 2015, the City's BWRA balance is estimated to be 1,295 acre-feet.

The reliability of the City's groundwater supplies for the various water year types are summarized in **Table 4:7-1**.

Table 4:7-1 COT: Basis of Water Year Data		
Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	Base Year	100%
Single-Dry Year	2015	100%
Multiple-Dry Years 1st Year	2013	100%
Multiple-Dry Years 2nd Year	2014	100%
Multiple-Dry Years 3rd Year	2015	100%
NOTES: The City pumps groundwater from an adjudicated basin with an annual allocation of 1,822 acre-feet. The City purchases SWP from TCCWD to meet its demands in excess of its groundwater allocation and stores at least a 5-year supply. It is anticipated that the City can provide 100% of average supplies in every year.		

4.06.3 Supply and Demand Assessment

Law

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 (10632(c)).

The comparison of City's supply and demand projections for the normal year, single dry year, and multiple dry year scenarios are shown in **Tables 4:7-2, 4:7-3, and 4:7-4** respectively. The City's purchase and recharge of imported SWP supplies are based on providing a five year supply beyond its adjudicated allocation. The City anticipates having groundwater supplies available to meet demands during the normal, single dry year, and multiple dry year scenarios.

Table 4:7-2 COT: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals *(from Table 4: 6-9)*	2,242	2,347	2,458	2,575
Demand totals *(from Table 4: 4-3)*	2,242	2,347	2,458	2,575
Difference	0	0	0	0
NOTES:				

Table 4:7-3 COT: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals	2,242	2,347	2,458	2,575
Demand totals	2,242	2,347	2,458	2,575
Difference	0	0	0	0
NOTES:				

Table 4:7-4 COT: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals	2,242	2,347	2,458	2,575
	Demand totals	2,242	2,347	2,458	2,575
	Difference	0	0	0	0
Second year	Supply totals	2,242	2,347	2,458	2,575
	Demand totals	2,242	2,347	2,458	2,575
	Difference	0	0	0	0
Third year	Supply totals	2,242	2,347	2,458	2,575
	Demand totals	2,242	2,347	2,458	2,575
	Difference	0	0	0	0
NOTES:					

4.06.4 Regional Water Supply Reliability

Law

> *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 (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The Water Availability Preservation Committee meets on a regular basis to plan for and manage available water supplies. More details regarding these efforts are included in other sections of the Plan.

4.07 Water Shortage Contingency Planning

4.07.1 Stages of Action

Law

The plans 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:

Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))

The City has adopted Water Shortage Contingency Measures, which are included in Chapter 13.22 of their Code of Ordinances (see **Appendix F**). The Water Shortage Contingency Measures provide for three stages of alert conditions to address shortages of 10% to 50%.

Water conservation stages shall be called and imposed by resolution of the City Council and shall remain in full force and effect until otherwise determined or discontinued by resolution of the City Council. The City Manager will promulgate guidelines which will set forth the criteria for determining when a particular conservation stage is to be implemented and terminated.

The stages of the City's Water Shortage Contingency Plan are summarized in **Table 4:8-1**.

Table 4:8-1 City of Tehachapi Stages of Water Shortage Contingency Plan

Stage	Percent Supply Reduction[1]	Water Supply Condition
Stage 1	10%	Pursuant to the guidelines or emergency or drought-related regulations imposed by the state or federal regulatory agencies.
Stage 2	30%	Pursuant to the guidelines and when it is apparent that the City's production or supply facilities cannot meet customer demand under Stage 1 conditions or pursuant to emergency or drought-related regulations imposed by state or federal regulatory agencies
Stage 2	50%	Pursuant to the guidelines and when it is apparent that the reductions achieved from Stage 1 and Stage 2 conditions are not sufficient to allow the City's production and supply to meet customer demand or pursuant to any emergency or drought-related regulations imposed by state or federal regulatory agencies.

[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.

NOTES:

4.07.2 Prohibitions on End Users/Consumption Reduction Methods

Law

> *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 (10632(a)(4)).*
>
> *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 (10632(a)(5)).*

The prohibitions on end users for the various stages of the City's Water Shortage Contingency Plan are summarized in **Table 4:8-2**. Compliance with water shortage contingency measures during Stage 1 is voluntary. During Stage 2, all measures in Stage 1 also apply and become mandatory. Compliance with all measures in Stages 2 is mandatory. During Stage 3, all measures in Stages 1 and 2 also apply and compliance with all measures is mandatory. In the event of a prolonged Stage 3 condition, the City Council has the authority to take any other action available to ensure that the City's water supply is not jeopardized.

Consumption Reduction Methods from the Water Shortage Contingency Plan are summarized in **Table 4:8-3**.

Table 4:8-2 COT: Restrictions and Prohibitions on End Uses

Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Landscape - Restrict or prohibit runoff from landscape irrigation	Prevent excessive run-off from entering adjacent properties, sidewalks, gutters, surface drains or storm drains	No
1	Other	Use of drip irrigation systems or other methods designed to prevent excessive runoff	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner		No
1	Other - Prohibit use of potable water for washing hard surfaces	Use of broom or blower to clean driveways and paved or other hard surfaces	No
1	Other - Prohibit use of potable water for washing hard surfaces	Use of water for washing down driveways and paved or hard surfaces only when necessary to alleviate immediate fire or sanitation hazards	No
1	Other - Require automatic shut off of hoses	Use of shut off nozzle when using a hose to wash a vehicle or hand watering	No
1	Other	Use of low flow shower heads and shortening time in the shower	No

Table 4:8-2 (Continued) COT: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Other	Use of volume reduction devices in toilets and being careful not to use the toilets as an ash tray or wastebasket	No
1	Other	Reduction in water consumption for bathing, hand dishwashing, and irrigation by reduction of flow time for these activities	No
1	Other	Running only full loads in the washing machine and dishwasher	No
2	Other	All Stage 1 Restrictions apply and compliance is mandatory	Yes
2	Landscape - Limit landscape irrigation to specific days	Odd number addresses irrigate Monday, Wednesday, and Friday. Even addresses irrigate on Tuesday, Thursday and Saturday. No irrigation on Sundays. Only exception shall be areas irrigated with non-potable water.	Yes
2	Landscape - Limit landscape irrigation to specific times	Any single irrigation station may not run longer than ten minutes per day.	Yes
2	Landscape - Limit landscape irrigation to specific times	Irrigation of turf and ornamental landscaping shall be prohibited between the hours of 10 A.M. and 4 P.M. daily.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	All observable leaks on a resident's premises shall be repaired within twenty-four hours of notification to customer.	Yes
2	Other - Prohibit use of potable water for washing hard surfaces	No hosing down of non-landscaped or hardscaped areas.	Yes
2	Other - Prohibit use of potable water for construction and dust control		Yes
2	Other	The washing of boats, vehicles or mobile equipment shall only be allowed in car washes or using a bucket and a hose with automatic shut off nozzle.	Yes
2	Water Features - Restrict water use for decorative water features, such as fountains	The use of water in ornamental fountains or water features shall only be permitted if the water is recirculated.	Yes
2	Other	The City manager will have the right to reduce the amount of water used in irrigating any park site, greenbelt or open areas within the City limits.	Yes

Table 4:8-2 (Continued) COT: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
2	Landscape - Other landscape restriction or prohibition	No outdoor irrigation shall be permitted during and forty-eight hours after a measurable rainfall event.	Yes
2	Other	Restaurants and other food services establishments shall serve water to customers only on request.	Yes
2	Other	Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily and prominently display notice of this option.	Yes
2	Other	Other restrictions may be imposed if deemed necessary by the City manager or City Council.	Yes
3	Other	All Stage 1 and Stage 2 restrictions apply	Yes
3	Landscape - Prohibit certain types of landscape irrigation	No irrigating of lawns. Plants, trees and bushes may be irrigated by use of a bucket or the use of reclaimed gray water as allowed by State and County health rules and regulations.	Yes
3	Landscape - Restrict or prohibit runoff from landscape irrigation	No run-off shall occur	Yes
3	Other - Prohibit use of potable water for washing hard surfaces	Hosing down of unlandscaped or hard surfaces is prohibited.	Yes
3	Other water feature or swimming pool restriction	The introduction of water into swimming pools, wading pools and spas shall be prohibited.	Yes
3	Other	No washing of motor and recreational vehicles, except at car wash facility.	Yes
3	Landscape - Other landscape restriction or prohibition	Parks may irrigate trees and shrubbery with buckets only or other methods which ensure that no more than twenty gallons of water are used on a single tree or shrub during a period of one week. Irrigation of playing fields and open spaces shall be prohibited	Yes
NOTES: See Appendix F for City Water Shortage Contingency Measures.			

Table 4:8-3 City of Tehachapi: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference
1, 2, 3	Expand Public Information Campaign	The City Manager informs the public of the water conservation stage and the desired reductions in water usage.
3	Other	The City Council may take other action to reduce consumption as required
NOTES: See Appendix F for City Water Shortage Contingency Measures.		

4.07.3 Penalties, Charges, and Other Enforcement of Prohibitions

Law

Penalties or charges for excessive use, where applicable 10632(a)(6).

The City's Water Shortage Contingency Plan allows for the imposition of penalties as follows:

> "Civil Enforcement: The City shall have all remedies available in its Municipal Code and ordinances for the enforcement of this chapter including, without limitation, Section 1.16.065 (administrative citations). Any fine, penalty, interest, or costs imposed on a violator of this chapter may, in addition to all other remedies available to the City thereunder, be added to the violator's water bill and thereafter be subject to enforcement therein including, without limitation, disconnection or turnoff of water service.
>
> Criminal Enforcement: Any person violating any provision of this chapter or failing to comply with any of its requirements shall be deemed guilty of a misdemeanor unless the violation is made an infraction by ordinance and shall be punishable as described in Chapter 1.20 of the Municipal Code."

4.07.4 Determining Water Shortage Reductions

Law

A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).

The City's deliveries to its customers are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

4.07.5 Revenue and Expenditure Impacts

Law

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 (10632(7)).

The City reviews its revenues and expenditures on an annual basis and evaluates the need to increase water rates in order to provide adequate revenues in times of water shortages. The City conducted a water rate study in 2015 and adopted a new water rate schedule in 2016. If necessary, the City may utilize reserves to address decreased water sales during a water shortage.

4.07.6 Resolution or Ordinance

Law

> *A draft water shortage contingency resolution or ordinance (10632(8)).*

The City's water shortage contingency plan (Tehachapi Ordinance Code Chapter 13.22) is included in **Appendix F**.

4.07.7 Catastrophic Supply Interruption

Law

> *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 (10632(a)(3)).*

The City will implement its water shortage contingency measures during a catastrophic non-drought related interruption in water supply. Stage 1, 2, or 3 restrictions may be implemented immediately by the City Manager as necessary to reduce consumption in the event of a facility malfunction or water supply interruption. In the event of a prolonged Stage 3 conditions, the City Council has the authority to enact further restrictions on water use.

The emergency activities that are undertaken by the City depend upon the severity of the problem and how quickly the problem can be remedied. Possible catastrophes affecting water supply may include:

- Widespread Power Outage
- Local Earthquake, Landslide, or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

In the event of power loss, the City has emergency power generation equipment that can be used to maintain water operations. In the event of an earthquake or other disaster, City personnel will survey and assess damage and respond accordingly with repairs. Work will be scheduled to minimize the impacts to potable water system customers.

Failure of the Aqueduct or Delta levees is discussed in **Section 2.07.6**

4.07.8 Minimum Supply Next Three Years

Law

> *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 (10632(a)(2)).*

The City's minimum available water supply for the next three years is estimated based on its annual groundwater pumping allocation of 1,822 acre-feet and the recovery of previously stored SWP supplies purchased from the TCCWD. The City purchases SWP supplies from the TCCWD to meet its demands in

excess of its groundwater allocation and maintains a storage balance of an estimated five year supply. As of December 31, 2015, the City's estimated BWRA balance is 1,295 acre-feet. Assuming that one-fifth of that amount could be recovered in each of the next three years would provide an additional groundwater supply of 259 acre-feet per year. The City's minimum supplies for the next three years are summarized in **Table 4:8-4.**

Table 4:8-4 COT: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply	2,081	2,081	2,081

NOTES: Estimated supplies are the sum of the following:
1. The City's annual groundwater allocation of 1,822 acre-feet.
2. 1/5 of the City's current BWRA balance (259 acre-feet).

4.08 Demand Management Measures

Law

. . .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 (10631(f)(1)(A)).

The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

viii. Water waste prevention ordinances
ix. Metering
x. Conservation pricing
xi. Public education and outreach
xii. Programs to assess and manage distribution system real loss
xiii. Water conservation program coordination and staffing support
xiv. 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.

4.08.1 Water Waste Prevention Ordinances

The City has adopted water waste prevention measures as a part of its Municipal Code (Section 13.20.020) and in its Water Shortage Contingency Plan. See **Section 4.07.**

4.08.2 Metering

The City charges all customers based on metered readings and established rate schedules. All current and new connections including temporary connections are required to be metered and billed per volume of use. Existing meters are checked on a regular basis for leakage and accuracy. A small number (6 to 10) of internal City accounts for landscape irrigation are currently unmetered. The City is working to install meters at these locations.

4.08.3 Conservation Pricing

City water users are billed a monthly service charge based on meter size and a quantity charge for water usage in excess of 4,000 gallons per month.

4.08.4 Public Education and Outreach

The TCCWD provides Public Education and Outreach on a regional basis for all of the participating retail urban water suppliers. See **Section 2.08.4** for a description of these efforts. The City Water Department staff conducted public outreach by utilizing water conservation door tags and providing assistance with leak detection.

4.08.5 Programs to Assess and Manage Distribution System Real Loss

The City utilizes the AWWA water audit tool. City staff reviews and audits water consumption for customers to detect extremely high water usage that may be due to leakage or waste. The City also contracts with an outside vendor on an annual basis for leak detection services.

4.08.6 Water Conservation Program Coordination and Staffing Support

The TCCWD provides water conservation program coordination and staffing support for all of the participating retail urban water suppliers. See **Section 2.08.6**.

4.08.7 Other Demand Management Measures

The City's demand management measures are discussed in other sections of the Plan.

4.08.8 Implementation over the Past Five Years

Law

> *(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

See **Section 2.08** for narrative descriptions of the nature and extent of the demand management measures implemented by the TCCWD on behalf of the participating agencies over the past five years.

4.08.9 Planned Implementation to Achieve Water Use Targets

Law

> *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 (10631(f)(1)(A)).*

While the City has achieved its water use reduction targets, it will continue with the implementation of its existing DMMs and look for ways to improve water use efficiency.

4.08.10 Members of the California Urban Water Conservation Council

Law

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 (10631(i)).

The City is not currently a member of the California Urban Water Conservation Council.

4.09 Plan Adoption, Submittal and Implementation

4.09.1 Public Notice

Law

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to 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 (10621(b)).

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 (10642).

The efforts the City has taken to involve appropriate agencies and the general public in the planning process are summarized below. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to the County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at City Hall on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

4.09.2 Plan Adoption, Submittal, and Implementation

Law

After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).

An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).

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 (10635(b)).

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 (10644(a)(1).

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. (10645).

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) (10621(c)).

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 (10644(a)(1)).

The 2015 RUWMP update plan was adopted by the City at the Regular Meeting of the City Council on June 20, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 20, 2016. The intent of the Public Hearing was to gather input from the public that is served by the City's potable water system as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

The Plan will be submitted to the California Department of Water Resources, the California State Library, and the County no later than July 1, 2016 which is within 30 days of adoption by the City on June 20, 2016.

Commencing no later than July 1, 2016, the City will have a copy of the 2015 RUWMP available for public review at City Hall (see address below) during normal business hours.

Tehachapi City Hall
115 S. Robinson Street
Tehachapi, CA 93561

The 2015 UWMP will also be posted on the City's website at www.liveuptehachapi.com.

Section 5 Golden Hills CSD

5.01 Plan Preparation

5.01.1 Agency Identification

Golden Hills Community Services District (Golden Hills CSD or GHCSD) is a retail water supplier. In 2015, its service area consisted of 2,819 municipal connections and it supplied a volume of 1,032 acre-feet of water to its service area. Golden Hills CSD's information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 5:2-1.**

GHCSD does not meet the threshold for preparing an UWMP as it serves less than 3,000 connections. However, GHCSD does want to continue to be proactive in water conservation and has voluntarily implemented water conservation measures to improve efficiency of water use.

Table 5:2-1 GHCSD: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015[1]
CA1510045	Golden Hills Community Services District	2,819	1,032
TOTAL		2819	1,032

NOTES:
1. GHCSD groundwater production.

5.01.2 Coordination

Law

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 (10620(d)(2)).

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 (10642).

Urban water suppliers that rely 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(j)).

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 (10621(b)).

GHCSD purchases imported SWP water from the TCCWD to augment its groundwater supplies. TCCWD was informed of GHCSD water use projections as a part of the RUWMP development process (See **Table 5:2-4**). The Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 5.09**. Copies of notices are included in **Appendix A**.

Table 5:2-4 GHCSD: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Tehachapi-Cummings County Water District
NOTES: TCCWD is a participant in this RUWMP.

5.02 System Description

5.02.1 General Description

Law

Describe the service area of the supplier (10631(a)).

Golden Hills CSD is a retail water agency, located in the Tehachapi Mountains west of the City of Tehachapi. Golden Hills CSD began operations in 1966 and is governed by a five member board. GHCSD encompasses approximately 5,400 acres consisting of approximately 4,000 primarily residential parcels ranging in size from ¼-acre to over 20 acres. The service area boundary for the GHCSD is shown on **Figure 2-1** in **Section 2.02.1,** which also includes more information on the Greater Tehachapi area.

5.02.2 Service Area Climate

Law

Describe the climate of the supplier (10631(a)).

See **Section 2.02.2.**

5.02.3 Service Area Population

Law

> *(Describe the service area) current and projected population . . . 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 . . . (10631(a)).*
>
> *. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).*
>
> *Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).*

The 2015 population estimate for Golden Hills CSD was developed based on 2010 Census data for the Golden Hills CDP and the population per connection method. Population projections for GHCSD for the years 2020 through 2035 were based on population projections for the unincorporated areas (1% growth per year) from the Kern COG 2014 Regional Transportation Plan. By the year 2035 the population within the Golden Hills CSD service area is projected to be approximately 10,721 as shown in **Table 5:3-1**.

Table 5:3-1 GHCSD: Population - Current and Projected

	2015	2020	2025	2030	2035
Population Served	8,787	9,235	9,706	10,201	10,721

NOTES:
1. 2015 population calculated per 2010 census data for Golden Hills CDP and population per connection method (3.12 persons/connection).
2. Population projections for 2020 through 2035 based on population projections for the unincorporated area from Kern COG (Regional Transportation Plan June 2014).

5.03 System Water Use

5.03.1 Water Use

Law

> *Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), 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 (10631(e)(1) and (2)).*

Water use data within Golden Hills CSD service area for 2015 is summarized in **Table 5:4-1**. 2015 was an extremely dry year. Water use restrictions and water conservation measures were enacted by Golden Hills CSD to meet the drought restrictions set by the State. Golden Hills CSD makes no deliveries of water for

saline intrusion barriers. Total water use for Golden Hills CSD water service in 2015 was 16% less than the water use in 2014 and 21% less than the water use in 2013.

Table 5:4-1 GHCSD: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Single Family		Drinking Water	720
Multi-Family		Drinking Water	129
Commercial		Drinking Water	37
Institutional/Governmental		Drinking Water	31
Losses	Includes unbilled unmetered	Drinking Water	115
TOTAL			**1,032**
NOTES:			

Table 5:4-2 includes projections of Golden Hill CSD's water demands for the years 2020 through 2035 in five year increments. The future water demands for the GHCSD are based on the population projections in **Table 5:3-1** and a future water use estimate of 121 gpcd.

Table 5:4-2 GHCSD: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Other	Total for all water use types	1,256	1,320	1,387	1,458
TOTAL		**1,256**	**1,320**	**1,387**	**1,458**
NOTES: Projected water use from GHCSD (121 gpcd).					

Table 5:4-3 summarizes GHCSD's total water demands from **Tables 5:4-1 and 5:4-2**.

Table 5:4-3 GHCSD: Total Water Demands					
	2015	2020	2025	2030	2035
Potable and Raw Water *From Tables 5:4-1 and 5:4-2*	1,032	1,256	1,320	1,387	1,458
Recycled Water Demand *From Table 5:6-4*	0	0	0	0	0
TOTAL WATER DEMAND	**1,032**	**1,256**	**1,320**	**1,387**	**1,458**
NOTES:					

5.03.2 Distribution System Water Losses

Law

Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:. . . (J) Distribution system water loss. (10631(e)(1) and (2)).

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.

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 (10631(e)(3)).

Table 5:4-4 includes the results of GHCSD's water system audit for 2015. The audit was completed according to Appendix L of the Guidebook using the AWWA's Water Audit Software. A copy of the GHCSD water audit reporting worksheet is included in **Appendix H.**

Table 5:4-4 GHCSD: 12 Month Water Loss Audit Reporting

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	102.1
NOTES: From AWWA Water Audit Worksheet WAS v5.0 (see Appendix H)	

5.03.3 Water Use for Lower Income Households/Future Water Savings

Law

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 (10631.1(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 (10631 (e)(4)(A)).

. . . Water use projections that do not account for these water savings shall be noted of that fact (10631 (e)(4)(B)).

The projection for affordable residential housing needs (combined low income and very low income) was estimated to be 38% of the total Residential Housing Needs Allocation for the City of Tehachapi in the 2014

Regional Transportation Plan prepared by Kern COG. Therefore, due to its proximity to the City of Tehachapi, low income housing water use needs for single-family and multifamily residential uses within the GHCSD are estimated to be 38% of its total residential water use.

The water use projections for the GHCSD do not account for water savings from codes, standards, ordinances, or transportation and land use plans. See **Table 5:4-5.**

Table 5:4-5 GHCSD: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

5.03.4 Climate Change

See **Section 2.03.3**.

5.04 Baselines and Targets

5.04.1 Updating Calculations from 2010 UWMP

Law

An urban retail water supplier shall include in its urban water management plan due in 2010 . . .the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).

An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. This section summarizes the calculations for the GHCSD. The calculations for the Regional Alliance are described in **Section 2.04**. The SB X7-7 verification form tables for the Regional Alliance and the GHCSD are included in **Appendix G.**

5.04.2 Baseline Periods

Law

"Base daily per capita water use" means any of the following:

10) 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.
11) For an urban retail supplier that meets at least 10 percent of its 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.

12) *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 reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The GHCSD will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP as shown in their **SB X7-7 Table 1**.

5.04.3 Service Area Population

Law

When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).

The GHCSD population estimates were developed based on the persons per connection method and census data for 2000 and 2010 for the Golden Hills CDP. Population per connection was calculated as 3.12 based on 2010 census data per the 2010 RUWMP. Population estimates for the GHCSD are shown in its **SB X7-7 Table 3**.

5.04.4 Gross Water Use

Law

"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:

13) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
14) *The net volume of water that the urban retail water supplier places into long term storage*
15) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*
16) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

GHCSD's gross water use as shown in its **SB X7-7 Table 4** consists of its groundwater well production.

5.04.5 Baseline Daily Per Capita Water Use

GHCSD's baseline daily per capita water use (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in its **SB X7-7 Table 5**.

5.04.6 2015 and 2020 Targets

The 2020 water use target for the GHCSD was calculated using Target Method 3 (95% of the Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010) as shown in its **SB X7-7 Table 7E**. The confirmation of the 2020 Target is shown in its **SB X7-7 Table 7F**. By law, the

maximum 2020 target is 95% of an agency's 5-year baseline water usage. Golden Hills CSD as an individual agency has a 5-year baseline water use of 149 GPCD. This results in a 2020 water use target of 141 gpcd for the GHCSD. The baseline and target information for GHCSD is summarized in **Table 5:5-1**.

Table 5:5-1 Baselines and Targets Summary
Golden Hills CSD

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*2000*	*2009*	*147*	*144*	*141*
5 Year	*2003*	*2007*	*149*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: See GHCSD SB X7-7 Tables in Appendix G.					

5.04.7 2015 Compliance Daily per Capita Water Use (GPCD)

Law

> *"Compliance daily per capita water use" means the gross water use during the final year of the reporting period (10608.12(e)).*
>
> *Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a)*

GHCSD is in compliance with the urban water use targets of 185 gpcd for 2015 and 179 gpcd for 2020 established for the Regional Alliance in **Section 2.04**. In addition, GHCSD is in compliance with its 2015 Interim Target for an individual agency as shown in **Table 5:5-2.** GHCSD has also achieved compliance with its 2020 Target as an individual agency. GHCSD's daily per capita water use for 2015 (105 gpcd) is a reduction of 29% from its average per capita water usage for the 2000 to 2009 baseline period (147 gpcd), and is about 26% lower than its 2020 Target (141 gpcd).

Table 5:5-2: 2015 Compliance
*Golden Hills CSD**

Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
105	144	Yes
**All values are in Gallons per Capita per Day (GPCD)*		
NOTES: See GHCSD SB X7-7 Tables in Appendix G.		

5.05 System Supplies

5.05.1 Purchased or Imported Water

The GHCSD purchases imported SWP water from TCCWD to meet demands in excess of its groundwater allocation. These supplies are delivered to GHCSD through groundwater recharge. Golden Hills CSD has an agreement with the TCCWD to maintain a Banked Water Reserve Account (BWRA) equal to, at a minimum, five times the annual average of the GHCSD's SWP water demand over the previous five calendar years. The GHCSD recovers water from its BWRA whenever SWP supplies are unavailable for purchase (due to drought, damage to SWP or TCCWD facilities, or any other event). The GHCSD's estimated BWRA balance as of December 31, 2015 is 2,925 acre-feet.

Deliveries of imported SWP water for 2015 are included in **Table 5:6-8** in **Section 5.05.9**. Projections of future SWP purchases are included in **Table 5:6-9** in **Section 5.05.9**. TCCWD's imported SWP supply is described in **Section 2.05.1**.

5.05.2 Groundwater

Law

> *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:*
>
> *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 (10631(b)(1)).*
>
> *A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).*
>
> *For those basins for which 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 (10631(b)(2)).*
>
> *A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).*
>
> *For basins that have not been adjudicated, (provide) 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 (10631(b)(2)).*
>
> *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 (10631(b)(3)).*

Golden Hills CSD pumps groundwater from the adjudicated Tehachapi Groundwater Basin. GHCSD had 15 active wells and 2,819 service connections as of 2015.

Groundwater adjudication proceedings were initiated in 1966 in response to the decline in groundwater levels that had been experienced in the Tehachapi Basin since 1950. The Tehachapi Basin adjudication judgment was filed in 1971, with an amended judgment filed in 1973 (Superior Court Case No. 97210). The judgment created "allowed pumping allocations" for each party which restricted total annual extractions within the Tehachapi Basin to the safe yield of 5,500 acre-feet. Exports from the groundwater basin are not allowed.

A groundwater modeling study of the Tehachapi Basin was completed by Fugro West, Inc. in 2009 to provide a better understanding of the hydrogeology of the basin. The study found the safe yield of the basin to be about 5,317 acre-feet per year, with annual extractions averaging about 3,591 acre-feet. The TCCWD monitors selected wells seasonally for groundwater levels. Groundwater levels have increased since the adjudication and are now close to 1950 levels. The basin is not considered to be in a state of overdraft or projected to become overdrafted.

Allowed pumping allocations per the judgment are as follows:

- City of Tehachapi – 1,822 Acre-feet
- Golden Hills CSD – 874 Acre-feet
- Other pumpers – 2,828 Acre-feet.

The adjudication judgment documents are included in **Appendix E**. More information on the Tehachapi Basin is included in **Section 2.05.2**.

In addition to its allowable pumping allocation from the adjudication judgment, the GHCSD purchases surface water from TCCWD that is recharged into the groundwater basin and available for future recovery by the GHCSD's wells. Golden Hills CSD also has a lease agreement for 800 acre-feet per year of allowed pumping allocation from the Lehigh Southwest Cement Company. This lease is presumed to expire by 2025. Of this 800 AF allocation, GHCSD has used in the range of 50 to 250 acre-feet per year to meet its own demands and has subleased the remaining allocation to other entities.

Table 5:6-1 summarizes the groundwater pumping by the GHCSD from the Tehachapi Basin for the last 5 years.

Table 5:6-1 GHCSD: Groundwater Volume Pumped

Groundwater Type	Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Tehachapi Basin	1,193	1,274	1,312	1,225	1,032
TOTAL		**1,193**	**1,274**	**1,312**	**1,225**	**1,032**

NOTES: From GHCSD groundwater production records.

5.05.3 Surface Water

GHCSD does not have sources of surface supply other than imported SWP supplies that it purchases from TCCWD.

5.05.4 Stormwater

GHCSD does not intentionally divert stormwater directly for beneficial use.

5.05.5 Wastewater and Recycled Water

Law

> *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. (16033)*

Golden Hills Sanitation Company (GHSC) owns and operates the wastewater treatment and recycling facility located within GHCSD. Originally, Golden Hills CSD and the GHSC collectively submitted a Report of Waste Discharge to the Central Valley RWQCB. However, in 2001 the Golden Hills CSD revoked its name from the RWQCB Waste Discharge Requirements (permit), dedicated the treatment site property to the GHSC, and terminated any contractual relationship with the GHSC.

The tertiary treated effluent from the GHSC WWTP was originally planned to be disposed of on the front nine fairways of the Golden Hills Country Club golf course. After the golf course closed in the mid-1990's, GHSC has been operating outside of the RWQCB permitted use. Currently, tertiary effluent is disposed of in Tom Sawyer Lake and percolates into the Tehachapi Basin.

The wastewater collected within the GHCSD's service area for 2015 is summarized in **Table 5:6-2.** Wastewater treatment and discharge within the GHCSD service area for 2015 is summarized in **Table 5:6-3**. There are no current or projected uses of recycled water within the service area of GHCSD. Therefore, **Table 5:6-4**, **Table 5:6-5**, and **Table 5:6-6** are not included in this report. The future of wastewater treatment in the Golden Hill CSD is currently under investigation. Potential options include repair of the existing WWTP in Golden Hills or a joint project with the City of Tehachapi where wastewater would be conveyed to the City for treatment at the City's existing WWTP. For the purposes of this Plan, existing WWTP operations are assumed to continue.

Table 5:6-2 GHCSD: Wastewater Collected Within Service Area in 2015

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?
Golden Hills Sanitation Company	Estimated	34	Golden Hills Sanitation Company	Golden Hills WWTP	Yes	Yes
Total Wastewater Collected from Service Area in 2015:		34				
NOTES: Information provided by GHCSD						

Table 5:6-3 GHCSD: Wastewater Treatment and Discharge Within Service Area in 2015						
Wastewater Treatment Plant Name	Method of Disposal	Treatment Level	2015 volumes			
			Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Golden Hills WWTP	Tom Sawyer Lake -Lake outfall	Tertiary	34	34	0	0
Total			34	34	0	0
NOTES: Information provided by GHCSD						

5.05.6 Desalinated Water Opportunities

Law

Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))

GHCSD has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. GHCSD has determined that desalination is not a cost-effective solution for its water supply needs due to the water resource opportunities that are available at a lower cost.

5.05.7 Exchanges and Transfers

Law

Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))

The GHCSD cannot transfer or exchange its groundwater supplies outside of the groundwater basin. The GHCSD has entered into lease agreements with other entities that have adjudicated allowed pumping allocations within the Tehachapi Basin. The GHCSD's current lease agreement is described in **Section 5.05.2**. Discussion of transfer opportunities on a regional basis is included in **Section 2.05.7**.

5.05.8 Future Water Projects

Law

(Describe) 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, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), 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 (10631(g)).

GHCSD is currently implementing the Steuber Phase of the Antelope Conjunctive Use Project. The project consists of a new 500 gpm (minimum) well and 4,500 lineal feet of pipeline to convey pumped groundwater to the GHCSD distribution system. The project will provide the following benefits:

- Provide an important water supply to help GHCSD meet peak demands, and ensure demands can be met if the largest capacity well is off-line.
- Shift groundwater pumping to the east and away from a cone of depression forming in the GHCSD.
- Provide much needed recovery capacity at the Antelope Dam Conjunctive Use Project, and make groundwater recharge in the area more practical and feasible.
- Provide additional emergency water supply to the neighboring City of Tehachapi, who can receive water from the well through an existing interconnection which also provides excess pipeline capacity to meet anticipated future City demands.

The project is anticipated to be completed in early 2017.

Discussion of future regional water projects for the GTA is included in **Section 2.05.8**.

5.05.9 Summary of Existing and Planned Sources of Water

Law

> *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) (10631(b)).*
>
> *(Provide) 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 (10631(b)(4)).*

The GHCSD's actual 2015 water supplies are summarized in **Table 5:6-8.** Projections of future water supplies are shown in **Table 5:6-9**. The GHCSD currently leases an additional 800 acre-feet/year of allowed pumping allocation from the Lehigh Cement Company of which approximately 50-250 acre-feet/year has been used to meet the demands of its customers. This lease is anticipated to expire by 2025. Projections for purchases of SWP supplies in **Table 5:6-9** have been estimated to meet projected demands.

Table 5: 6-8 GHCSD: Water Supplies — Actual

Water Supply	Additional Detail on Water Supply	2015	
		Actual Volume	Water Quality
Groundwater	GHCSD Allowed Pumping Allocation (includes leases) and Salvage Area well production	916	Drinking Water
Purchased or Imported Water	Conjunctive use through groundwater recharge	116	Raw Water
Total		**1,032**	

NOTES: Per GHCSD

Table 5:6-9 GHCSD: Water Supplies — Projected					
Water Supply	Additional Detail on Water Supply	Projected Water Supply *Reasonably Available Volume*			
		2020	2025	2030	2035
Groundwater	GHCSD Allowed Pumping Allocation[1]	1,116	866	866	866
Purchased or Imported Water	Purchased SWP supplies[2]	140	454	521	592
Total		**1,256**	**1,320**	**1,387**	**1,458**

NOTES:
1. GHCSD leases 800 AF of pumping allocation from Lehigh Southwest Cement Company in addition to its 866 AF right. 250 AF is assumed to be used to meet GHCSD demands. The lease is anticipated to expire by 2025.
2. Purchases of SWP supplies have been projected as shown in order to meet future demands.

5.06 Water Supply Reliability Assessment

5.06.1 Constraints on Water Sources

Law

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 (10631(c)(2)).

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 (10634).

Due to the ongoing management of its groundwater supplies, the GHCSD anticipates that they would be available at a consistent level of use during the planning horizon of this Plan. Water quality issues may be a future constraint. Groundwater in some areas of the Tehachapi Basin has been found to have high nitrogen levels. As noted in the 2010 RUWMP, a groundwater nitrogen level monitoring program has been proposed for the Tehachapi Basin.

5.06.2 Reliability by Type of Year

Law

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 (10631(c)(1)).

The GHCSD relies on groundwater pumping from the adjudicated Tehachapi Basin to meet the demands of its customers. The GHCSD has an adjudicated allocation of 866 acre-feet/year in addition to the right to recovery of previously recharged SWP supplies purchased from the TCCWD in its BWRA. Based on ongoing monitoring of the Tehachapi Basin, the GHCSD anticipates that the safe yield and water quality will remain at close to current conditions for the next twenty years and beyond.

The reliability of SWP supplies is discussed in **Section 2:06.2**. With average SWP deliveries at 60% long-term, the GHCSD anticipates that sufficient supplies will be reasonably available for purchase from the TCCWD and will have been previously recharged for recovery during the average year, single dry year, and multiple dry years scenarios. As of December 31, 2015, the GHCSD's BWRA balance is estimated to be 2,925 acre-feet.

The reliability of the GHCSD's groundwater supplies for the various water year types are summarized in **Table 5:7-1**.

Table 5:7-1 GHCSD: Basis of Water Year Data

Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	Base Year	100%
Single-Dry Year	2015	100%
Multiple-Dry Years 1st Year	2013	100%
Multiple-Dry Years 2nd Year	2014	100%
Multiple-Dry Years 3rd Year	2015	100%
NOTES: The GHCSD pumps groundwater from an adjudicated basin with an annual allocation of 866 acre-feet. The GHCSD purchases SWP from TCCWD to meet its demands in excess of its groundwater allocation and stores at least a 5-year supply. It is anticipated that the GHCSD can provide 100% of average supplies in every year.		

5.06.3 Supply and Demand Assessment

Law

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 (10632(c)).

The comparison of GHCSD's supply and demand projections for the normal year, single dry year, and multiple dry year scenarios are shown in **Tables 5:7-2, 5:7-3, and 5:7-4** respectively. The GHCSD's

purchase and recharge of imported SWP supplies are based on providing a five year supply beyond its adjudicated allocation. The GHCSD anticipates having groundwater supplies available to meet demands during the normal, single dry year, and multiple dry year scenarios.

Table 5:7-2 GHCSD: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals *(from Table 5:6-9)*	1,256	1,320	1,387	1,458
Demand totals *(from Table 5:4-3)*	1,256	1,320	1,387	1,458
Difference	0	0	0	0
NOTES:				

Table 5:7-3 GHCSD: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals	1,256	1,320	1,387	1,458
Demand totals	1,256	1,320	1,387	1,458
Difference	0	0	0	0
NOTES:				

Table 5:7-4 GHCSD: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals	1,256	1,320	1,387	1,458
	Demand totals	1,256	1,320	1,387	1,458
	Difference	0	0	0	0
Second year	Supply totals	1,256	1,320	1,387	1,458
	Demand totals	1,256	1,320	1,387	1,458
	Difference	0	0	0	0
Third year	Supply totals	1,256	1,320	1,387	1,458
	Demand totals	1,256	1,320	1,387	1,458
	Difference	0	0	0	0
NOTES:					

5.06.4 Regional Water Supply Reliability

Law

> *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 (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The Water Availability Preservation Committee meets on a regular basis to plan for and manage available water supplies. More details regarding these efforts are included in other sections of the Plan.

5.07 Water Shortage Contingency Planning

5.07.1 Stages of Action

Law

> *The plans 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:*
>
> *Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The GHCSD Water Shortage Contingency Plan is included in **Appendix F**. Water shortage regulations have been adopted in order to reduce consumption and reserve a sufficient supply of water for public health and safety. The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by GHCSD and/or its consumers. When staff determines that water supply condition warrants activating a water alert or stage change, the General Manager will approve and notify the board. Presently there are not any defined triggers (i.e., water allocations, snow pack levels, etc.) for moving from one stage to the next. Any decision to change stages will however be based on the combination of water supplies, weather conditions, trends in water usage, groundwater levels, and water production.

Conservation measures gradually increase with each stage. The consumers are given opportunities to voluntarily reduce consumption in Stage I. If these efforts are not sufficient, then Stage II is implemented which includes additional mandatory and voluntary measures. If these are not sufficient, then Stage III, which includes several other mandatory regulations, is implemented.

The State of California requires that an urban water shortage contingency plan include up to a 50% reduction in consumption. The voluntary measures alone would not reduce consumption by 50% and this goal could probably only be achieved with strict enforcement and significant mandatory reductions.

The stages of action from GHCSD's Water Shortage Contingency Plan are summarized in **Table 5:8-1**.

Table 5:8-1 GHCSD Stages of Water Shortage Contingency Plan		
Stage	Percent Supply Reduction[1]	Water Supply Condition
Stage I	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
Stage II	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
Stage III	See Notes	No Defined Trigger. District staff determines when to declare water shortage stages.
[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES: GHCSD is completely supplied by groundwater. The decision to declare a water shortage stage is based on the combination of water supplies, weather conditions, water usage trends, groundwater levels, water tank levels, and water production. A 50% reduction in supply would be addressed through Stage III.		

5.07.2 Prohibitions on End Users/Consumption Reduction Methods

Law

> *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 (10632(a)(4)).*
>
> *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 (10632(a)(5)).*

The prohibitions on end users for the various stages of the GHCSD's Water Shortage Contingency Plan are summarized in **Table 5:8-2**. In the event of a prolonged Stage 3 condition, the GHCSD Board of Directors has the authority to take any other action available to ensure that the GHCSD's water supply is not jeopardized and may impose a building moratorium until such time as the water supply is increased.

Consumption Reduction Methods are summarized in **Table 5:8-3**. A copy of the GHCSD's Stage III Water Alert Notice for 2015 is included in **Appendix F**.

Table 5:8-2 GHCSD: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
Stage I	Other	Voluntary water conservation by GHCSD Customers (10% reduction target)	No
Stage II	Landscape - Limit landscape irrigation to specific days	Alternate day irrigation of landscaping	Yes
Stage II	Other - Prohibit use of potable water for washing hard surfaces	No hosing down of un-landscaped areas	Yes
Stage II	Other	Washing of boats and vehicles only allowed at carwashes or with a hose equipped with a shutoff valve	Yes
Stage II	Water Features - Restrict water use for decorative water features, such as fountains	Water in ornamental fountains shall only be allowed where all water in the fountain is re-circulated	Yes
Stage II	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	The introduction of water into swimming pools, wading pools, and spas shall be prohibited	Yes
Stage II	Landscape - Other landscape restriction or prohibition	GHCSD will have the right to reduce the amount of water used in irrigation of parks or greenbelts. All irrigation will be performed between the hours of 8PM and 6AM. No run-off will be allowed	Yes
Stage II	Other	Other restrictions as deemed necessary by the General Manager	Yes
Stage II	Other	Car washes must limit wash/rinse cycle to 10 gallons or less	Yes
Stage III	Landscape - Prohibit all landscape irrigation	No irrigating of lawns. Plants and bushes may be watered by use of a bucket or the use of reclaimed gray water. No run-off allowed	Yes
Stage III	Other - Prohibit use of potable water for washing hard surfaces	No hosing down of un-landscaped areas	Yes
Stage III	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	No washing of motor or recreational vehicles, including boats, except at a car wash facility	Yes

Table 5:8-2 (Continued) GHCSD: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
Stage III	Other	The management of the car wash must provide the General Manager with evidence that a normal wash/rinse cycle can be accomplished at the site through the use of 10 gallons water or less. Such washing shall require use of an automatic shut-off nozzle	Yes
Stage III	Other water feature or swimming pool restriction	The introduction of water into swimming pools, wading pools, and spas shall be prohibited	Yes
Stage III	Landscape - Prohibit certain types of landscape irrigation	Parks may irrigate trees and shrubbery only with buckets or other methods which ensure that no more than twenty (20) gallons of water are used on a single tree or shrub during a period of (1) week. Irrigation of playing fields and open spaces shall be prohibited	Yes
Stage III	Landscape - Other landscape restriction or prohibition	GHCSD will have the right to reduce the amount of water used in irrigation of parks or greenbelts. All irrigation will be performed between the hours of 8PM and 6AM. No run-off will be allowed	Yes
Stage III	Other	Account holders will be issued warnings and surcharges if found to be violating Stage I restrictions	Yes
NOTES: From Golden Hills CSD Water Shortage Contingency Plan and 2010 RUWMP			

Table 5:8-3 GHCSD: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or
1, 2, 3	Expand Public Information Campaign	GHCSD Manager informs the public of the Consumption Reduction Stage and desired usage reduction percentage
2	Implement or Modify Drought Rate Structure or Surcharge	A 15% increase of the current water rates may be imposed. Water end use restrictions implemented.
3	Implement or Modify Drought Rate Structure or Surcharge	A 25% increase of the current water rates may be imposed. Water end use restrictions implemented.
NOTES: From Golden Hills CSD Water Shortage Contingency Plan and 2010 RUWMP		

5.07.3 Penalties, Charges, and Other Enforcement of Prohibitions

Law

Penalties or charges for excessive use, where applicable 10632(a)(6).

In the event of a violation of the terms of the GHCSD's water restrictions, the General Manager has the authority to issue warnings and/or impose surcharges. If water abuses continue, the General Manager has the authority to lock the meter or remove the meter from the property. Details on the penalties can be found in **Appendix F**.

5.07.4 Determining Water Shortage Reductions

Law

A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).

The GHCSD's deliveries are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

5.07.5 Revenue and Expenditure Impacts

Law

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 (10632(7)).

The GHCSD has established water rate adjustments that can be implemented when water shortage conditions are declared. The purposes of the rate adjustment include encouraging additional water conservation and helping to defray the costs of constructing, maintaining and operating the District's water system as reduced usage of water lowers the revenues received. A rate adjustment equal to a 15% increase

of the current water rates may be imposed during a Stage II Water Alert and a rate adjustment equal to a 25% increase of the current water rates may be imposed during a Stage II Water Alert.

The GHCSD reviews its revenues and expenditures on an annual basis and evaluates the need to increase water rates or impose a rate adjustment in order to provide adequate revenues in times of water shortages.

5.07.6 Resolution or Ordinance

Law

> *A draft water shortage contingency resolution or ordinance (10632(8)).*

Golden Hills CSD's Water Shortage Contingency Plan and adopting ordinance are included in **Appendix F**.

5.07.7 Catastrophic Supply Interruption

Law

> *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 (10632(a)(3)).*

GHCSD has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply. The water shortage regulations could be used to reduce consumption after a catastrophic supply interruption.

The emergency activities that are undertaken by GHCSD depend upon the severity of the problem and how quickly the problem can be remedied. Possible catastrophes affecting water supply may include:

- Widespread Power Outage
- Local Earthquake, Landslide, or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

In the event of power loss, GHCSD has emergency power generation equipment that can be used to maintain water operations. In the event of an earthquake or other disaster, GHCSD personnel will survey and assess damage and respond accordingly with repairs. Work will be scheduled to minimize the impacts to potable water system customers.

Failure of the Aqueduct or Delta levees is discussed in **Section 2.07.6**

5.07.8 Minimum Supply Next Three Years

Law

> *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 (10632(a)(2)).*

The GHCSD's minimum available water supply for the next three years is estimated based on its annual groundwater pumping allocation of 866 acre-feet and the recovery of previously stored SWP supplies purchased from the TCCWD. The GHCSD purchases SWP supplies from the TCCWD to meet its demands in excess of its groundwater allocation and maintains a storage balance of an estimated five year supply. As of December 31, 2015, the GHCSD's estimated BWRA balance is 2,925 acre-feet. Assuming that one-fifth of

that amount could be recovered in each of the next three years would provide an additional groundwater supply of 585 acre-feet per year. Use of the GHCSD's leased allowed pumping allocation is not included. The GHCSD's minimum supplies for the next three years are summarized in **Table 5:8-4.**

Table 5:8-4 GHCSD: Minimum Supply Next Three Years			
	2016	2017	2018
Available Water Supply	1,451	1,451	1,451

NOTES: Estimated supplies are the sum of the following:
1. The GHCSD's annual groundwater allocation of 866 acre-feet.
2. 1/5 of the GHCSD's current BWRA balance (585 acre-feet).

Use of the GHCSD's leased allowed pumping allocation is not included.

5.08 Demand Management Measures

Law

. . .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 (10631(f)(1)(A)).

The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

xv. Water waste prevention ordinances
xvi. Metering
xvii. Conservation pricing
xviii. Public education and outreach
xix. Programs to assess and manage distribution system real loss
xx. Water conservation program coordination and staffing support
xxi. 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.

5.08.1 Water Waste Prevention Ordinances

The GHCSD has adopted water waste prevention measures as a part of its Water Shortage Contingency Plan as described in **Section 5.07.** The GHCSD uses an AMR system to detect on-site leaks. If the system detects a leak, a mailer is sent to the applicable customer(s). Golden Hill CSD has an illegal Water Connection/Theft policy with a fine of $2,500. The Golden Hills CSD does not have on-going water restrictions since its per capita usage has averaged 123 gpcd over the past five years. If per-capita usage increases, the GHCSD will impose water use restrictions as necessary.

5.08.2 Metering

The GHCSD has been fully metered since it first delivered water. All customers are charged based on metered readings and established rate schedules. All current and new connections including temporary

connections are required to be metered and billed per volume of use. Existing meters are checked on a regular basis for leakage and accuracy. All production wells have been equipped with meters.

5.08.3 Conservation Pricing

GHCSD's rate schedule includes a monthly service charge and quantity rate charges for the volume of water used. Quantity rates are higher for water usage greater than 500 cubic feet. Adjustments to the rate schedule are expected in 2016 as a result of the water rate study that is in progress.

5.08.4 Public Education and Outreach

The TCCWD provides Public Education and Outreach on a regional basis for all of the participating retail urban water suppliers. See **Section 2.08.4** for a description of these efforts. The GHCSD Water Department staff provides assistance to customers with locating on-site leaks identified through the AMR system and is available to meet with customers upon request to identify applicable water conservation measures. The GHCSD also includes water conservation information in the annual water quality reports that are mailed to its customers and has a landscape conservation demonstration garden at its headquarters.

5.08.5 Programs to Assess and Manage Distribution System Real Loss

The GHCSD compares metered consumption and well production on a monthly basis. The meter program is operated using an AMR system which includes an automated intermittent and continuous leak detection program. If a leak is detected during the monthly meter reading process, customers are promptly notified. On average, losses since completion of the AMR system have been reduced into a range between 2% and 6%. The GHCSD is reviewing a potential water main replacement fund as a part of its water rate study.

5.08.6 Water Conservation Program Coordination and Staffing Support

The TCCWD provides water conservation program coordination and staffing support for all of the participating retail urban water suppliers. See **Section 2.08.6**.

5.08.7 Other Demand Management Measures

The GHCSD's demand management measures are discussed in other sections of the Plan.

5.08.8 Implementation over the Past Five Years

Law

> *(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

See **Section 2.08** for narrative descriptions of the nature and extent of the demand management measures implemented by the TCCWD on behalf of the participating agencies over the past five years.

5.08.9 Planned Implementation to Achieve Water Use Targets

Law

> *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 (10631(f)(1)(A)).*

Although the GHCSD has achieved its water use reduction targets it will continue with the implementation of its existing DMMs and will look for ways to improve water use efficiency.

5.08.10 Members of the California Urban Water Conservation Council

Law

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 (10631(i)).

The GHCSD is not currently a member of the California Urban Water Conservation Council.

5.09 Plan Adoption, Submittal and Implementation

5.09.1 Public Notice

Law

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to 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 (10621(b)).

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 (10642).

The efforts GHCSD has taken to involve appropriate agencies and the general public in the planning process are summarized below. The City of Tehachapi is a participant in this RUWMP. No separate notice was provided to the City. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at GHCSD Office on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

5.09.2 Plan Adoption, Submittal, and Implementation

Law

> *After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).*
>
> *An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).*
>
> *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 (10635(b)).*
>
> *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 (10644(a)(1).*
>
> *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. (10645).*
>
> *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) (10621(c)).*
>
> *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 (10644(a)(1)).*

The 2015 RUWMP update plan was adopted by the GHCSD at the Regular Meeting of the Board of Directors on June 16, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 16, 2016. The intent of the Public Hearing was to gather input from the public that is served by GHCSD as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

The Plan will be submitted to the California Department of Water Resources, the California State Library, and the County no later than July 1, 2016 which is within 30 days of adoption by the GHCSD on June 16, 2016.

Commencing no later than July 1, 2016, the GHCSD will have a copy of the 2015 RUWMP available for public review at the GHCSD Office (see address below) during normal business hours.

Golden Hills CSD
21415 Reeves Street
Tehachapi, CA 93581

The 2015 RUWMP will also be posted on the GHCSD's website at www.ghcsd.com.

Section 6 Stallion Springs CSD

6.01 Plan Preparation

6.01.1 Agency Identification

SSCSD is a retail water supplier. In 2015, its service area consisted of 1,314 municipal connections and it supplied a volume of 421 acre-feet of water to its service area. Its information in the RUWMP is presented in Calendar Year format and water quantities are presented in Acre Feet. See **Table 6:2-1**.

SSCSD does not meet the threshold for preparing an UWMP as it serves less than 3,000 connections. However, SSCSD does want to continue to be proactive in water conservation and has voluntarily implemented water conservation measures to improve efficiency of water use.

Table 6:2-1 SSCSD: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015[1]
CA1510025	Stallion Springs CSD	1,314	421
TOTAL		1314	421

NOTES:
1. SSCSD groundwater production.

6.01.2 Coordination

Law

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 (10620(d)(2)).

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 (10642).

Urban water suppliers that rely 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(j)).

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 (10621(b)).

SSCSD purchases imported SWP water from the TCCWD to augment its groundwater supplies. TCCWD was informed of SSCSD's water use projections as a part of the RUWMP development process (See **Table 6:2-4**). The Kern County Planning Department was provided notice that an update to the RUWMP was being prepared and notice of the public hearing on the Plan. Further information on coordination of the Plan and public involvement is included in **Section 6.09**. Copies of notices are included in **Appendix A**.

Table 6:2-4 SSCSD: Water Supplier Information Exchange
The retail supplier has informed the following wholesale supplier(s) of projected water use in accordance with CWC 10631.
Wholesale Water Supplier Name
Tehachapi-Cummings County Water District
NOTES: TCCWD is a participant in this RUWMP.

6.02 System Description

6.02.1 General Description

Law

Describe the service area of the supplier (10631(a)).

The Stallions Springs CSD was originally created in 1970 as the Tehachapi Mountain CSD, but later became known as Stallion Springs CSD. The SSCSD provides water and wastewater services to approximately 2,510 lots in the Tehachapi Mountains west of the City of Tehachapi. SSCSD produces and distributes water for domestic and commercial use and is governed by a five member board. Groundwater supplies from the Cummings Valley basin are supplemented by conjunctive use programs (groundwater banking) with the TCCWD. The service area boundary for SSCSD is shown on **Figure 2-1** in **Section 2.02.1,** which also includes more information on the Greater Tehachapi area.

6.02.2 Service Area Climate

Law

Describe the climate of the supplier (10631(a)).

See **Section 2.02.2**

6.02.3 Service Area Population

Law

> *(Describe the service area) current and projected population . . . 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 . . . (10631(a)).*
>
> *. . . (population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).*
>
> *Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).*

The 2015 population estimates for the SSCSD were developed based on 2010 Census data for the Stallion Springs CDP and the population per connection method. Population projections for the SSCSD are based on projections for the unincorporated areas of Kern County (1% growth per year) from the Kern COG 2014 Regional Transportation Plan. See **Table 6:3-1.**

Table 6:3-1 SSCSD: Population - Current and Projected

Population Served	2015[1]	2020[2]	2025[2]	2030[2]	2035[2]
	2,782	2,924	3,073	3,230	3,395

NOTES:
1. 2015 population calculated per 2010 census data for the Stallion Springs CDP and population per connection method (2.12 persons/connection).
2. Population projections for 2020 through 2035 based on population projections for the unincorporated area from Kern COG (Regional Transportation Plan June 2014).

6.03 System Water Use

6.03.1 Water Use

Law

> *Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), 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 (10631(e)(1) and (2)).*

Water use data within the SSCSD for 2015 is summarized in **Table 6:4-1**. Water usage is almost entirely residential with some small retail venues, a golf course, an extreme sports camp, and a few government buildings. 2015 was an extremely dry year. Water use restrictions and water conservation measures were enacted by the SSCSD to meet the conservation standard set for the SSCSD by the State. The SSCSD

makes no deliveries of water for saline intrusion barriers. Total water use for the SSCSD water service area in 2015 was 11% less than the water use in 2014 and 13% less than the water use in 2013.

Table 6:4-1 SSCSD: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
	Additional Description	Level of Treatment When Delivered	Volume
Other	Residential	Drinking Water	292
Commercial		Drinking Water	18
Losses		Drinking Water	111
TOTAL			421
NOTES:			

Table 6:4-2 includes projections of SSCSD's water demands for the years 2020 through 2035 in five year increments. Projections for future water use are based on historic deliveries and the projected population growth from **Table 6:3-1**.

Table 6:4-2 SSCSD: Demands for Potable and Raw Water - Projected					
Use Type	Additional Description	Projected Water Use			
		2020	2025	2030	2035
Other	Residential and Commercial	508	534	561	590
TOTAL		**508**	**534**	**561**	**590**
NOTES: Projected water usage based on population projections and average 2011-2015 water use of 155 gpcd.					

Table 6:4-3 summarizes SSCSD's total water demands from **Tables 6:4-1 and 6:4-2**.

Table 6:4-3 SSCSD: Total Water Demands					
Description	2015	2020	2025	2030	2035
Potable and Raw Water *From Tables 6:4-1 and 6:4-2*	421	508	534	561	590
Recycled Water Demand *From Table 6:6-4*	0	20	20	20	20
TOTAL WATER DEMAND	**421**	**528**	**554**	**581**	**610**
NOTES:					

6.03.2 Distribution System Water Losses

Law

Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:. . . (J) Distribution system water loss. (10631(e)(1) and (2)).

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.

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 (10631(e)(3)).

Table 6:4-4 includes the results of SSCSD's water system audit for 2015. The audit was completed according to Appendix L of the Guidebook using the AWWA's Water Audit Software. A copy of the SSCSD's water audit reporting worksheet is included in **Appendix H**.

Table 6:4-4 SSCSD: 12 Month Water Loss Audit Reporting

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2015	105.74
NOTES: Water loss from AWWA Water Audit Reporting Worksheet (see Appendix H)	

6.03.3 Water Use for Lower Income Households/Future Water Savings

Law

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 (10631.1(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 (10631 (e)(4)(A)).

. . . Water use projections that do not account for these water savings shall be noted of that fact (10631 (e)(4)(B)).

The projection for affordable residential housing needs (combined low income and very low income) was estimated to be 38% of the total Residential Housing Needs Allocation for the City of Tehachapi in the 2014 Regional Transportation Plan prepared by Kern COG. Therefore, due to its proximity to the City of Tehachapi, low income housing water use needs for single-family and multifamily residential uses within the SSCSD are estimated to be 38% of its total residential water use.

The water use projections for the SSCSD do not account for water savings from codes, standards, ordinances, or transportation and land use plans. See **Table 6:4-5.**

Table 6:4-5 SSCSD: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections?	No
Are Lower Income Residential Demands Included In Projections?	Yes
NOTES:	

6.03.4 Climate Change

See **Section 2.03.3**.

6.04 Baselines and Targets

6.04.1 Updating Calculations from 2010 UWMP

Law

An urban retail water supplier shall include in its urban water management plan due in 2010 . . .the baseline daily per capita water use . . . along with the bases for determining those estimates, including references to supporting data (10608.20(e)).

An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan (10608.20(g)).

The same target method is proposed for use in this RUWMP Update that was used for the 2010 Plan. This section summarizes the calculations for the SSCSD. The calculations for the Regional Alliance are described in **Section 2.04**. The SB X7-7 verification form tables for the Regional Alliance and the SSCSD are included in **Appendix G.**

6.04.2 Baseline Periods

Law

"Base daily per capita water use" means any of the following:

13) 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.
14) For an urban retail supplier that meets at least 10 percent of its 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.

15) *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 reporting period ending no earlier than December 31, 2007, and no later than December 31, 2010 (10608.12(b)).*

The SSCSD will utilize the same baseline period (2000 – 2009) as used in the 2010 RUWMP as shown in its **SB X7-7 Table 1**.

6.04.3 Service Area Population

Law

When calculating per capita values for the purposes of this chapter, an urban water retailer shall determine population using federal, state, and local population reports and projections (10608.20(f)).

The SSCSD population estimates were developed based on the persons per connection method and census data for 2000 and 2010 for the Stallion Springs CDP. Population per connection was calculated at 2.1 based on 2000 and 2010 census data per the 2010 RUWMP. Population estimates for the SSCSD are shown in its **SB X7-7 Table 3**.

6.04.4 Gross Water Use

Law

"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:

17) *Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier*
18) *The net volume of water that the urban retail water supplier places into lon term storage*
19) *The volume of water the urban retail water supplier conveys for use by another urban water supplier*
20) *The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24 (10608.12(g)).*

SSCSD's gross water use as shown in its **SB X7-7 Table 4** consists of its groundwater well production.

6.04.5 Baseline Daily Per Capita Water Use

SSCSD's baseline daily per capita water use (calculated by dividing the gross water use by the service area population) is shown for each of the baseline years in its **SB X7-7 Table 5**.

6.04.6 2015 and 2020 Targets

The 2020 Target for the SSCSD was calculated using Target Method 3 (95% of the Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010) as shown in its **SB X7-7 Table 7E**. The confirmation of the 2020 Target is shown in its **SB X7-7 Table 7F**. By law, the maximum 2020 target is 95% of an agency's 5-year baseline water usage. Stallion Springs CSD as an individual agency has a 5-year baseline water use of 169 GPCD. This results in a 2020 water use target of 160 gpcd for the SSCSD. The baseline and target information for SSCSD is summarized in **Table 6:5-1**.

Table 3:5-1 Baselines and Targets Summary
Stallion Springs CSD

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*2000*	*2009*	*176*	*168*	*160*
5 Year	*2005*	*2009*	*169*		
*All values are in Gallons per Capita per Day (GPCD)					
NOTES: See SSCSD SB X7-7 Tables in Appendix G.					

6.04.7 2015 Compliance Daily per Capita Water Use (GPCD)

Law

> *"Compliance daily per capita water use" means the gross water use during the final year of the reporting period (10608.12(e)).*
>
> *Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015 (10608.24(a)*

SSCSD is in compliance with the 2015 Interim Target as shown in **Table 6:5-2.** SSCSD has also achieved compliance with the 2020 Target. SSCSD's daily per capita water use for 2015 (135 gpcd) is a reduction of 23% from its average per capita water usage for the 2000 to 2009 baseline period (176 gpcd), and is 16% lower than its 2020 Target (160 gpcd).

Table 6:5-2: 2015 Compliance
*Stallion Springs CSD**

Actual 2015 GPCD	2015 Interim Target GPCD	Did Supplier Achieve Targeted Reduction for 2015? Y/N
135	168	Yes
**All values are in Gallons per Capita per Day (GPCD)*		
NOTES: See SSCSD SB X7-7 Tables in Appendix G.		

6.05 System Supplies

6.05.1 Purchased or Imported Water

The SSCSD purchases imported SWP water from TCCWD to meet demands in excess of its groundwater supplies. SWP purchases are delivered to the SSCSD through groundwater recharge.

Deliveries of imported SWP water for 2015 are included in **Table 6:6-8** in **Section 6.05.9**. Projections of future SWP purchases are included in **Table 6:6-9** in **Section 6.05.9**. TCCWD's imported SWP supply is described in **Section 2.05.1**.

6.05.2 Groundwater

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:

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 (10631(b)(1)).

A description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).

For those basins for which 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 (10631(b)(2)).

A description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree (10631(b)(2)).

For basins that have not been adjudicated, (provide) 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 (10631(b)(2)).

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 (10631(b)(3)).

The Stallion Springs CSD pumps groundwater from the adjudicated Cummings Basin and from areas outside of the adjudicated groundwater basin within the Stallion Springs community.

SSCSD purchases surface water from TCCWD that is recharged within the Cummings Basin. This water is recovered from wells within the Cummings Basin and delivered to the SSCSD service area. The TCCWD serves as watermaster and oversees programs to manage groundwater supplies within the Cummings Basin. The Cummings Basin has been in overdraft since 2002. The SSCSD is working with the TCCWD to develop and implement mitigation measures to correct this overdraft. More information on the Cummings Basin is included in **Section 2.05.2**.

SSCSD's groundwater supply is obtained through seven production wells, four of which are located in the Cummings Basin. Additional water supplies to meet future growth will come from expansion of the Cummings Basin conjunctive use operations.

SSCSD's groundwater pumping for the last five years is included in **Table 6:6-1.**

Table 6:6-1 SSCSD: Groundwater Volume Pumped						
Groundwater Type	Location or Basin Name	2011	2012	2013	2014	2015
Alluvial Basin	Cummings Basin	451	417	424	433	370
Alluvial Basin	Outside of adjudicated Cummings Basin	21	99	40	20	51
TOTAL		472	516	464	453	421
NOTES: Includes recovery of previously banked SWP supplies.						

6.05.3 Surface Water

SSCSD does not utilize surface water as a source of its urban water supply.

6.05.4 Stormwater

SSCSD does not utilize stormwater as a source of its urban water supply.

6.05.5 Wastewater and Recycled Water

Law

> *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. (16033)*

SSCSD collects and treats wastewater from within its service area. Disinfected secondary treated effluent is discharged to Chanac Creek and is regulated by a NPDES permit. This method of wastewater disposal is expected to continue in the near future. However, the SSCSD is evaluating options for upgrading the WWTP to tertiary treatment with the goal of utilizing the recycled water for golf course irrigation. This work is in the preliminary stage.

The wastewater collected within the SSCSD service area for 2015 is summarized in **Table 6:6-2.** Wastewater treatment and discharge within the SSCSD service area for 2015 is summarized in **Table 6:6-3**. The estimated future use of recycled water for golf course irrigation is summarized in **Tables 6:6-4 and 6:6-6**. **Table 6:6-5** is not included in this report since no recycled water use for the SSCSD in 2015 was projected in the 2010 RUWMP.

Table 6:6-2 SSCSD: Wastewater Collected Within Service Area in 2015						
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?
The Stallion Springs CSD	Estimated	21	Stallion Springs CSD	Stallion Springs WWTF	Yes	No
Total Wastewater Collected from Service Area in 2015:		21				
NOTES:						

Table 6:6-3 SSCSD: Wastewater Treatment and Discharge Within Service Area in 2015						
Wastewater Treatment Plant Name	Method of Disposal	Treatment Level	2015 volumes			
			Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area
Stallion Springs WWTF	Chanac Creek outfall	Secondary, Disinfected - 23	21	21		
Total			21	21	15	0
NOTES:						

Table 6:6-4 SSCSD: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area						
Name of Agency Producing (Treating) the Recycled Water:	Stallion Springs CSD					
Name of Agency Operating the Recycled Water Distribution System:	Stallion Springs CSD					
Supplemental Water Added in 2015	None					
Beneficial Use Type	Level of Treatment	2015	2020	2025	2030	2035
Golf course irrigation	Tertiary	0	20	20	20	20
Total:		0	20	20	20	20
NOTES: SSCSD is currently developing a scope of work for tertiary effluent upgrades to the WWTF. It is unknown at this time how much treated effluent would be utilized by the golf course.						

Table 6:6-6 SSCSD: Methods to Expand Future Recycled Water Use		
Name of Action/Description	Planned Implementation Year	Expected Increase in Recycled Water Use
Upgrade plant to tertiary and send effluent to golf course	3-5 years	20
Total		20
NOTES: Golf course irrigation requirements are estimated.		

6.05.6 Desalinated Water Opportunities

Law

> *Describe the opportunities for development of desalinated water, including but not limited to ocean water, brackish water, and groundwater, as a long-term supply. (10631(h))*

Stallion Springs CSD has no plans for the development of desalinated water supplies within the planning horizon of this RUWMP. Desalination is not a cost-effective solution for the water supply needs of the GTA due to the water resource opportunities that are available at a much lower cost.

6.05.7 Exchanges and Transfers

Law

> *Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis. (10631(d))*

The SSCSD cannot transfer or exchange its groundwater supplies. Discussion of transfer opportunities on a regional basis is included in **Section 2.05.7**.

6.05.8 Future Water Projects

Law

> *(Describe) 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, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), 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 (10631(g)).*

SSCSD will develop and implement future water projects as necessary to maintain its groundwater supplies to meet its customers' potable water demands. Discussion of future regional water projects for the GTA is included in **Section 2.05.8**.

6.05.9 Summary of Existing and Planned Sources of Water

Law

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) (10631(b)).

(Provide) 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 (10631(b)(4)).

SSCSD's existing and planned sources of water are summarized in **Tables 6:6-8 and 6:6-9**. Water demands for lands overlying the Cummings Basin are estimated to be 40% of the overall water demands. These lands will be served by groundwater from the Cummings Basin. Projections for future purchases of SWP supplies are estimated to meet the remaining water demands.

Table 6:6-8 SSCSD: Water Supplies — Actual

Water Supply Description	Additional Detail on Water Supply	2015	
		Actual Volume	Water Quality
Groundwater	From District Wells	183	Drinking Water
Purchased or Imported Water	Conjunctive use[1]	238	Raw Water
Total		**421**	

NOTES:
1. From TCCWD BWRA Summary.

Table 6:6-9 SSCSD: Water Supplies — Projected

Water Supply Description	Additional Detail on Water Supply	**Projected Water Supply** *Reasonably Available Volume*			
		2020	**2025**	**2030**	**2035**
Groundwater	Service to overlying lands[1]	203	214	224	236
Purchased or Imported Water	Purchased SWP supplies[2]	305	320	337	354
Recycled Water	Golf course irrigation	20	20	20	20
	Total	528	554	581	610

NOTES:
1. Groundwater service to overlying lands in the Cummings Basin estimated as 40% of overall water demands.
2. Purchased SWP supplies are estimated to meet remaining water demands.

6.06 Water Supply Reliability Assessment

6.06.1 Constraints on Water Sources

Law

> *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 (10631(c)(2)).*
>
> *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 (10634).*

Due to the ongoing management of its groundwater supplies, the SSCSD anticipates that they would be available at a consistent level of use during the planning horizon of this Plan.

6.06.2 Reliability by Type of Year

Law

> *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 (10631(c)(1)).*

The SSCSD relies on groundwater pumping to meet the demands of its customers, which includes recovery of previously recharged SWP supplies from the Cummings Basin. The SSCSD anticipates that with groundwater management measures implemented by the watermaster, the safe yield and water quality of the Cummings Basin will remain at close to current conditions for the next twenty years and beyond. The reliability of SWP supplies is discussed in **Section 2:06.2**. With average SWP deliveries at 60% long-term, the SSCSD anticipates that sufficient supplies will be reasonably available for purchase from the TCCWD as needed by the SSCSD.

The SSCSD currently purchases water supplies from the TCCWD in dry years. Starting in 2017, the SSCSD will begin accumulating banked supplies for use in dry years. The SSCSD will purchase additional water supplies from the TCCWD when available and develop a Banked Water Reserve Account (BWRA) equal to, at a minimum, five times the annual average of the SSCSD's SWP water demand over the previous five years. It is anticipated that water supplies through the BWRA will be available for recovery by the SSCSD during the single dry year and multiple dry years scenarios.

The reliability of SSCSD's groundwater supplies for the various water year types are summarized in **Table 6:7-1**.

Table 6:7-1 SSCSD: Basis of Water Year Data		
Year Type	Base Year	Available Supplies if Year Type Repeats
		% of Average Supply
Average Year	Base Year	100%
Single-Dry Year	2014	100%
Multiple-Dry Years 1st Year	2013	100%
Multiple-Dry Years 2nd Year	2014	100%
Multiple-Dry Years 3rd Year	2015	100%
NOTES: The SSCSD pumps groundwater to meet its demands. Imported SWP supplies are purchased and recharged for use by areas of the SSCSD located outside of the Cummings Basin. It is anticipated that 100% of the average groundwater supplies will be available in every year.		

6.06.3 Supply and Demand Assessment

Law

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 (10632(c)).

The comparison of SSCSD's supply and demand projections for the normal year, single dry year and multiple dry year scenarios are shown in **Tables 6:7-2, 6:7-3, and 6:7-4** respectively.

Table 6:7-2 SSCSD: Normal Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals *(from Table 6:6-9)*	528	554	581	610
Demand totals *(from Table 6:4-3)*	528	554	581	610
Difference	0	0	0	0
NOTES:				

Table 6:7-3 SSCSD: Single Dry Year Supply and Demand Comparison				
Description	2020	2025	2030	2035
Supply totals	528	554	581	610
Demand totals	528	554	581	610
Difference	0	0	0	0
NOTES:				

Table 6:7-4 SSCSD: Multiple Dry Years Supply and Demand Comparison					
Description		2020	2025	2030	2035
First year	Supply totals	528	554	581	610
	Demand totals	528	554	581	610
	Difference	0	0	0	0
Second year	Supply totals	528	554	581	610
	Demand totals	528	554	581	610
	Difference	0	0	0	0
Third year	Supply totals	528	554	581	610
	Demand totals	528	554	581	610
	Difference	0	0	0	0
NOTES:					

6.06.4 Regional Water Supply Reliability

Law

> *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 (10620(f)).*

The urban water suppliers in the Greater Tehachapi area have been working together for many years to manage available water supplies on a regional basis. The Water Availability Preservation Committee meets on a regular basis to plan for and manage available water supplies. More details regarding these efforts are included in other sections of the Plan.

6.07 Water Shortage Contingency Planning

6.07.1 Stages of Action

Law

> *The plans 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:*
>
> *Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50% reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10631(a)(1))*

The SSCSD Water Shortage Contingency Plan is included in **Appendix F**. Water shortage regulations have been adopted in order to reduce consumption and reserve a sufficient supply of water for public health and safety. SSCSD staff is also investigating more aggressive measures to encourage water conservation.

The SSCSD's Water Shortage Contingency Plan includes protocols to respond to long term and short term water shortages and authorizes the Board to select the most appropriate level of conservation measures based on then current conditions. The Board shall conduct duly noticed public meetings to inform water customers of any change in the level of water conservation needed to meet the limited water supply and measures needed to meet those limitations.

The water shortage regulations include four stages of implementation. Conservation measures gradually increase with each stage. Emergency response stage actions become effective when the Stallion Springs CSD Board of Directors declares that the District is unable to provide sufficient water supply to meet ordinary demands, to the extent that insufficient supplies would be available for human consumption, sanitation and/or fire protection.

The General Manager will monitor the District's projected supply and demand for water on a daily basis and determine the extent of the conservation required through the implementation or termination of stages one, two, three and four conditions. The declaration of a stage condition shall be made by public announcements, posting of notices in three (3) locations accessible to the public and publication of the notice in the "Tehachapi News" and on the District website. The stage designated shall become effective immediately upon announcement. The declaration of any stage condition shall be reported to the Board at its next meeting. The Board shall then ratify the declaration, rescind the declaration or direct the declaration of a different stage.

The stages of action from SSCSD's Water Shortage Contingency Plan are summarized in **Table 6:8-1**.

Table 6:8-1 SSCSD Stages of Water Shortage Contingency Plan		
Stage	Percent Supply Reduction[1]	Water Supply Condition
Stage 1	10%	This condition exists when the District determines that it may not be able to meet ninety-percent (90%) or more of the projected water demands of its customers, either now or within six (6) months, and that water use should be reduced by not less than ten percent (10%).
Stage 2	20%	This condition exists when the District determines that it may not be able to meet eighty-percent (80%) or more of the projected water demands of its customers, either now or within six (6) months, and that water use should be reduced by not less than twenty percent (20%).
Stage 3	30%	A Stage three condition applies during periods when the District determines that it may not be able to meet seventy-percent (70%) or more of the projected water demands of its customers now or within six (6) months, and that a reduction of not less than thirty percent (30%) in potable water use is required to meet minimal demands of all its customers.
Stage 4	50%	A Stage four condition applies during periods when the District determines that is may not be able to meet fifty-percent (50%) or more of the projected water demands of its customers now or within six (6) months, and that a reduction of not less than fifty percent (50%) in potable water use is required to meet minimal demands of all its customers.
[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		
NOTES:		

6.07.2 Prohibitions on End Users/Consumption Reduction Methods

Law

> *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 (10632(a)(4)).*
>
> *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 (10632(a)(5)).*

The prohibitions on end users for the various stages of the SSCSD's Water Shortage Contingency Plan are summarized in **Table 6:8-2**. Consumption Reduction Methods are summarized in **Table 6:8-3**.

Table 6:8-2 SSCSD: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
1	Other	Preventing excessive water from flowing off property served onto adjacent properties, sidewalks, gutters, surface drains, storm drains or over land.	No
1	Landscape - Other landscape restriction or prohibition	Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or runoff.	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Immediate repair of all observable leaks of water on the customer's premises.	No
1	Other - Prohibit use of potable water for washing hard surfaces	Use of broom or blower instead of a hose to clean driveways and paved surfaces. Use of water in cleaning of driveways and other paved surfaces only when necessary to alleviate immediate fire or un-sanitation hazards.	No
1	Other	Being careful not to leave hose running while washing a vehicle.	No
1	Other	Use of low flow shower heads and shortening the time spent in the shower.	No
1	Other	Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or waste bucket	No
1	Other	Reduction in water consumption for bathing, hand washing and irrigation by reduction of flow time for these devices.	No
1	Other	Running only full loads in the washing machine and dishwasher.	No
1	Other	Capturing cold tap water while waiting for tap water to come down the pipes, to be used later on house plants or garden.	No
1	Other	Serving water to customers at any and all restaurants within the service area is only upon specific request.	No
2	Other	All Stage 1 conditions apply	No

Table 6:8-2 (Continued) SSCSD: Restrictions and Prohibitions on End Uses			
Stage	Restrictions and Prohibitions on End Users	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
2	Landscape - Limit landscape irrigation to specific times	Lawn watering and landscape irrigation is only permitted Monday Through Saturday between (5:00) P.M. and (8:00) A.M. local time. However, this watering is permitted at any time on these days if a handheld hose is used, equipped with a nozzle that automatically shuts of when released, or when handheld container or a drip irrigation system is used.	No
2	Landscape - Limit landscape irrigation to specific days	Lawn Watering and landscape irrigation is prohibited on Sundays.	No
2	Other - Prohibit use of potable water for construction and dust control	Construction water for grading and compacting maybe used at any time provided the water is from a source other than the District potable water system.	No
2	Other	Potable metered water may be used for other construction between seven o'clock (7:00) A.M. and five o'clock (5:00) P.M., local time.	No
2	Other	Washing of vehicles or other equipment is permitted only if done using a handheld bucket or a handheld hose equipped with a nozzle that automatically shuts off when released.	No
3	Other	All Stage 1 and 2 conditions apply	No
3	Other	All high volume users (defined as over 8,000 cubic feet on a bi-monthly basis) shall submit to the District water curtailment plans for at least thirty percent (30%) overall reduction in water use within 10 (10) days of notice by the District of the declaration of a stage three condition.	No
4	Other	All Stage 1, 2, and 3 conditions apply	No
4	Other	Remaining water supplies must be allocated to preserve human health and environment integrity. All customers are only permitted to use water at the minimum required for public health and protection. Firefighting is the only allowable outdoor water use.	No
NOTES:			

Table 6:8-3 SSCSD: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier	Additional Explanation or Reference
All Stages	Expand Public Information Campaign	Board shall conduct duly noticed public meetings to inform water customers. Declaration of stage condition shall be publicized in the "Tehachapi News" and SSCSD Website
NOTES:		

6.07.3 Penalties, Charges, and Other Enforcement of Prohibitions

Law

Penalties or charges for excessive use, where applicable 10632(a)(6).

The SSCSD's Water Shortage Contingency Plan allows for the imposition of penalties as follows:

> "The Board of Directors shall consider an ordinance consistent with this policy which provides for enforcement authority, legal remedies, including fines, penalties and/or termination of water service, and an appeal procedure."

6.07.4 Determining Water Shortage Reductions

Law

A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis 10632(a)(9).

The SSCSD's deliveries are entirely metered. The meter readings will be used to monitor the actual reductions in water usage in accordance with the water shortage contingency plan.

6.07.5 Revenue and Expenditure Impacts

Law

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 (10632(7)).

The SSCSD reviews its revenues and expenditures on an annual basis and evaluates the need to increase water rates in order to provide adequate revenues in times of water shortages. If necessary, the SSCSD may utilize reserves to address decreased water sales during a water shortage.

6.07.6 Resolution or Ordinance

Law

> *A draft water shortage contingency resolution or ordinance (10632(8)).*

The SSCSD's adopted water shortage contingency plan is included in **Appendix F**.

6.07.7 Catastrophic Supply Interruption

Law

> *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 (10632(a)(3)).*

SSCSD has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply. The water shortage regulations would be used to reduce consumption after a catastrophic supply interruption until more stringent methods such as strict water rationing could be put in place.

The emergency activities that are undertaken by SSCSD depend upon the severity of the problem and how quickly the problem can be remedied. Possible catastrophes affecting water supply may include:

- Widespread Power Outage
- Local Earthquake, Landslide, or Flash Flood
- Aqueduct Failure (due to earthquake or other circumstances)
- Delta Levee Failure

In the event of power loss, SSCSD has emergency power generation equipment that can be used to maintain water operations. In the event of an earthquake or other disaster, SSCSD personnel will survey and assess damage and respond accordingly with repairs. Work will be scheduled to minimize the impacts to potable water system customers.

Failure of the Aqueduct or Delta levees is discussed in **Section 2.07.6**

6.07.8 Minimum Supply Next Three Years

Law

> *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 (10632(a)(2)).*

The SSCSD's minimum supply for the next three years is assumed to be the same as its 2015 supply as shown in **Table 6:8-4**.

Table 6:8-4 SSCSD: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply	421	421	421
NOTES: Minimum supply is assumed to be the same as utilized in 2015.			

6.08 Demand Management Measures

Law

. . .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 (10631(f)(1)(A)).

The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

- *xxii. Water waste prevention ordinances*
- *xxiii. Metering*
- *xxiv. Conservation pricing*
- *xxv. Public education and outreach*
- *xxvi. Programs to assess and manage distribution system real loss*
- *xxvii. Water conservation program coordination and staffing support*
- *xxviii. 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.*

6.08.1 Water Waste Prevention Ordinances

Wasting water within the Stallion Springs CSD is prohibited by ordinance. In addition, the SSCSD provides information to all property owners and renters regarding the design, installation, and maintenance of water efficient landscapes and the use of drought resistant plants and efficient irrigation systems.

6.08.2 Metering

SSCSD charges all customers based on metered readings and established rate schedules. All current and new connections including temporary connections are required to be metered and billed per volume of use. Existing meters are checked on a regular basis for leakage and accuracy.

6.08.3 Conservation Pricing

SSCSD's rate schedule includes a monthly service charge and a tiered structure for water volume charges with rates that increase with the volume of water used.

6.08.4 Public Education and Outreach

The TCCWD provides Public Education and Outreach on a regional basis for all of the participating retail urban water suppliers. See **Section 2.08.4** for a description of these efforts. SSCSD includes water conservation tips and articles in its quarterly newsletter and on its website www.mysscsd.com. Water conservation messages have also been posted by the SSCSD on community bulletin boards.

6.08.5 Programs to Assess and Manage Distribution System Real Loss

The SSCSD monitors pumping rates and water sales to identify average system water loss. Unusual water loss is investigated for possible leakage. SSCSD field personnel have the necessary equipment to locate and repair leaks in a timely manner. Customer water usage is also recorded and monitored in order to identify anomalies in water sales and usage that may be attributable to leakage or waste.

6.08.6 Water Conservation Program Coordination and Staffing Support

The TCCWD provides water conservation program coordination and staffing support for all of the participating retail urban water suppliers. See **Section 2.08.6**.

6.08.7 Other Demand Management Measures

The SSCSD's demand management measures are discussed in other sections of the Plan.

6.08.8 Implementation over the Past Five Years

Law

> *(Provide) a narrative description of that addresses the nature and extent of each water demand management measure implemented over the past five years (10631(f)(1)(A)).*

See **Section 2.08** for narrative descriptions of the nature and extent of the demand management measures implemented by the TCCWD on behalf of the participating agencies over the past five years.

6.08.9 Planned Implementation to Achieve Water Use Targets

Law

> *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 (10631(f)(1)(A)).*

Although the SSCSD has achieved its water use reduction targets it will continue to implement its existing DMMs and look for ways to use water more efficiently.

6.08.10 Members of the California Urban Water Conservation Council

Law

> *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 (10631(i)).*

SSCSD is not currently a member of the California Urban Water Conservation Council (CUWCC).

6.09 Plan Adoption, Submittal and Implementation

6.09.1 Public Notice

Law

> *Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to 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 (10621(b)).

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 (10642).

The efforts SSCSD has taken to involve appropriate agencies and the general public in the planning process are summarized below. The City of Tehachapi is a participant in this RUWMP. No separate notice was provided to the City. Copies of notices are included in **Appendix A**.

For the 2015 Plan update, the public hearing was held on June 8, 2016. Accordingly, notice was provided as follows:

- Notice to County on February 24, 2016 (at least 60 days prior to hearing),
- Letter to Interested Parties (see **Section 2.02**) on May 18, 2016,
- Notice in local newspaper on May 18, 2016 and May 25, 2016 (per Gov. Code 6066 – 2 weeks in advance of hearing),
- Posted Draft 2015 RUWMP at SSCSD Office on May 18, 2016 (2 weeks prior to hearing), and
- Drafts of the plan were provided to the entities that requested such drafts.

6.09.2 Plan Adoption, Submittal, and Implementation

Law

After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642).

An urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016 (10621(d)).

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 (10635(b)).

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 (10644(a)(1).

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. (10645).

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) (10621(c)).

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 (10644(a)(1)).

The 2015 RUWMP update plan was adopted by the SSCSD at the Regular Meeting of the Board of Directors on June 21, 2016. A public hearing on the update of the Regional Urban Water Management Plan was held on June 21, 2016. The intent of the Public Hearing was to gather input from the public that is served by SSCSD as well as other interested entities. Written and verbal comments received during the public hearing process have been addressed as appropriate in the final Plan. A copy of the resolution adopting the 2015 RUWMP update is included in **Appendix B**.

The Plan will be submitted to the California Department of Water Resources, the California State Library, and the County no later than July 1, 2016 which is within 30 days of adoption by the SSCSD on June 21, 2016.

Commencing no later than July 1, 2016, the SSCSD will have a copy of the 2015 RUWMP available for public review at the SSCSD Office (see address below) during normal business hours.

Stallion Springs CSD
27800 Stallion Springs Drive
Tehachapi, CA 93561

The 2015 RUWMP will also be posted on the SSCSD's website at www.mysscsd.com.

Appendix A

Notices

Agenda

Letter Agreement

Between and Among the Tehachapi-Cummings County Water District, Bear Valley Community Services District, Golden Hills Community Services District, City of Tehachapi and Stallion Springs Community Services District For Establishing a Regional Alliance to Comply with SB X7-7, the Water Conservation Act of 2009

Recitals

1. The Water Conservation Act of 2009 (SB X7-7; Water Code Sections 10608 et seq.) set a goal of achieving a 20% reduction in statewide urban per capita water use by the year 2020 and requires urban water retailers to set a 2020 urban per capita water use target (Water Code Sections 10608.20 et seq.). SB X7-7 provides that urban water retailers may plan, comply and report on a regional basis, individual basis, or both. The parties hereto are voluntarily addressing such requirements as part of the update of their Urban Water Management Plan being undertaken pursuant to the Urban Water Management Planning Act (Water Code Sections 10610 et seq), although they do not presently meet the requirements of an "urban water supplier" under such acts.

2. The Parties to this Letter Agreement (Tehachapi-Cummings County Water District, Bear Valley Community Services District, Golden Hills Community Services District, City of Tehachapi and Stallion Springs Community Services District) are eligible to form a "Regional Alliance" pursuant to the *California Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (DWR Methodologies) because the Parties are located in the same hydrologic region, the Tulare Lake Hydrologic Region. The Parties are also participating and developing a Regional Urban Water Management Plan wish to establish a Regional Alliance for purposes of complying with SB X7-7.

Agreement for the Regional Alliance Formation, Target Calculation, and Reporting

Section 1. Regional Alliance Formation and Target Calculation

The Parties hereby form a Regional Alliance and agree to inform DWR, prior to July 1, 2011, that a Regional Alliance has been formed, pursuant to the DWR Methodologies, The Parties agree that the Regional Alliance Target will be calculated using Option 1 (as described in DWR Methodology 9). The Parties will include the Regional Alliance Target in the Regional 2010 Urban Water Management Plan.

Section 2. Regional Alliance Review

The Parties agree to review and re-calculate the Regional Alliance and Regional Alliance Target, no later than December 31, 2015, in preparation of their respective 2015 Urban Water Management Plans.

Section 3. Regional Alliance Reporting

The Parties agree to prepare and submit Regional Alliance Reports pursuant to the DWR Methodologies, including, but not limited to, the following information:

- Baseline Gross Water Use and Service Area Population,
- 2015 and 2020 Water Use Targets (Individual and Regional),

- Compliance Year Gross Water Use and Service Area Population, and
- Adjustments to Gross Water Use in Compliance Year

Section 4. Regional Water Supply Planning

The Parties agree to participate in discussions regarding regional water supply planning.

Section 5. Regional Alliance Dissolution

The Parties agree that each Party can withdraw from the Regional Alliance at any time without penalty by giving written notice to all other Parties. If a Party withdraws from the Regional Alliance, the Parties agree that the Regional Target will be recalculated among remaining participating Parties as set forth in the DWR Methodologies.

Section 6. Miscellaneous

(a) This Letter Agreement shall be between and among those Parties that have executed this Letter Agreement by June 30, 2011. If all Parties have not executed this Letter Agreement by said date, the Parties who have executed this Letter Agreement by June 30, 2011, agree that the Regional Target will be recalculated among participating Parties as set forth in the DWR Methodologies.

(b) As noted above the parties hereto are not currently required to prepare or submit an Urban Water Management Plan nor comply with SB X7-7 and are voluntarily doing so as good stewards of their water resources, and therefore at the present time have no obligation to meet such requirements except to the extent their respective governing bodies elect to do so. By enter into this Letter Agreement and acting in concert to update their Urban Water Management Plan in a manner consistent with SB X7-7 the parties do not forgo any of their respective rights under applicable law.

Section 7. Letter Agreement Authorization

This Letter Agreement may be signed in counterparts. By signing below, each signatory states that he or she is authorized to sign this Letter Agreement on behalf of the Party for which he or she is signing.

Ed Grimes 6/21/11	John Martin 6/13/11
Signature Date	Signature Date
Ed Grimes	JOHN MARTIN
Print Name City of Tehachapi	Print Name Tehachapi-Cummings CWD
[illegible] 6/22/11	Kathleen Cassil June 9, 2011
Signature Date	Signature Date
ROB NORTHCUTT	Kathleen Cassil
Print Name Bear Valley CSD	Print Name Golden Hills CSD

Sandra K Young 6-21-2011
Signature Date

SANDRA K. YOUNG
Print Name Stallion Springs CSD

Agenda

AECOM

AECOM
5001 E. Commercenter Drive
Suite 100
Bakersfield, CA 93309
www.aecom.com

661 283-2323 tel
661 395 0359 fax

February 24, 2016

Ms. Lorelei Oviatt
Kern County Planning Department
2700 M Street, Suite 100
Bakersfield, CA 93301-2370

Notice of Preparation of 2015 Update to the Tehachapi Regional Urban Water Management Plan

Dear Ms. Oviatt,

In accordance with the California Water Code Sections 10620 and 10621, you are being notified that the members of the Tehachapi Water Availability Preservation Committee (Tehachapi Cummings County Water Disctrict, Bear Valley CSD, City of Tehachapi, Golden Hills CSD, and Stallion Springs CSD) are reviewing their Regional Urban Water Management Plan and considering amendments or changes to the Plan. AECOM is under contract to prepare the 2015 RUWMP Update on behalf of the committee. If you would like to provide comments during this process, please let us know.

Sincerely,

Monique Roberts

Monique Roberts, PE
Project Manager

cc. John Martin, TCCWD
David Edmonds, BVCSD
Jon Curry, City of Tehachapi
Bill Fisher, GHCSD
Lori Rodgers, SSCSD

Agenda

AECOM

AECOM
5001 E. Commercenter Drive
Suite 100
Bakersfield, CA 93309
www.aecom.com

661 283-2323 tel
661 395 0359 fax

May 18, 2016

Ms. Lorelei Oviatt
Kern County Planning Department
2700 M Street, Suite 100
Bakersfield, CA 93301-2370

Notice of Public Hearing on the 2015 Update to the Tehachapi Regional Urban Water Management Plan (RUWMP)

Dear Ms. Oviatt,

In accordance with the California Water Code Section 10642, you are being notified on behalf of the members of the Tehachapi Water Availability Preservation Committee (Tehachapi Cummings County Water Disctrict, Bear Valley CSD, City of Tehachapi, Golden Hills CSD, and Stallion Springs CSD) that a Draft of the 2015 RUWMP Update has been prepared. A public workshop on the 2015 RUWMP has been scheduled for Wednesday, June 8, 2016 at 6:00 p.m., at the office of the Golden Hills Community Services District, 21415 Reeves Street, Tehachapi, California, 93581.

Please let us know if you would like a copy of the Draft 2015 RUWMP or if you would like to provide any comments on the Plan.

Sincerely,

Monique Roberts

Monique Roberts, PE
Project Manager

cc. John Martin, TCCWD
David Edmonds, BVCSD
Jon Curry, City of Tehachapi
Bill Fisher, GHCSD
Lori Rodgers, SSCSD

Agenda

NOTICE OF PUBLIC WORKSHOP
TEHACHAPI WATER AVAILABILITY PRESERVATION COMMITTEE

NOTICE is hereby given that a Public Workshop will be held by the Tehachapi Water Availability Preservation Committee on Wednesday, June 8, 2016 at 6:00 p.m., at the office of the Golden Hills Community Services District, 21415 Reeves Street, Tehachapi, California, 93581 to consider the following:

The Tehachapi Water Availability Preservation Committee, consisting of five local public agencies within the Greater Tehachapi Area – the Tehachapi-Cummings County Water District, the Bear Valley Community Services District, the City of Tehachapi, the Golden Hills Community Services District, and the Stallion Springs Community Services District – has prepared a 2015 Regional Urban Water Management Plan (2015 RUWMP), in compliance with the Urban Water Management Planning Act. The 2015 RUWMP is an update to the 2010 RUWMP that was adopted by each participating agency. A Draft copy of the 2015 RUWMP is available for public review at the Office of each participating agency.

Publication dates: May 18 and May 25, 2016

Appendix B

Resolutions Adopting 2015 UWMP Update

To be included in Final Plan

Appendix C

Climate Change Vulnerability Assessment
Tulare Lake Basin Portion of Kern County Integrated Regional Water Management Plan (Kern IRWMP)

Kennedy/Jenks Consultants
Engineers & Scientists
2775 North Ventura Road, Suite 100
Oxnard, California 93036
805-973-5700
FAX: 805-973-1440

8 September 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Financial Assistance Branch – Attn: Ted Daum
Post Office Box 942836
Sacramento, CA 94236-0001

Subject: Climate Change and Vulnerability Assessment submission as an addendum to the Tulare Lake Basin Portion of Kern County Integrated Regional Water Management Plan (Kern IRWMP)

Dear Mr. Daum:

Enclosed please find the Climate Change and Vulnerability Assessment submission as an addendum to the Tulare Lake Basin Portion of Kern County Integrated Regional Water Management Plan (Kern IRWMP). It is being submitted as a result of the June 6, 2014 IRWM Plan Review Process recommendations prepared by DWR. Members of the Kern IRWMP Executive Committee discussed the results of the Plan Review Process with you during a conference call on July 7, 2014, when it was determined that the Climate Change Standard and Vulnerability Assessment should be addressed so that the Kern IRWMP would be in compliance with the IRWM Guidelines. This will also enable the Kern IRWMP to meet the requirements of the Proposal Solicitation Package for Emergency Drought Funding; an application was submitted by project proponents on July 21, 2014.

The Kern IRWMP participants met on August 25, 2014 to conduct the Vulnerability Assessment and review the draft Climate Change submission (agenda and meeting notes attached). Comments were received and incorporated.

Your contact person for matters regarding this submittal is:

Ms. Lauren Bauer
Kern County Water Agency
PO Box 58
Bakersfield, CA 93302-0058
661/634-1411
lbauer@kcwa.com

We appreciate your assistance in this matter. Please feel free to contact Ms. Bauer with any questions or comments.

Very truly yours,

KENNEDY/JENKS CONSULTANTS

Mary Lou Cotton
Practice Leader, Water Resources

Attachments

cc: Joe Yun, DWR

Kennedy/Jenks Consultants

September 5, 2014

Technical Memorandum

To: Kern IRWMP Participants Group c/o Ms. Lauren Bauer, Water Resources Planner

From: Mary Lou Cotton

Subject: Vulnerability to Climate Change Technical Memorandum
K/J 1289035*01

Climate change refers to significant changes in temperature, precipitation, wind patterns and other weather that occur over several decades and beyond. Climatic changes observed in recent decades are occurring due to rising average global temperatures that are the result of elevated levels of gases released primarily by human activities, which trap heat in the atmosphere in a process known as the greenhouse effect. These so-called greenhouse gases (GHGs) include, among others, water vapor, carbon dioxide (CO_2) and methane (CH_4).

Climate change is impacting California water resources in many ways, including through rising sea levels, reduced snowpack, and more frequent and severe droughts. Impacts and vulnerabilities vary by region resulting in the need for tailored actions to ensure the viability of regional watersheds, including the Kern Region. These actions focus on reducing the intensity of climate change through mitigation measures and adapting to climate change effects.

This technical memorandum identifies the potential climate change vulnerabilities in the Kern Region as well as potential future actions to mitigate the vulnerabilities to climate change. The climate change vulnerability assessment presented in this section includes the checklist assessment in the Department of Water Resources (DWR's) *Climate Change Handbook for Regional Water Planning* and is consistent with climate change requirements in the Proposition 84 Integrated Regional Water Management Plan (IRWMP) Guidelines (June 2014).

1.1 Climate Change Projections Overview

A climate change assessment is performed using the output of computer models that project future conditions from inputs on GHG emissions. These models are not predictive, but provide projections of potential future climate scenarios that can be used for planning purposes.

Climate change has the potential to have significant impacts on the Kern IRWM Region. The U.S. Bureau of Reclamation (Reclamation), the State of California and others continue to study climate change and its potential impacts on water and other resources in the western states.

The primary climate variables projected by global climate models (GCMs) that are important for water resources planning in California are changes in air temperature, changes in precipitation patterns, and sea level rise. The State of California 2009 Climate Change Impacts Assessment (California Climate Change Center 2009) provides the scientific basis for developing statewide climate change impact projections. The 2009 assessment provided future climate projections to support water resources decision making in California. A set of six GCMs were run for two

GHG emissions scenarios, A2 and B1, selected from the Intergovernmental Panel on Climate Change (IPCC) Special Report on Emissions Scenarios (SRES). The IPCC report provides a family of common scenarios that cover a range of plausible trends in GHG emissions over the 21st century as a result of economic, technological, and population change (IPCC 2007). Scenario A2 assumes higher GHG emissions and high growth in population and represents a more competitive world that lacks cooperation in development (similar to business as usual), while B1 is a lower GHG emission scenario that represents social consensus for sustainable development. Each GCM was used to simulate a historical period from 1950-1999 and a future projection period from 2000 to 2100. The 1950-1999 period serves as a baseline or "present condition" for the models so that future conditions can be projected. Table 1 lists the six GCM models and their sponsoring organization, the combination of which were used to evaluate climate change impacts in the Kern Region.

Table 1: Summary of Global Climate Models

GCM	Sponsoring Organization and Model Name
NCAR-PCM1[(a)]	National Center for Atmospheric Research (NCAR) Parallel Climate Model (PCM)
GFDL-CM21[(a)]	National Oceanic and Atmospheric Administration (NOAA) Geophysical Fluids Dynamics Laboratory (GFDL) model, version 2.1
NCAR-CCSM3[(a)]	NCAR Community Climate System Model (CCSM)
MPI-ECHAM5	Max Plank Institute ECHAM5/MPI-OM Used by DWR for its climate change analysis for the 2011 Reliability Report, but the 2013 Draft Report Update uses Bay Delta Conservation Plan (BDCP) LLT CC5 input hydrology.
MIROC32	MIROC 3.2 medium-resolution model from the Center for Climate System Research of the University of Tokyo and collaborators
CNRM-CM3[(a)]	French Centre National de Recherches Météorologiques (CNRM) models
Four Model Average[(a)]	Cal-Adapt website. Average of the following four GCMs: NCAR-PCM1, GFDL-CM21, NCAR-CCSM3, and CNRM-CM3. Used in this analysis for Kern River Region

Note: (a) Model used by Cal-Adapt.

DWR used the MPI-ECHAM5 model with the A2 emissions scenario when preparing the 2011 *State Water Project Delivery Reliability Report*. MPI-ECHAM5 represents the median of the six GCMs listed in Table 1. However, the 2013 *Draft Delivery Reliability Report* (December 2013) uses the climate change input hydrology developed for the Bay Delta Conservation Plan (BDCP) for the Late Long Term planning horizon and the 5th climate change region (BDCP LLT CC5 input hydrology). This had the effect of lowering State Water Project (SWP) long-term future reliability, from 60% to 58%.

The California Energy Commission's Public Interest Energy Research Program (PIER) recently established the Cal-Adapt website (http://cal-adapt.org/), whose purpose is to explore California's climate change research. In part, the website provides output from four climate

models (NCAR-PCM1, GFDL-CM21, NCAR-CCSM3, and CNRM-CM3) and two GHG emission scenarios (A2 and B1) downscaled to any location in California. The four GCMs are a subset of the six GCMs identified in Table 1. Because the BDCP LLT CC5 GCM is not included in Cal-Adapt, an average of the four GCMs (also provided by Cal-Adapt) with the A2 emission scenario was used in this analysis for the Kern Region.

1.2 Kern Region Climate Change Projections

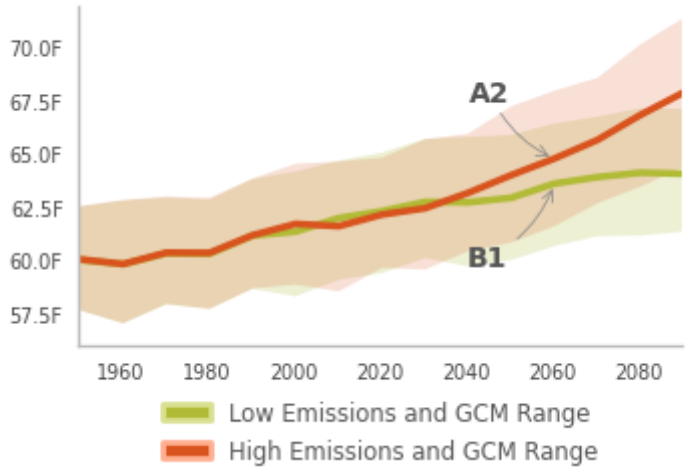
Climate change is expected to have various impacts on the Kern Region including: (1) changing hydrology, and the resultant impacts to conjunctive use operations, due to a shift from snow to rain precipitation, (2) higher wildfire risk due to warmer, drier conditions over the year, and associated impacts on water quality and flooding, (3) fluctuations in temperature resulting in longer and drier conditions over the year, and associated impacts on water quality and flooding, (4) longer and more severe multi-year droughts, (5) greater summer water demand from all categories of users and (6) impacts to habitats and species.

1.2.1 Temperature

Cal-adapt projects that locally, overall air temperatures are expected to rise from 1degree Fahrenheit (°F) to 2.3°F over the next few decades. The historical average annual temperature in the Kern region is 61.4°F; the A2 and B1 scenarios project increases of 3.5°F and 6.3°F by the end of the 21st century. Figure 1 shows the projected air temperature change for the four GCMs averaged from 2000 through 2100, compared with the historical baseline from 1950-2000. The projected temperature increases begin to diverge at mid-century so that, by the end of the century, the temperature increases projected in the higher emissions scenario A2 are almost twice as high as those projected in the lower emissions scenario B1.

Figure 1: Historical and Projected Annual Average

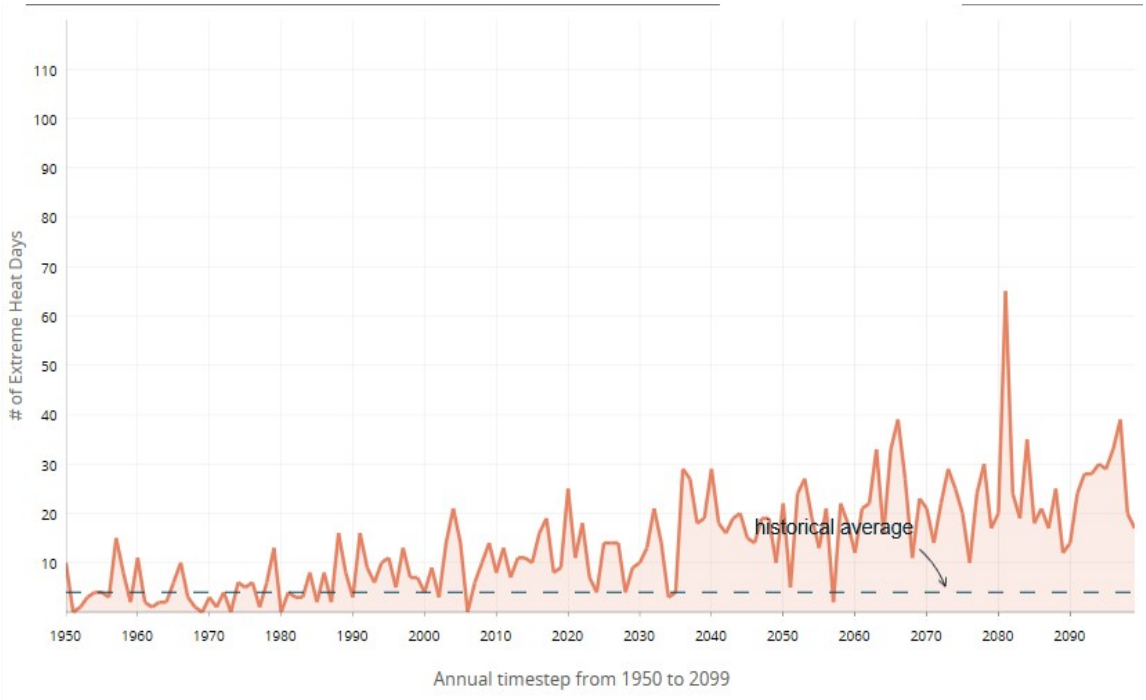
Air Temperature for Kern County



Source: Cal-adapt.org. Bakersfield Area

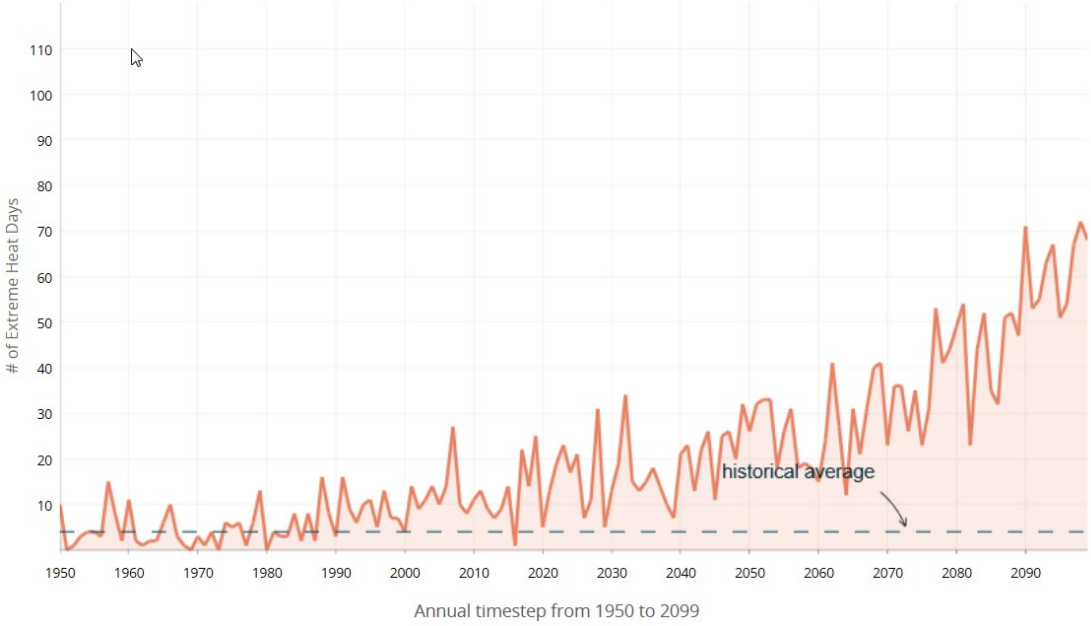
In addition to overall temperature increases, the region is projected to encounter higher incidences of extreme temperatures. Figure 2 and Figure 3 show the projected increases in extreme temperature days in Kern County for the B1 and A2 emission scenarios. This chart displays a count of the number of days that the selected area on the map is projected to exceed the area's calculated "extreme heat threshold" of 101 °F for each year 1950-2099. The historical annual average number of extreme heat days is four. Both scenarios project that number will increase to about 30 days by mid-century and either 40 or 70 days by the end of the century, depending on the emissions scenario. The increased temperatures will likely increase evaporation, leading to drier soils, increased crop evapotranspiration, and a longer growing season.

Figure 2: Number of Extreme Heat Days (Low Emission Scenario)



Source: Cal-adapt.org. Bakersfield Area

Figure 3: Number of Extreme Heat Days (High Emission Scenario)



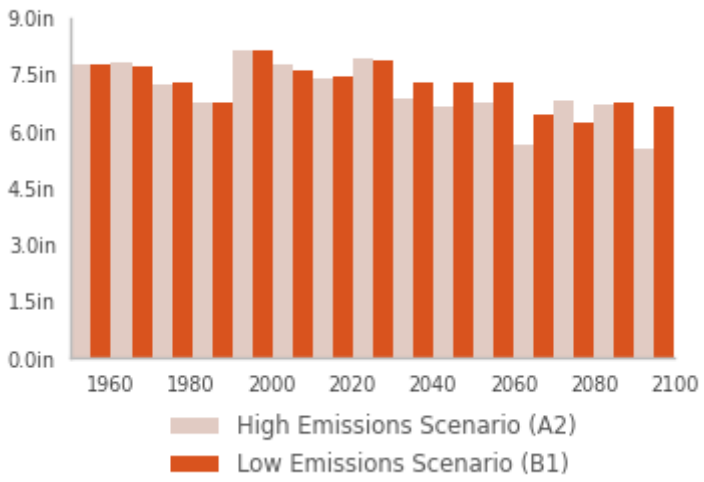
Source: Cal-adapt.org. Bakersfield Area

1.2.2 Precipitation

Precipitation in the Kern Region is essentially all in the form of rain, and significant shifts in the timing of precipitation are not expected to occur. On average the projections indicate little change in total annual precipitation in California. Furthermore, among several models, precipitation projections do not show a consistent trend during the next century. The Mediterranean seasonal precipitation pattern is expected to continue, with most precipitation falling during winter from North Pacific storms. One of the four climate models projects slightly wetter winters, and another projects slightly drier winters with a 10 to 20 percent decrease in total annual precipitation. However, even modest changes would have a significant impact because California ecosystems are conditioned to historical precipitation levels and water resources are nearly fully utilized.

Figure 4 shows the decadal precipitation projections from 1960 through 2100 for the Bakersfield area in Kern County. There appears to be continued variable precipitation over the next century, with an overall consistent decrease. Drier conditions may result in a reduction in effective precipitation for crop irrigation needs and higher wildfire risk in the Region.

Figure 4: Projected Annual Precipitation for the Bakersfield Area in Kern County



Source: Cal-adapt.org. Bakersfield Area

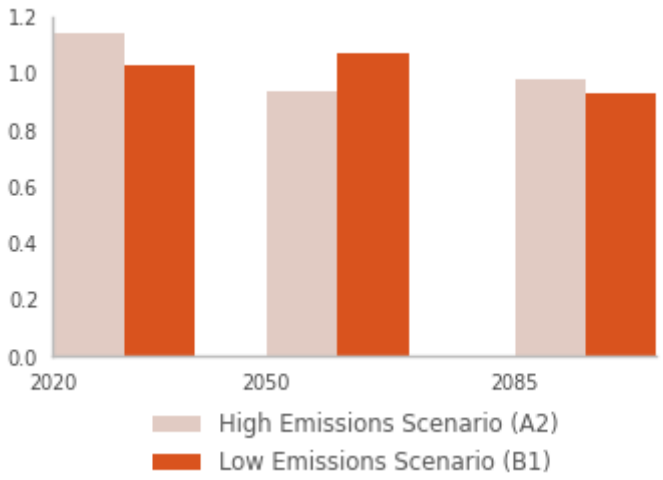
1.2.3 Wildfire

Fire is an important ecosystem disturbance. It promotes vegetation and wildlife diversity, releases nutrients into the soil, and eliminates heavy accumulation of underbrush that can fuel catastrophic fires. Statewide, the area projected to be burnt by wildfire toward the end of the century will increase substantially, especially in mountainous areas. As climate changes, it appears that summer dryness will begin earlier, last longer and become more intense. These changes may exacerbate fire occurrences, which have historically peaked in late summer and early fall. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range.

Because wildfire risk is determined by a combination of factors including precipitation, winds, temperature, landscape and vegetation conditions, future risks will not be uniform throughout the state. In years with wet winters, annual vegetation growth is plentiful. But accentuated dryness during summer would produce a hazardous fuel load that worsens the wildfire problem in some of Southern California wildlands. With expanding development into the urban/wildland interface, threats to human safety and property are even greater. The spread of invasive species that are more fire-prone, coupled with more frequent and prolonged periods of drought, all increase the risk of fires, and reduce the capacity of native species to recover. Wildfires are also bad news for the region in terms of air quality, human health, soil erosion and stress on watersheds.

Figure 5 shows projected increases in potential area burned in the Bakersfield area of Kern County. The y-axis represents the ratio of additional fire risk for an area compared to the expected burn area. These data are modeled solely on climate projections and do not take landscape and fuel sources into account. New wildfire risk projections are currently being produced that take more landscape information into account.

Figure 5: Projected Increase in Potential Area Burned in the Bakersfield Area of Kern County



Source: Cal-adapt.org. Bakersfield Area

Fire is an important process in maintaining a diverse ecosystem in the Region. It is unclear at this time whether projected increased wildfire risk will be beneficial or harmful to long term ecosystem health and habitat maintenance, but will likely negatively impact water quality with increased turbidity loading to water supplies.

1.3 Resources in the Kern Region Vulnerable to Climate Change

This section identifies the resources within the Kern Region, its related areas that are potentially affected, and their collective potential vulnerability to climate change. Table 2 provides a general overview of the water-related resources that are considered important in the Kern Region and potentially sensitive to future climate change. Resources that are likely to be vulnerable to climate change are considered for further analysis in the preceding subsections. Table 2 also highlights those resources in the Region that are unlikely to be affected by climate change and therefore they do not warrant further analysis and consideration at this time. The summary table provides the main categories applicable to water planning in the Kern Region with a general overview of the qualitative assessment of each category with respect to anticipated climate change impacts. Table 4 in Section 1.4 below provides the complete assessment of the regional vulnerability to the potential climate change impacts using the

'Vulnerability Assessment Checklist', found in the *Climate Change Handbook for Regional Water Planning* (DWR, 2011).

Table 2: Climate Change Vulnerability Assessment Overview

Watershed Characteristics	General Overview of Vulnerabilities
Water Demand	Urban and Agricultural Water Demand – Changes of hydrology in the Region as a result of climate change could lead to changes in water demand, both in quantities and patterns. Increased irrigation (outdoor landscape or agricultural) is anticipated to occur with temperature rise, increased evaporation losses with warmer temperature and longer growing season.
Water Supply	Imported Water – State Water Project (SWP) and Central Valley Project (CVP) water via the California Aqueduct and the Friant-Kern Canal are an important portion of the water resources available to the Region. Potential impacts on SWP and CVP water availability resulting from climate change directly affect the amount of imported water supply delivered to the Region, part of which will be delivered to recharge groundwater banking programs in the Kern Region. Groundwater – Changes in local hydrology could affect natural recharge to the local groundwater aquifers and the quantity of groundwater that could be pumped sustainably over the long-term. Decreased inflow from runoff, increased evaporative losses, warmer and shorter winter seasons can alter natural recharge of groundwater, as well as conjunctive use operations. Alternatively, if more precipitation occurs as rain, short-term high flows could result, and will require the Region to adapt to the faster runoff which will impact the timing of conjunctive uses. In addition, additional reductions in the imported water imposed by climate change would lead to more reliance on local groundwater, resulting in reductions in base flows, reduced groundwater outflows, increased depth to groundwater and increased land subsidence. .

Watershed Characteristics	General Overview of Vulnerabilities
Water Quality	Imported Water – Sea level rise could result in increases in chloride and bromide (a disinfection by product precursor), potentially requiring changes in drinking water treatment. Increased temperatures could result in an increase in algal blooms and taste and odor events. Regional Surface Water – Increased temperature could result in lower dissolved oxygen, increased algal blooms, and task and odor affect to the Kern River and its tributaries. Decrease in annual precipitation could result in higher concentrations of contaminants in these surface waters during droughts. Increased wildfire risk and flashier storms could increase turbidity loads for water treatment, irrigation filtration systems and spreading basins (sedimentation and loss of percolation rates). Return flows from groundwater banking programs have inherent water qualities. Increased use of banking projects is leading to replacement of higher quality snowmelt surface water (Kern River and Friant CVP), as these supplies are being diverted further upstream than historical diversions to effect transfers and exchanges, and replaced with groundwater supplies that are higher in salt constituents (TDS, nitrates, etc.).
Sea Level Rise	The Kern Region is not directly subject to sea level rise. However, potential effects of sea level rise would affect imported water supply conditions. As discussed above, the principal concern is the potential for sea water intrusion to increase Sacramento-San Joaquin Delta (Delta) salinity. While sea level rise is not a direct regional concern, pursuant to the California Ocean Protection Council Resolution adopted March 11, 2011, it should be considered in the project selection/prioritization process.
Flooding	Local surface flows could change as a result of more frequent and intense storm events, leading to more areas susceptible to flooding, and increasing risk of direct flood damage in the Kern Region.
Ecosystem and Habitat	Increased temperature and potential decreases in annual precipitation could put stress on sensitive ecosystems and alter habitats. Water-dependent recreation could also be affected by water quality impacts. In addition, the Kern Region may be subject to increased wildfire risk, which could alter habitat.
Hydropower	Hydropower production in the Kern Region is small, however power through the Western Area Power Administration operated by the BOR does provide power to the CVP. Because of the amount of hydropower used in comparison to the size of the Region is relatively small, climate change effects on hydropower are not considered to be significant.

Climate change processes are supported by extensive scientific research and are based on a vast number of peer-reviewed and published technical literature. Much of the available literature presents general information, but there is relatively little information that presents specific tools on how to assess impacts in the context of addressing climate change impacts on water resources. In addition, far less information is available on smaller geographic areas and the spatial resolution of the existing climate change models is still quite low. One additional challenge is that precipitation projections cannot be easily converted directly into surface runoff and groundwater recharge effects to connect with the local water resources planning activities.

The following sections present the vulnerability of each sector identified in Table 2 with respect to climate change projections given the existing tools and available data. This is an initial attempt using projections specific to the Kern Region for the vulnerability assessment in support of the IRWMP. The outcome of this initial assessment is intended to help understand the potential impacts, to integrate climate change into long-term planning, and to improve understanding of the uncertainties associated with climate change effects. Consistent with the water resources planning horizon in the Kern Region through 2050, the vulnerability analysis considers projections for mid-21st century (2050), consistent with DWR's modeling approach to climate change.

1.3.1 Water Demand

Increasing air temperatures due to climate change will result in increased evaporation leading to drier soils, increased plant evapotranspiration (ET), and a longer growing season. All of these factors generally increase water demand however there are not sufficient data available to estimate a total volume.

The Cal-Adapt A2 emissions scenario projects an average temperature increase for the Kern Region of about 3.3°F by the mid-century (2050) and increase of about 6.3°F by the end of century (Figure 1). Characterizing the impacts of temperature rise on water demand is a difficult task and discussed on a qualitative basis. While water use varies considerably depending on other factors such as regional economy, population, and land use, a qualitative assessment of water demand increase can be noted based on the projected temperature increase from the Cal-Adapt emission scenarios.

Kern County is characterized by its traditional industries, agriculture, oil and gas production, as well as increasing urbanization and population growth. Total water demand for the region is projected to increase only slightly. Water use to meet municipal water needs are projected to increase significantly due to population growth - about 48 percent from approximately 189,162 acre-feet per year (AFY) in 2005 to 281,284 projected for 2030 (Kern IRWMP 2011). However most of the use in the Kern Region is agricultural. Although historically the trend of agricultural water use has been decreasing, for purposes of this report future agricultural water demands are assumed to stay the same at 2,669,713 AFY (Kern IRWMP 2011), although there are some current reports that forecast a decrease in overall usage within the Region. Total 2005 urban and agricultural demand for the Kern Region is estimated at around 2,857,755 AFY and

projected 2030 total demand is estimated to be 2,938,818 AFY, a change of just under 3 percent (Kern IRWMP 2011.

An important effect of changing weather conditions is likely to be on landscape and agricultural demand. Higher temperature generally increases ET rates; but some research studies also suggest higher CO2 levels and higher temperature increase rates of plant growth, and can shorten the time to plant maturity (Hanak and Lund, 2008). This would reduce the overall plant water uptake, partially compensating for potential reductions in agricultural water supply. Thus, the net effect on agricultural crops is still uncertain (Kiparsky and Gleick, 2005) and remains an important area of on-going research.

Qualitatively, the ET projections with climate change suggest water demand for agriculture in the Region is anticipated to increase during months where ET is high and decrease in months where ET is low. As a result of increased ET, urban water demand is anticipated to increase as well because of greater outdoor water use for landscape irrigation and agriculture.

Demand management is an important adaptation given decreased water supply as a result of climate change. Agriculture has a variety of water demand management options including fallowing fields of annual crops and changing the crop itself to one that may be less water intensive, yet economically viable. Additionally, in some cases, farmers may be able to switch their water source from surface water to groundwater. Demand management options for the urban landscape sector range from climate appropriate plants to improved irrigation methods. Water demand management strategies are discussed in Section 11.2 in the November 2011 Kern IRWM Plan.

1.3.2 Water Supply

For long-term water supply planning, coping with variability is a challenge. With potential additional changes imposed by climate change, there will be a heightened need to evaluate and respond to increased water supply variability.

Climate change is expected to affect Regional imported water supplies as follows:

- Total precipitation is expected to decrease in the Sierra Nevada sources, reducing runoff to surface supplies.
- Snow pack projected to decrease as precipitation shifts toward more rain and less snow.
- Timing of runoff is expected to shift to earlier in the year, affecting reservoir storage especially in the spring and summer months, as well as groundwater recharge activities.
- Sea level rise may impact Delta water deliveries.

Climate change is expected to affect Regional surface and groundwater supplies as follows:

- Total precipitation is not projected to change significantly, however the trend is decreasing.
- Variability in annual precipitation is expected to continue, with vulnerability to droughts. This is especially important for the highly variable Kern River system.
- More intense storms anticipated that may affect surface water runoff, surface storage and groundwater recharge.

Climate change is expected to affect Regional oil and gas activities requiring supplies as follows:

Oil and gas drilling in the county could be impacted by decreasing water availability, particularly in times of drought by limiting the amount of water available for cooling, fuel extraction, and power generation. The effects of climate change and water availability on the oil and gas sector include a combination of potential direct and indirect impacts. Water is required in many different stages of the oil and gas value chain, from exploration to processing to transport, and the volume of water used in these activities varies, with the largest volume used in the refining process. Among exploration and production processes, the largest volume of water is used as a supplemental source.

Because the Kern Region relies heavily on imported supplies, any reduction or change in the timing or availability of those supplies could have negative impacts on the Region. Reductions in imported water supplies would lead to increased reliance on local groundwater, recycled water or other sources of supplies if demand was not reduced. Changes in local hydrology could affect surface storage of water and natural recharge to the local groundwater and the quantity of groundwater that could be pumped in a sustainable manner. The following sections describe potential climate change impacts to the region's water supplies.

1.3.2.1 Imported Supplies

Imported water deliveries to the Kern Region are from the SWP and CVP via the California Aqueduct, and the Friant-Kern Canal. Increasing development and environmental demands on water availability and quality for agricultural, municipal and industrial (M&I), and groundwater banking purposes, coupled with curtailments of imported SWP and CVP deliveries due to prolonged drought and regulatory restrictions, have intensified the competition for available water supplies in the Kern Region. It is estimated that due to drought and decreases in imported water supply, about 45,000 acres of farmland in the Region will be idled and an additional 100,000 acres will be under-irrigated. Climate change impacts are likely to exacerbate these challenges.

In an effort to assess the impacts of these varying conditions on SWP supply reliability, DWR issues its "*State Water Project Delivery Reliability Report*". DWR's long-term SWP delivery reliability analyses incorporate assumptions that are intended to account, among other impacts, for potential supply shortfalls related to global climate change. The long-term average delivery

of contractual SWP Table A supply is projected to be 62 percent under current conditions and 58 percent under future conditions over the 20-year projection (DWR 2013). Within that long-term average, SWP Table A deliveries can range from 12 percent (single dry year) to 97 percent (single wet year) of contractual amounts under current conditions, and from 11 percent (single dry year) to 98 percent (single wet year) under future conditions. Contractual amounts are projected to be 31 percent during multiple-dry year periods (assuming a 4-year dry period), and from 81 to 85 percent during multiple wet periods (assuming a 4-year wet period). Table 3 shows SWP supplies projected to be available to the Region in average/normal years and summarizes estimated SWP supply availability in a single dry year and over a multiple dry year period. While detailed analysis of CVP supply reliability has not been performed, it is likely that similar impacts from climate change will also apply to the CVP.

Table 3: Kern County Water Agency (KCWA) Wholesaler Supply Reliability (AF)

Wholesaler (Supply Source)	2015	2020	2025	2030
Average Water Year				
DWR (SWP)				
KCWA Table A Supply	579,263	579,263	579,263	579,263
% of Table A Amount(a)	58%	58%	58%	58%
Single Dry Year				
DWR (SWP)				
KCWA Table A Supply	109,860	109,860	109,860	109,860
% of Table A Amount(a)	11%	11%	11%	11%
Multiple Dry Year				
DWR (SWP)				
KCWA Table A Supply	309,606	309,606	309,606	309,606
% of Table A Amount(a)	31%	31%	31%	31%

Note: (a) Percentages of Table A amount from DWR's *2013 SWP Delivery Reliability Report* and assumes future conditions. Also assumes Table A contract amount of 998,730 AFY.

1.3.2.2 Groundwater

The San Joaquin Valley groundwater basin covers the majority of the managed groundwater resources in the Kern Region. Other groundwater basins in the Kern Region include the Kern River Valley groundwater basin to the east; Walker Basin Creek Valley groundwater basin to the southeast; Cummings Valley and Tehachapi Valley West on the eastern side of the Region, Brite Valley to the southwest; and Cuddy Canyon Valley, Cuddy Ranch Area, Cuddy Valley; and

Mil Potrero Area basins to the south. All of these groundwater basin boundaries are within the watershed boundary of the Kern Region (see Figure 2-7 in the November 2011 Kern IRWM Plan for basin locations).

One of the longest-standing issues in the Kern Region is groundwater overdraft. Groundwater provides approximately 39 percent of local water needs; however it is estimated to be as much as 60 percent in dry years. Further, certain portions of the groundwater basin underlying the Kern Region have experienced overdraft conditions.

The Kern Region is well-known for its long-established and successful conjunctive use and banking programs. These programs overlie the major portions of the groundwater basin and can access surface supplies from the Kern River, the SWP, the Friant-Kern Canal, and more. In times of high flows, these surface supplies are recharged and stored to help to lessen the effects of dry period conditions when the Region relies on the groundwater basin.

The groundwater in the Kern Region may also be subject to decreasing reliability related to the extent and duration of longer drought periods that may occur due to climate change. There are limited data available to quantify the sustainable groundwater supplies and therefore to assess the resiliency of these supplies after drought events. A better understanding of groundwater supplies will be important to continued resiliency against climate change, as water supply management becomes a more important issue in the Region.

While the basins have supply exceeding the future projected pumping levels, based on the basins' characteristics and their natural recharge processes, changes in local hydrology and natural recharge are anticipated to have a direct impact on available groundwater storage. Warmer winters would increase the amount of runoff available for groundwater recharge, but reductions in inflow from runoff and increased evaporative losses could reduce the amount of natural recharge. The extent to which climate change will change the natural recharge processes and the impact of that change are not exactly known and are difficult to quantify.

1.3.3 Water Quality

Improving water quality is a Kern Region Plan objective that may be impacted by climate change. Studies of potential climate change impacts on water quality exist, but few trends in relationships between hydroclimate (hydrology and weather variables) have been identified. Key climate vulnerabilities potentially important to the Kern Region include increasing temperature and changes in precipitation patterns. Increased wildfire risk is another potential factor that could affect water quality in the Kern Region. Outside the Kern Region, sea level rise in the Delta is expected to impact water quality of imported SWP water.

Surface waters in the Region are expected to be more directly vulnerable to water quality impacts of climate change, while water quality impacts to groundwater sources would be indirect, as conjunctive use and banking programs can increase the amount of salts in the underlying aquifer dependent on the source of the recharge water.

1.3.3.1 Imported Water Quality

SWP water currently meets or exceeds applicable standards (see Appendix D in the November 2011 Kern IRWM Plan for data). However, there is concern with some constituents that are approaching SWP acceptance criteria, particularly arsenic and selenium. SWP and CVP water is vulnerable to potential effects of climate change at the source in the Delta and in storage in Regional reservoirs. Sea-level rise will increase the intrusion of salinity into the Delta and its exported water. This will increase chloride and bromide (a disinfection byproduct [DBP] precursor that is also a component of sea water) concentrations in the SWP and CVP imported water. In addition, decreased freshwater flows into the Delta could increase the concentration of organic matter, which contribute to potentially higher DBP formation concentrations, in the SWP and CVP water. However, CVP water from the Friant system is of very high-quality as it originates from Sierra snowmelt and is similar in characteristics to Kern River supplies.

Extreme storm events, although rare, may cause quick response time thereof in canal flow rates, which may be more intense due to climate change and may present treatment challenges for source water and sedimentation issues in recharge basins because of increased turbidity. In the past, high turbidity events in reservoirs and conveyance facilities have required modification of the treatment processes (primarily additional chemical usage) for extended periods. In addition, an intense winter rainfall event after a wildfire in a watershed that burned the prior year can result in extremely high turbidities and fine organic matter in the water. The additional sludge production can overwhelm the treatment plants' solids handling equipment and require plants to be shut down or reduce their capacities for brief periods of time, or make capital investment to enlarge solids handling facilities. Similarly, turbidity events can negatively impact porosity in recharge basins, lessening their absorptive capacity. This combination of more intense rainfall events and increased wildfire risk is more likely under projected climate change conditions.

The warmer temperatures could also lead to increased taste and odor events triggered by algal blooms; which are characterized by water quality changes during the spring and summer such as increases in DO and DO saturation, pH and fluorescence. Water treatment plants can be designed to address taste and odor events through pre-ozonation but use of higher ozone dosages to control taste and odor events must also consider the need to control bromate formation (from the oxidation of bromide), which could increase due to greater bromide levels in the imported SWP and CVP water affected by climate change. Local canals would have to deal with the algae and effects thereof with higher treatment cost (i.e. copper sulfate).

1.3.3.2 Regional Surface Water Quality

The primary regional surface water in the Kern Region is the Kern River. Local minor streams, many of which are ephemeral, provide additional local surface water. A very small percentage of minor stream runoff is collected and used as irrigation for agriculture; the majority of these irregularly-occurring flows serve to recharge local groundwater basins. However, the Kern River serves as a major source of supply to groundwater banking programs in the Region.

The Kern River and its tributaries, while generally considered a high quality supply, are vulnerable to potential water quality impacts due to climate change as a result of increased

temperature, more frequent heavy rainfall events, increased wildfire risk, and longer periods of low natural stream flow from decreased annual precipitation. Increased water temperature generally reduces DO and can promote algal blooms if nutrients are available in the source. The storm events can transport sediments and other pollutants along the river, while long periods of low flow can increase concentrations of pollutants from wastewater plant and non-point discharges. Increased wildfires may contribute to the turbidity events. Key water quality constituents of concern are nitrogen and chloride, in addition to reduced DO and increased algae growth, turbidity and sedimentation. Taken together these can impact drinking water supplies as well as supplies utilized for groundwater recharge.

Imported water stored in Isabella Reservoir will also be vulnerable to climate change when considering reduced runoff volumes which could affect turbidity and increasing water temperatures, dissolved oxygen (DO) levels, and pH.

1.3.3.3 Groundwater Quality

Groundwater quality throughout the region is typically suitable for most urban and agricultural uses with only localized impairments including high TDS (salts), sodium chloride, sulfate, nitrate, organic compounds, boron and arsenic. High TDS, arsenic, boron, and nitrates are the primary groundwater quality issues. Various constituents can impact agricultural uses and M&I uses in different ways.

Any water quality impacts to groundwater sources due to climate change are expected to be indirect, primarily due to decreased recharge from lower precipitation, increased periodic recharge from earlier/faster snowmelt runoff and increased use of groundwater to make up loss of imported or local surface water supplies. Decreased recharge and increased groundwater pumping may allow concentrations of groundwater contaminants such as perchlorate and volatile organic compounds to increase, which may trigger additional treatment requirements and increase groundwater treatment costs. Increased use of lower quality groundwater may also have some concerns associated with soil properties over a long period.

1.3.4 Flooding

Flooding is one of the most costly and destructive natural disaster; thus, a change in flood risk is a potential significant effect of climate change that could have great implications for the Kern Region. Local minor streams are the second-largest source of local surface water to the Region after the Kern River. Streams with measurable runoff are grouped into four separate watershed areas: Poso, Caliente, El Paso, and San Emigdio. Under certain hydrologic conditions, some of these streams carry very large flows that can be quite damaging. Examples include flooding in the Kelso Creek area, and in the area around the cities of Arvin and Lamont. Regional efforts to address flooding and to better manage such flow events have been initiated among various parties in the Region, including the County of Kern, KCWA and the affected areas.

The FEMA Flood Insurance Rate Map for the Kern Region designates multiple areas as “High Risk,” areas with a 1 percent or greater risk of flooding in any year and a 26 percent chance of flooding over the life of a 30-year mortgage. The area at greatest flood risk is the area

surrounding the communities of Lamont, Weedpatch, and the city of Arvin. The area is also prone to wildfires, which impact water quality when rain washes fire debris into waterways. Other large flood area includes the Buena Vista lakebed as well as areas in the historic Tulare lakebed and nearby drainage areas. Areas along the Kern River and other local streams like Tejon, El Paso and Grapevine in the southern region are also considered to have a high flood risk. These areas are depicted in Figure 2-8 in the November 2011 Kern IRWM Plan.

Regional efforts to address flooding and to better manage such flow events have been initiated among various parties in the Kern Region, including the County of Kern, KCWA and the affected areas. For more information on flood management see Section 10.2 in the November 2011 Kern IRWM Plan.

While the Cal-Adapt climate change model projects precipitation decrease of 10 percent by 2050 on the long-term basis, research data suggest that there is a risk of increased flooding in California (Kiparsky and Gleick 2005). Flooding depends not only on average precipitation but on the timing and intensity of precipitation. Climate change projections are not sensitive enough to assess short term extreme events such as flooding, but the general expectation is that more intense storms would occur. This could present larger areas susceptible to flooding and increase the risk of direct flood damage in the Region.

1.3.5 Ecological Health and Habitat

Ecosystem health and habitat protection are important to the Kern Region. Increased temperature, changes in precipitation patterns, and increased wildfire risk projected for potential climate change scenarios are potential stressors to ecosystems and habitat in the Region.

Environmental resources of the Kern Region include the Kern River, Sequoia National Forest, several wildlife refuges, and the unique flora and fauna of the Tejon Pass area and Transverse Ranges. The riparian forest along the South Fork Kern River in the vicinity of Onyx and Weldon is one of the highest quality and most extensive stands of that vegetation type in California. This section of the river has the largest populations of Southwestern willow flycatchers and yellow-billed cuckoos in California. Much of this forest is conserved in the USFS South Fork Wildlife Area, Audubon California's Kern River Preserve, and California Department of Fish and Game's (CDFG's) Canebrake Ecological Reserve. For more detail on the Kern Region's ecological resources, see Section 2.4 in the November 2011 Kern IRWM Plan. All of these species and habitats have acclimated to the historical climate and water resources and may or may not to adapt to potential changes due to future climate change.

Increased air temperature will increase water temperature in rivers, tributary streams, ponds, and lakes, with resulting decreases in DO. This combination may stress fish and biota that depend on higher DO levels and colder water which may impact their sustainability. The increased annual average air temperatures may also alter plant habitat by changing the length and timing of the growing season and/or allowing non-native species to outcompete native species and disrupt ecosystems that depend on the present habitats. Thus, measures to control non-native species may be needed to maintain habitats. Water available for plant habitat could be impacted by potential decreases in annual precipitation and increases in ET

due to projected increases in temperature. Decreased precipitation could also directly affect formation of vernal ponds.

Ackerly *et al.* (2012) summarizes existing research on the relationship between climate and biodiversity and how changes in climate historically have and will in the future impact habitat. In terrestrial systems, the impacts of rising temperature and changing precipitation patterns have the largest effect and that in estuarine and intertidal areas, sea-level rise results in the most important direct impact. These habitats may be affected directly by habitat loss through erosion, or indirectly via human responses such as coastal armoring (e.g., construction of sea walls) and other infrastructural changes.

1.4 Regional Vulnerability Assessment

Table 4 provides an assessment of the regional vulnerability to the potential climate change impacts using the 'Vulnerability Assessment Checklist', found in the 'Climate Change Handbook for Regional Water Planning' (DWR, 2011). This checklist provides a further evaluation of the effects on regional water demands and supplies, as well as water quality, flooding events, environmental and ecosystems, and hydropower systems within the Kern Region.

In addition to the assessment of vulnerabilities provided in Table 4, the Kern Region prioritized the identified vulnerabilities during a Stakeholder meeting in August 2014. The results are displayed in the Climate Change Vulnerabilities Prioritization Table provided in Appendix A. Meeting minutes from the August Stakeholder meetings are also included with Appendix A, documenting the planning efforts of the Region.

Table 4: Vulnerability Assessment Checklist

Resource Checklist Item	Kern Regional Condition
Water Demand	
Are there major industries that require cooling/process water in your planning region?	Kern County is characterized by its traditional industries, agriculture, oil and gas production, as well as increasing urbanization and population growth. Oil and gas drilling in the county could be impacted by decreasing water availability, particularly in times of drought by limiting the amount of water available for cooling, fuel extraction, and power generation. Additionally, process water is required in packing plants and other locations for processing crops harvested from the field, further contributing to the significance of the use.
Does water use vary by more than 50% seasonally in parts of your region?	Yes. A significant amount of water in the Kern Region is used for agricultural purposes, the demand for which fluctuates greatly in the summer compared to the winter.
Are crops grown in your region climate-sensitive? Would shifts in daily heat patterns, such as how long heat lingers before night-time cooling, be prohibitive for some crops?	Yes. The Kern Region is the second largest agricultural county in the state in economic value, and produces over 250 different crops, including over 30 types of fruits and nuts, over 40 types of vegetables, over 20 field crops, lumber, nursery stock, livestock, poultry and dairy products. Many of these are climate-sensitive and could be prohibitively affected by shifts in daily heat patterns.
Do groundwater supplies in your region lack resiliency after drought events?	With only six (6) inches per year of average rainfall, groundwater is necessary to maintain a sufficient water supply in the semi-desert climate of the Region. It is estimated that on average groundwater accounts for 39 percent of total water supply to the Region; however, it is estimated to be as much as 60 percent during dry years. Long-established and successful conjunctive use and banking programs. These programs overlie the major portions of the groundwater basin and can access surface supplies from the Kern River, the SWP, the Friant-Kern Canal, and more. In times of high flows, these surface supplies are recharged and stored to help to lessen the effects of dry period conditions when the Region relies on the groundwater basin.

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Resource Checklist Item	Kern Regional Condition
Are water use curtailment measures effective in your region?	Stakeholders of this IRWMP have identified water use efficiency as an important component of water supply planning. One of the stated objectives of this IRWMP is to "Pursue and implement cost effective water use efficiency programs." In addition to direct water use efficiency, stakeholders have expressed a desire to improve system operation, reduce system water loss, and decrease energy use related to water infrastructure. Another objective of this IRWMP is to "Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions." Lastly, implementation of agricultural land fallowing programs within the Region also help to curtail water use.
Are some instream flow requirements in your region either currently insufficient to support aquatic life, or occasionally unmet?	No. However, since 1994, the two large projects that import water into the Kern Region, the CVP and the SWP, have been incrementally impacted by environmental and regulatory requirements that have served to diminish the ability of the projects to reliably deliver water supplies. A large proportion of recent imported water cutbacks has stemmed from fishery issues in the Sacramento-San Joaquin Delta, where the pumping plants for the CVP and SWP are located, as well as San Joaquin River Settlement or Public Law 111-111 where water previously supplied to the CVP Friant Division for M&I and agricultural irrigation is being diverted into the San Joaquin River for in-stream flows.
Water Supply	
Does a portion of the water supply in your region come from snowmelt?	Yes. The Kern River is fed by annual snowmelt from the Southern Sierra Nevada, including Mount Whitney. The SWP, CVP and Friant system are also fed by Sierra snowmelt.

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Resource Checklist Item	Kern Regional Condition
Does part of your region rely on water diverted from the Delta, imported from the Colorado River, or imported from other climate-sensitive systems outside your region?	Yes. The Kern Region receives SWP and CVP water delivered through the Delta, which is affected by climate change. Friant CVP also has a Delta connection with the San Joaquin River Restoration Program as well as San Joaquin River Exchange Contractor rights.
Does part of your region rely on coastal aquifers? Has salt intrusion been a problem in the past?	The Kern Region does not rely on coastal aquifers. While salt intrusion from coastal aquifers is not applicable, salt management is still an issue in the region with regard to increasing salinity in groundwater. Salt in imported water supplies such as the SWP and CVP is the major source of salt which circulates throughout the groundwater in Kern County.
Would your region have difficulty in storing carryover supply surpluses from year to year?	There is limited carryover available for SWP and CVP water in San Luis Reservoir. Carryover of Friant CVP water in Millerton Lake/Friant Dam has limited capacity. Carryover of Kern River water in Isabella Reservoir is limited by the Reservoir's flood control purpose and US Army Corps of Engineers Regulations. However, there are opportunities to expand the Region's groundwater storage capabilities.
Has your region faced a drought in the past during which it failed to meet local water demands?	No. Water demands have been met through the use of groundwater which, during drought, can result in significant declines in groundwater levels. To the extent that surface water supplies are reduced in the future (as a result of climate change and/or regulatory constraints), recharge will be reduced, which will affect the availability of groundwater for meeting local water demands.

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Resource Checklist Item	Kern Regional Condition
Does your region have invasive species management issues at your facilities, along conveyance structures, or in habitat areas?	Yes. Aquatic pests, including invasive plants have been fought on the Kern River for decades. Prevention and control of invasive species is an ongoing battle by many resource agencies such as the Kern River Preserve Audubon Society, and the Kern River Ranger District. Canal operators treat aquatic weeds, mainly with use of copper sulfate.
Water Quality	
Are increased wildfires a threat in your region? If so, does your region include reservoirs with fire-susceptible vegetation nearby which could pose a water quality concern from increased erosion?	Yes. Parts of the Kern Region are prone to wildfires, which impact water quality when rain washes fire debris into waterways. In July 2008, the Piute Fire burned a significant area in the region. It was soon followed by a summer thunderstorm, which washed fire debris into the South Fork and ultimately down the Kern River. Many water purveyors were forced to switch from Kern River water to alternate sources to avoid contamination of settling ponds and costly treatment of the water.
Does part of your region rely on surface water bodies with current or recurrent water quality issues related to eutrophication, such as low dissolved oxygen or algal blooms? Are there other water quality constituents potentially exacerbated by climate change?	Yes. The Kern River, the primary native surface supply in Region, is generally considered a high quality supply. However, Isabella Lake which serves as the source for the lower Kern River is listed on the 303(D) list for dissolved oxygen and pH. Climate change could exacerbate these water quality conditions from increased temperatures. Banking return flows result in replacement of higher quality snowmelt water with groundwater.
Are seasonal low flows decreasing for some waterbodies in your region? If so, are the reduced low flows limiting the waterbodies' assimilative capacity?	Possibly. Annual Kern River flows and flows in local ephemeral streams could be decreasing through time.

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Resource Checklist Item	Kern Regional Condition
Are there beneficial uses designated for some water bodies in your region that cannot always be met due to water quality issues?	No. Water is intended for many beneficial uses including agricultural water supplies, groundwater recharge, water replenishment, recreation, wildlife habitat, rare and endangered species, and wetland ecosystems. Most of these are met within the Kern Region; however there are two TMDLs for Lake Isabella with regard to DO and pH.
Does part of your region currently observe water quality shifts during rain events that impact treatment facility operation?	No.
Sea Level Rise	
Has coastal erosion already been observed in your region?	No. The Kern Region is located in the Southern San Joaquin Valley, and concerns regarding coastal regions are not applicable.
Are there coastal structures, such as levees or breakwaters, in your region?	No.
Is there significant coastal infrastructure, such as residences, recreation, water and wastewater treatment, tourism, and transportation) at less than six feet above mean sea level in your region?	No.
Are there climate-sensitive low-lying coastal habitats in your region?	No.
Are there areas in your region that currently flood during extreme high tides or storm surges?	No.
Is there land subsidence in the coastal areas of your region?	No.
Do tidal gauges along the coastal parts of your region show an increase over the past several decades?	No.
Flooding	
Does critical infrastructure in your region lie within the 200-year floodplain?	Yes. The FEMA Flood Insurance Rate Map for the Kern Region designates multiple areas as “High Risk”, areas with a 1 percent or

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Resource Checklist Item	Kern Regional Condition
	greater risk of flooding in any year and a 26 percent chance of flooding over the life of a 30-year mortgage. Figure 2-8 (in the November 2011 Kern IRWM Plan) shows the areas that are within the 100- and 500-year floodplain. Flooding can result in the inundation of structures, causing water damage to structural elements and contents, as well as impact damage to structures, roads, bridges, culverts, and other features from high velocity flows and from debris carried by floodwaters.
Does part of your region lie within the Sacramento-San Joaquin Drainage District?	No.
Does aging critical flood protection infrastructure exist in your region?	Yes. In general, many Kern County communities are older and the physical components of their water systems are aging and outdated. Aging infrastructure is a particular issue for rural communities and DACs.
Have flood control facilities (such as impoundment structures) been insufficient in the past?	Yes. The primary flood control facility in the Region is Isabella Dam on the Kern River. The dam protects the urban Bakersfield area and about 350,000 acres of agricultural land and oilfields. Kern River had an unregulated flow until 1954 when the Isabella Dam and Reservoir were constructed by the Army Corps of Engineers. Unfortunately, due to seepage and earthquake concerns, the flood control capacity of the reservoir has recently been limited. Other areas near Lamont in the southern portion of the Region also have infrastructure that could be impacted.
Are wildfires a concern in parts of your region?	Yes. Parts of the Kern Region are prone to wildfires, which impact water quality when rain washes fire debris into waterways.
Ecosystem and Habitat Vulnerability	
Does your region include inland or coastal aquatic habitats vulnerable to erosion and sedimentation issues?	Coastal aquatic habitats are not applicable to the Region. However,

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Resource Checklist Item	Kern Regional Condition
	aquatic pests, including invasive plants have been fought on the Kern River for decades. Prevention and control of invasive species is an ongoing battle by many resource agencies such as the Kern River Preserve Audubon Society, and the Kern River Ranger District.
Does your region include estuarine habitats which rely on seasonal freshwater flow patterns?	No.
Do climate-sensitive fauna or flora populations live in your region?	Environmental resources of the Region include the Kern River, Sequoia National Forest, several wildlife refuges, and the unique flora and fauna of the Tehachapi Mountains, Tejon Pass area and Transverse Ranges. The riparian forest along the South Fork Kern River in the vicinity of Onyx and Weldon is one of the highest quality and most extensive stands of that vegetation type in California. This section of the river has the largest populations of Southwestern willow flycatchers and yellow-billed cuckoos in California. All of these resources could be potentially affected by climate change.
Do endangered or threatened species exist in your region? Are changes in species distribution already being observed in parts of your region?	Yes. There are threatened and endangered species in the Kern Region including the bald eagle, burrowing owl, California condor, California red-legged frog, least bell's vireo, and the San Joaquin kit fox to name a few. Whether or not changes in species distribution have occurred is unknown.

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Resource Checklist Item	Kern Regional Condition
Does the region rely on aquatic or water-dependent habitats for recreation or other economic activities?	Yes. Water-dependent recreation includes a wide variety of outdoor activities that can be divided into two (2) categories. The first category includes fishing, boating, swimming, and rafting, which occur on lakes, reservoirs, and rivers. The second category includes recreation that is enhanced by water features but does not require actual use of the water, such as wildlife viewing, picnicking, camping, and hiking.
Are there rivers in your region with quantified environmental flow requirements or known water quality/quantity stressors to aquatic life?	No.
Do estuaries, coastal dunes, wetlands, marshes, or exposed beaches exist in your region? If so, are coastal storms possible/frequent in your region?	There are several wildlife refuges within the Kern Region including the Kern National Wildlife Refuge that manages some wetlands. Coastal storms are not possible in the Region, due to its location in the southern San Joaquin Valley.
Does your region include one or more of the habitats described in the Endangered Species Coalition's Top 10 habitats vulnerable to climate change	Yes, the Kern Region's eastern boundary is the southern Sierra Nevada, which is listed on the Top 10 habitats list.
*Are there areas of fragmented estuarine, aquatic, or wetland wildlife habitat within your region? Are there movement corridors for species to naturally migrate? Are there infrastructure projects planned that might preclude species movement**?***	Yes. There are many wildlife habitats in the Kern Region. Most notably is the Kern National Wildlife Refuge which provides habitat for wintering and migrating waterfowl, shorebirds, and marsh birds and also provides habitat for upland and riparian bird species. However, there are no infrastructure projects planned in the Region that are known to preclude species movement.

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Resource Checklist Item	Kern Regional Condition
Hydropower	
Is hydropower a source of electricity in your region?	Yes. Within the Kern Region is the Rio Bravo Hydro Project Hydro Power Plant which has a design capacity of 14 mega watts (MWe). However, most of the energy provided in the Kern Region comes from its 37 high-efficiency cogeneration facilities that produce two sources of energy in the form of steam and electricity.
Are energy needs in your region expected to increase in the future? If so, are there future plans for hydropower generation facilities or conditions for hydropower generation in your region?	Yes. Energy needs in the Region will increase in the future as a result of several factors, which include changes in land use from agricultural uses to urban uses, increasing population and increases in groundwater pumping. However, the Kern Region has a variety of efforts planned to reduce energy use, and to develop local energy supply sources. These efforts include utilization of renewable resources, such as wastewater treatment plant digester gas recovery, hydropower, and solar power.

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1.4.1 Vulnerability Prioritization

This section discusses a list of prioritized vulnerabilities based on stakeholder input on the importance of these sectors to the Kern Region. The watershed vulnerability assessment identifies the water resource characteristics for each sector most vulnerable to potential climate change projections. The Region can use the assessment results to prioritize the sectors with vulnerabilities and develop adaptive strategies to respond to potential climate change impacts. The sector vulnerability prioritization is defined as follows (1 being the sector most prioritized [high risk] and 4 being the sector least prioritized [low risk] with respect to climate change vulnerability):

1. Water Supply; Water Quality
2. Water Demand; Flooding
3. Ecosystem and Habitat
4. Sea Level Rise and Hydropower

The vulnerability assessment and prioritization was conducted based on the *Climate Change Vulnerability Checklist* provided as Table 4, data currently available and inputs from the stakeholders involved in the preparation of this study for the Kern Region. This assessment can be improved in the future with further data gathering and analyzing of the prioritized vulnerabilities.

1.5 Climate Change Adaptations

The Kern IRWMP (Plan) identifies strategies to address adapting and mitigating the general effects of climate change. The objectives for the Kern Region address adapting and mitigating the general effects of climate change, including changes in the amount, intensity, timing, quality, and variability of runoff and recharge. These “no regrets” adaptations recognize the current water management context for the region. In addition, mitigation strategies addressed by the objectives for the Kern IRWMP include energy efficiency improvements, emissions reductions, and carbon sequestration through vegetation growth. The Climate Change Handbook (DWR, 2011) was used to help develop these adaptation and mitigation strategies, which are listed in Table 10-2 in the November 2011 Kern IRWM Plan.

For this technical memorandum, potential adaptation strategies have been grouped by water resource and priorities developed in the climate change vulnerability analysis. This approach will allow the Kern Region to incorporate climate change adaptation and GHG mitigation measures in projects developed and evaluated as part of the IRWMP process. While the focus of this discussion is adaptation, some of the adaptation strategies will overlap with and enhance GHG mitigation measures.

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1.5.1 Vulnerability Priority 1 (Highest) Sectors: Water Supply and Water Quality

Water supply and water quality were identified as the highest priority sectors that could potentially be impacted by climate change. The potential impacts due to climate change and the suggested regional adaptation strategies are summarized below.

1.5.1.1 Water Supply

Climate change projections suggest continued highly variable annual precipitation with slightly drier climate by mid-century. The overall impact will include reductions in Kern River, SWP and CVP imported water and greater reliance on groundwater supplies with the potential to affect long-term planning.

Suggested Regional adaptation strategies to address potential reductions in water supply include the following:

- Expand water storage and conjunctive management of surface and groundwater resources.
- Encourage local projects to increase regional self-reliance.
- Enhance use of recycled water for appropriate uses as a drought-proof water supply.
- Enhance practices of water exchanges and water banking outside the Region to supplement water supply.
- Encourage local agencies to develop and implement AB 3030 Groundwater Management Plans as a fundamental component of the IRWM plan.
- Develop plans for local agencies in the Kern Region to monitor the elevation of their groundwater basins.
- Encourage cities and the county agencies in the Kern Region to adopt local ordinances that protect the natural functioning of groundwater recharge areas.

1.5.1.2 Water Quality

Climate change projections suggest increased temperature and continued highly variable annual precipitation with slightly drier climate by mid-century that could degrade water quality.

Suggested Regional adaptation strategies to address potential water quality impacts include the following:

- Consider water quality improvements associated with water transfers and water banking on Regional water supply.

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- Encourage projects (ex. conjunctive use) that improve water quality of contaminated groundwater sources.
- Increase implementation of low impact development (LID) techniques to improve stormwater management.
- Comply with NPDES permits to ensure water quality protection.

1.5.2 Vulnerability Priority 2 (Second Highest) Sectors: Water Demand and Flooding

Water demand and flooding were identified as the second highest priority sectors that could potentially be impacted by climate change. The potential impacts due to climate change and the suggested regional adaptation strategies are summarized below.

1.5.2.1 Water Demand

Climate change projections suggest increases in average annual air temperature by mid-century and increased evaporative losses are expected to increase both urban and agricultural water demand. Suggested Regional adaptation strategies to address potential increases in water demand include the following:

- Aggressively increase cost effective water use efficiency.
- Encourage agricultural users to adopt efficient water management practices.
- Encourage landscape water users to adopt efficient water management practices, including xeriscaping.

1.5.2.2 Flooding

Climate change projections are not sensitive enough to assess short term extreme events such as flooding, but the general expectation is that more intense storms will occur. Suggested Regional adaptation strategies to address potential increases in flood risk include:

- Improve emergency preparedness and response capacity in anticipation of potential increases in extreme events.
- Practice and promote integrated flood management among water and flood management agencies.
- Flood management should be integrated with watershed management on open space, agricultural, wildlife areas, and other low-density lands.
- Avoid significant new development in areas that cannot be adequately protected from flooding.

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- Encourage land use policies including LID that maintain or restore historical hydrological characteristics.

- Development of a Kern Region Flood Protection Plan.

1.5.3 Vulnerability Level 3 (Third Highest) Sector: Ecosystem and Habitat

Ecosystem Health and Habitat was identified as the third highest priority sector category that could potentially be impacted by climate change. The potential impacts due to climate change and the suggested regional adaptation strategies are summarized below. Climate change projections of increasing annual average temperature suggest potential environmental stressors that may affect the sustainability of existing ecosystems and habitat. Suggested Regional adaptation strategies to address potential Ecosystem Health and Habitat impacts include the following:

- 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.

1.5.4 Vulnerability Priority 4 (Lowest) Sectors: Sea Level Rise and Hydropower

Sea level rise and hydropower were identified as the lowest priority sectors for the Kern Region.

1.5.4.1 Sea Level Rise

Climate change projections suggest sea level rise off most of the California Coast of over half a meter by mid-century and by about one meter by the end of the century. Suggested Regional adaptation strategies to address potential reductions in water supply include the following:

- Support DWR/USBR strategies that minimize the impact of sea level rise on salinity intrusion into the Delta and impact water quality deliveries in the SWP and CVP.

- Support DWR/USBR strategies for protecting levees in the Delta from the potential effects of projected sea level rise.

1.5.4.2 Hydropower

Climate change projections suggest continued highly variable annual precipitation with slightly drier climate by mid-century, affecting hydropower generation. Strategies to address potential reductions in hydropower include the following:

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- Support alternative economically viable energy projects within the region including solar energy and wind energy.

1.6 Data Gaps and Next Steps

1.6.1 Data Improvement

The climate change assessment conducted in this Plan update is qualitative in some areas due to limited data, high level of uncertainty, and, in some cases, because impacts to a given sector are not expected to be severe. The intent of future data gathering is to address gaps in the current vulnerability assessment, to improve the understanding of climate change impacts and vulnerabilities, and to enable a more quantitative analyses. Recommended future data gathering efforts will include data that facilitate more quantitative analysis of the vulnerability, as described in the following sections. Data gathering efforts will be considered in the context of the current and proposed projects and funding available.

This section describes potential areas of future data gathering efforts for the priority sectors identified earlier. The recommendations focus on the top four priority sectors; namely, water supply, water quality, water demand, and flooding. The lower priority sectors include ecosystem health and habitat and fire, which require a lesser degree of data collection. Climate change vulnerability of ecosystem health and habitat is difficult to quantify, and reliance on generalized studies will likely satisfy the Region's needs. Thus, the Kern Region should prioritize data gathering efforts for the sectors most vulnerable to climate change impacts.

1.6.1.1 Climate Change Models and Scenarios

Cal-Adapt modeling results for the Kern Region were used for projections of temperature, ET, precipitation, and runoff for the Region. The California Energy Commission maintains the Cal-Adapt site and will update the modeling tools as new climate change modeling results, based on more refined data, become available from the ICCC. Thus, to the extent feasible, the available climate change tools and projections for the Region will be reviewed periodically and the vulnerability assessment updated in future versions of the Plan.

1.6.1.2 Updates on Climate Change Research

Research on the climate change impacts on water resources is ongoing and continues to evolve with further analysis and more refined methodologies. During the preparation of this Plan update, key literature resources on climate change have been reviewed. New scientific findings will be reviewed periodically and incorporated into the climate change vulnerability assessment, especially the findings pertinent to the sectors most vulnerable to the climate change in the Region.

1.6.1.3 Vulnerability Assessment Update

As noted above, a goal of further data collection is to enable a more quantitative analysis of the high priority watershed sectors that are more vulnerable to climate change in future Plan updates. Water supply and water quality were identified as the highest priority sectors and

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water demand and flooding were identified as the second highest priority sectors that could potentially be impacted by climate change.

1.6.1.4 Water Demand

Cal-Adapt projections suggest water demand in the Region is likely to increase as a result of higher temperature with the greatest temperature increase anticipated during dry months compared to wet months. Historical records of annual water demand data currently available are not specific enough to quantify the effects from increasing temperature. As discussed earlier in the vulnerability assessment, the most important effect of changing weather conditions is likely to be on agricultural demand, but the overall effects on agricultural water demand is uncertain.

Suggestions for future data gathering efforts to quantify the climate change effects on municipal and agricultural water demand include the following:

- Collect and analyze historical monthly records of water demand data for the Region to quantify the weather effects on water use and seasonal variations in response to changes in historical temperature.
- Collect and analyze historical monthly records of water demand data for each purveyor in the Region to demonstrate purveyor-specific patterns in response to changes in climate.
- Based on the water demand and temperature data, develop a regression analysis correlating water demand to temperature on a monthly or seasonal basis for the Region and each purveyor. The historical response can be used to infer future response with the projected changes in temperature with climate change.
- Characterize the variations in indoor and outdoor water use, both for the Region and each purveyor. Future data gathering should focus on the seasonal and monthly patterns both in indoor and outdoor usage to evaluate the effects of weather conditions on each use category.
- Collect and analyze historical agricultural water demand to quantity the weather effects on water use and seasonal variations in response to changes in historical temperature.
- Identify the major industries in the Region that require cooling and/or process water. As water temperature increases, cooling water needs may also increase.

1.6.1.5 Water Supply

Future assessment of water supply climate change vulnerability will incorporate the most up-to-date data available from DWR and the most current groundwater supply availability. Suggestions for future data gathering efforts to quantify the climate change effects on water supply include the following:

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- Update DWR SWP Delivery Reliability Report projections - DWR provides an updated analysis and report every two years.

- Review or request other reports (e.g., USBR, Army Corp of Engineers, etc).

- Update available groundwater supply projections – Groundwater production in a given year varies depending on hydrologic conditions. Changes in local hydrology and natural recharge are anticipated to have a direct impact on available groundwater storage and may affect current safe operating ranges. Updates on the groundwater safe operating ranges will be needed when further assessments of water supply vulnerability to climate change are performed for future Plan updates.

- Evaluate the effects of reduction in precipitation from climate change on the groundwater operational ranges and quantify the potential reduction in groundwater supply due to reduction in precipitation from climate change.

1.6.1.6 Water Quality

Collection of historical water quality data within the Region would greatly improve the understanding of Regional water quality and how it may be impacted by climate change. For imported SWP water, the vulnerability analysis relied on DWR projections of water quality impacts in the Delta due to sea level rise and increases in salinity. Future analyses will incorporate updated DWR or other agency studies on the potential impacts of climate change on SWP quality.

Suggestions for future data gathering efforts to quantify the climate change effects on water quality include:

- Monitor future and collect historical water quality data within the Region during storm events.

- Develop a long-term water quality record for the Kern River that would assist in improving the understanding of Regional water quality.

- Collect long-term weather records associated with air temperature, precipitation, and ET to assess potential correlations with seasonal water quality.

- Develop, to the extent possible, a long term surface/ground/aerial deposition model that can be continuously updated and refined with newly available data. Model should be ready accessible to stakeholders and in a user-friendly format to allow better understanding of trends over time.

1.6.1.7 Flooding

A quantitative assessment of the potential impacts of climate change on flooding cannot be performed as climate projections are not sensitive enough to project short-term extreme events such as flooding. Rather, the 100-year and 500-year floodplains were used to define flooding risk zones that should be considered in location of water infrastructure.

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Suggestions for future data gathering efforts to address the potential climate change effects on flooding include the following:

- Perform an inventory of runoff monitoring stations in the Region to see if a more robust runoff record can be developed. Those data may allow an analysis of historical storm events correlated with precipitation events as well as annual precipitation to provide a better understanding of conditions that may lead to more extreme flooding conditions.

As recommended by DWR's Climate Change Handbook for Regional Water Planning, future work should focus on gathering the 200-year floodplain maps for the Region after DWR develops them under the authorization of Senate Bill 5 (SB 5) enacted in 2007. Currently, the 100-year and 500-year floodplain maps are available from FEMA. Additional information on the DWR's Best Available Maps (BAM) program can be found at the following website: http://gis.bam.water.ca.gov/bam/.

- Coordinate with the Region stakeholders for advanced flood preparation and quick response and document the protocol(s).

- Perform an inventory of critical infrastructure located in floodplains, especially those that were impacted during the historical flood events in 1969 and 1983.

- Update the projections of runoff with climate change as updates from Cal-Adapt become available.

- Work with local flood plain managers and/or equivalent to determine areas of concern as information from FEMA evolves.

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Appendix A

Climate Change Vulnerabilities Prioritization

August 2014 Kern Region Stakeholder Meeting Minutes

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Agenda

Climate Change Vulnerabilities Prioritzation

Kern IRWMP Objectives	Climate Change Vulnerabilities	Prioritization (High, Medium, Low)
Increase Water Supply		
Through cooperation and collaboration with other regions restore water supplies to levels that will mitigate for water lost from the region and eliminate overdraft	Water Supply	H
Pursue and implement cost effective water use efficiency programs	Water Demand	M
Increase water storage capacity in the region by increasing recharge acreage and expanding groundwater banking programs before all prime recharge land has been developed	Water Supply, Sea Level Rise	H
Integrate management of water banking facilities to maximize conjunctive use over the planning horizon	Water Supply	H
Increase/augment water supplies to meet region demands (e.g., M&I, agricultural, environmental) by 2050.	Water Supply, Sea Level Rise	H
Improve Operational Efficiency		
Increase transfers and exchanges flexibility over the planning horizon	Water Supply	H
Create tools to re-regulate water supplies within the region, including storage, storm flows, and operational flows over the planning horizon	Water Supply	H
Increase distribution efficiencies and reduce energy usage over the planning horizon	Water Demand	M
Increase the use of alternate energy sources (e.g., solar)	Hydropower	M
Replace aging infrastructure to reduce system water losses, improve operational efficiencies, and reduce service interruptions	Water Supply, Flooding	M
Increase the use of recycled water for direct reuse within the Kern Region	Water Supply, Water Demand, Water Quality	M
Optimize local management of water resources to improve water supply reliability over the planning horizon	Water Supply	H
Increase pool of qualified candidates to operate water and wastewater systems	Water Quality	L
Improve Water Quality		
Monitor and/or manage headwaters/areas of origin, natural streams, and recharge areas to prevent or mitigate contamination	Ecosystem and Habitat, Water Quality	M
Identify and preserve prime recharge areas in the Kern fan area and other areas	Water Supply, Water Quality	H
Improve water quality for DACs and the watershed over the planning horizon	Water Supply, Water Quality	H
Continue to provide drinking water that meets or exceeds water quality standards; and support efforts to attain appropriate standards throughout the planning horizon	Water Supply, Water Quality	H
Maximize the use of lesser quality water for appropriate uses (landscaping, certain ag crops, “aesthetic” projects) throughout the planning horizon	Water Supply, Water Quality	M
Coordinate and enhance aquatic pest control efforts from this point forward	Ecosystem and Habitat, Water Quality, Water Supply	M
Promote Land Use Planning and Resource Stewardship		
Promote stewardship of the Kern River by applying appropriate measures in various reaches of the river from this point forward	Ecosystem and Habitat	M
Encourage the removal of non-native invasive plant species that affect water quality, reliability, and operations	Ecosystem and Habitat, Water Supply, Water Quality	M
Identify and promote the regeneration and restoration of native riparian habitat	Ecosystem and Habitat	M
Coordinate agricultural and urban water suppliers to more effectively address land use planning issues from this point forward	Habitat, Water Demand, Water Supply	M
Improve the linkage between land use planning and water supply in the region throughout the planning horizon	Ecosystem and Habitat, Water Supply	H
Increase educational opportunities to improve public awareness of water supply, conservation, and water quality issues throughout the planning horizon	Ecosystem and Habitat, Water Supply, Water Demand, Water Quality	H
Improve and coordinate integrated land use planning to support stewardship of environmental resources, such as the Kern River and Kern Fan, and integrate with habitat conservation plans and other ongoing planning efforts from this point forward	Ecosystem and Habitat, Water Supply	M
Preserve and improve ecosystem/watershed health throughout the planning horizon	Ecosystem and Habitat	M
Improve Regional Flood Management		
Improve regional flood management by addressing preparedness, response, and post flood actions throughout the planning horizon	Flooding	M
Reduce the effects of poor quality runoff throughout the planning horizon	Flooding. Water Quality	M
Identify and promote innovative flood management projects to protect vulnerable areas	Flooding	H
Plan new developments to minimize flood impacts from this point forward	Ecosystem and Habitat, Flooding	M

Agenda

Tulare Lake Basin Portion of Kern County
Integrated Regional Water Management Plan

August 25, 2014 - 1:00 pm – 3:00 pm
Kern County Water Agency
Stuart T. Pyle Water Resources Center
3200 Rio Mirada Drive, Bakersfield, CA 93308

Meeting Objectives:

- Recommendations from DWR Plan Review Process:
- Climate Change Vulnerability Assessment Prioritization

PARTICIPANTS MEETING AGENDA

1:00	**I**	**Welcome and Introductions – Executive Committee Chair** Meeting purpose and agenda *A quorum of the EC was present as follows: Bill Taube, Chair, Regina Houchin, Jon Curry, Greg Fenton, and Lauren Bauer.*
1:05	**II**	**General Information Items** A. Revised/Updated Participant Funding Agreement – Lauren Bauer *Lauren described the process for obtaining indications from all signatories that they would be willing to execute the "First Amendment to the Agreement with KCWA for IRWM Plan Management Services." An email request for comments on the form of the agreement is currently being conducted; comments are due by COB September 1, 2014. After the Amendment is finalized, an email poll of signatories regarding their wiliness to execute will be conducted.*
1:20	**III**	**Funding Opportunities - KJ/P&P Team** A. Water Energy Draft PSP - $19M B. Update on Emergency Drought Funding Application *Mary Lou Cotton of Kennedy/Jenks Consultants gave a brief update on these items and referred to a handout of DWR's compiled list of applicants for the Emergency Drought Funding.*
1:30	**IV**	**IRWM Plan Status – KJ** ***A.*** Kern IRWM Plan DWR Plan Review Recommendations: Climate Change Vulnerability Assessment Prioritization – KJ and EC Members *Mary Lou described the draft Climate Change Technical Memo and Vulnerability Assessment table that were sent to the participants on August 20. She then described the Vulnerability Assessment and prioritization process, and led the group through a discussion of the vulnerabilities that could potentially impact the Tulare Lake Basin Portion of Kern County Region. The group collectively discussed and agreed upon the prioritization of the vulnerabilities, and directed Mary Lou to include it as part of the Climate Change package to be submitted to DWR by September 9, 2014.*
2:00	**V.**	**Public Comment** *Representatives from the Community Water Center reported that the Tulare Lake Basin Disadvantaged Community Study is ready and will be presented to the Tulare County Board of Supervisors on September 9. A draft of the report (prepared by Provost & Pritchard) is available on the Tulare County website. The report contains recommendations regarding DACs for various IRWM Regions.*
		Close

Appendix D

Table C.15 and Table C. 16 - Kern County WA: 2015 DCR ELT

Table C.15. Kern County WA-AG: 2015 DCR ELT

SWP Table A Deliveries for 2015 Study					Probability Curve			
Year	Delivery w/o Article 56 Carryover (TAF)	Article 56 Carryover (TAF)	Total Table A Delivery (TAF)	Percent of Maximum Table A	Year	Total Table A Delivery (TAF)	Exceedence Frequency (%)	Percent of Maximum Table A
1922	616	0	616	73%	1938	848	0%	100%
1923	525	0	525	62%	1958	848	1%	100%
1924	148	0	148	17%	1969	848	2%	100%
1925	401	0	401	47%	1969	848	4%	100%
1926	414	0	414	49%	1969	848	5%	100%
1927	551	0	551	65%	1980	847	6%	100%
1928	648	0	648	76%	1952	822	7%	97%
1929	150	0	150	18%	1998	795	9%	94%
1930	402	0	402	47%	1956	753	10%	89%
1931	167	0	167	20%	1967	745	11%	88%
1932	399	0	399	47%	1941	733	12%	86%
1933	294	0	294	35%	1995	733	14%	86%
1934	235	0	235	28%	1984	732	15%	86%
1935	554	0	554	65%	1978	731	16%	86%
1936	625	0	625	74%	1997	721	17%	85%
1937	628	0	628	74%	1943	718	19%	85%
1938	848	0	848	100%	1951	672	20%	79%
1939	219	0	219	26%	1973	662	21%	78%
1940	562	0	562	66%	1986	651	22%	77%
1941	733	0	733	86%	1928	648	23%	76%
1942	632	0	632	74%	1974	636	25%	75%
1943	718	0	718	85%	1979	635	26%	75%
1944	336	0	336	40%	1942	632	27%	74%
1945	629	0	629	74%	1945	629	28%	74%
1946	591	0	591	70%	1937	628	30%	74%
1947	388	0	388	46%	1936	625	31%	74%
1948	438	0	438	52%	1922	616	32%	73%
1949	357	0	357	42%	1996	616	33%	73%
1950	471	0	471	56%	1970	611	35%	72%
1951	672	0	672	79%	2000	607	36%	72%
1952	822	0	822	97%	1975	602	37%	71%
1953	438	0	438	52%	1946	591	38%	70%
1954	536	0	536	63%	1965	589	40%	69%
1955	380	0	380	45%	1963	579	41%	68%
1956	753	0	753	89%	1985	567	42%	67%
1957	436	0	436	51%	1999	564	43%	67%
1958	848	0	848	100%	1966	564	44%	66%
1959	397	0	397	47%	1940	562	46%	66%
1960	392	0	392	46%	1971	556	47%	66%
1961	191	0	191	22%	1935	554	48%	65%
1962	501	0	501	59%	1927	551	49%	65%
1963	579	0	579	68%	1954	536	51%	63%
1964	404	0	404	48%	1993	525	52%	62%
1965	589	0	589	69%	1923	525	53%	62%
1966	564	0	564	66%	1962	501	54%	59%

Agenda

SWP Table A Deliveries for 2015 Study					Probability Curve			
Year	Delivery w/o Article 56 Carryover (TAF)	Article 56 Carryover (TAF)	Total Table A Delivery (TAF)	Percent of Maximum Table A	Year	Total Table A Delivery (TAF)	Exceedence Frequency (%)	Percent of Maximum Table A
1967	745	0	745	88%	1989	497	56%	59%
1968	461	0	461	54%	1950	471	57%	56%
1969	848	0	848	100%	1968	461	58%	54%
1970	611	0	611	72%	2003	461	59%	54%
1971	556	0	556	66%	1972	440	60%	52%
1972	440	0	440	52%	1948	438	62%	52%
1973	662	0	662	78%	1953	438	63%	52%
1974	636	0	636	75%	1957	436	64%	51%
1975	602	0	602	71%	1926	414	65%	49%
1976	368	0	368	43%	1964	404	67%	48%
1977	68	0	68	8%	1930	402	68%	47%
1978	731	0	731	86%	1925	401	69%	47%
1979	635	0	635	75%	1932	399	70%	47%
1980	847	0	847	100%	1959	397	72%	47%
1981	350	0	350	41%	1960	392	73%	46%
1982	848	0	848	100%	1947	388	74%	46%
1983	848	0	848	100%	1955	380	75%	45%
1984	732	0	732	86%	1976	368	77%	43%
1985	567	0	567	67%	1949	357	78%	42%
1986	651	0	651	77%	1981	350	79%	41%
1987	173	0	173	20%	1944	336	80%	40%
1988	122	0	122	14%	2002	328	81%	39%
1989	497	0	497	59%	1933	294	83%	35%
1990	131	0	131	16%	1994	264	84%	31%
1991	132	0	132	16%	2001	239	85%	28%
1992	137	0	137	16%	1934	235	86%	28%
1993	525	0	525	62%	1939	219	88%	26%
1994	264	0	264	31%	1961	191	89%	22%
1995	733	0	733	86%	1987	173	90%	20%
1996	616	0	616	73%	1931	167	91%	20%
1997	721	0	721	85%	1929	150	93%	18%
1998	795	0	795	94%	1924	148	94%	17%
1999	564	0	564	67%	1992	137	95%	16%
2000	607	0	607	72%	1991	132	96%	16%
2001	239	0	239	28%	1990	131	98%	16%
2002	328	0	328	39%	1988	122	99%	14%
2003	461	0	461	54%	1977	68	100%	8%
Average	**505**	**0**	**505**	**60%**		**505**		**60%**
Maximum	**848**	**0**	**848**	**100%**		**848**		**100%**
Minimum	**68**	**0**	**68**	**8%**		**68**		**8%**

Table C.16. Kern County WA-MI: 2015 DCR ELT

SWP Table A Deliveries for 2015 Study					Probability Curve			
Year	Delivery w/o Article 56 Carryover (TAF)	Article 56 Carryover (TAF)	Total Table A Delivery (TAF)	Percent of Maximum Table A	Year	Total Table A Delivery (TAF)	Exceedence Frequency (%)	Percent of Maximum Table A
1922	98	0	98	73%	1969	135	0%	100%
1923	83	0	83	62%	1938	135	1%	100%
1924	24	0	24	18%	1938	135	2%	100%
1925	64	0	64	47%	1938	135	4%	100%
1926	66	0	66	49%	1982	135	5%	100%
1927	88	0	88	65%	1980	134	6%	100%
1928	103	0	103	76%	1952	130	7%	97%
1929	25	0	25	18%	1998	126	9%	94%
1930	64	0	64	47%	1943	125	10%	92%
1931	27	0	27	20%	1956	120	11%	89%
1932	63	0	63	47%	1967	118	12%	88%
1933	48	0	48	36%	1995	118	14%	87%
1934	39	0	39	29%	1941	116	15%	86%
1935	88	0	88	65%	1984	116	16%	86%
1936	99	0	99	74%	1978	116	17%	86%
1937	100	0	100	74%	1997	114	19%	85%
1938	135	0	135	100%	1986	108	20%	80%
1939	33	0	33	24%	1951	107	21%	79%
1940	89	0	89	66%	1973	105	22%	78%
1941	116	0	116	86%	1928	103	23%	76%
1942	100	0	100	74%	1974	101	25%	75%
1943	125	0	125	92%	1979	101	26%	75%
1944	54	0	54	40%	1942	100	27%	74%
1945	100	0	100	74%	1945	100	28%	74%
1946	94	0	94	70%	1937	100	30%	74%
1947	51	0	51	38%	1936	99	31%	74%
1948	70	0	70	52%	1922	98	32%	73%
1949	57	0	57	42%	1996	98	33%	73%
1950	75	0	75	56%	1970	97	35%	72%
1951	107	0	107	79%	2000	96	36%	72%
1952	130	0	130	97%	1975	95	37%	71%
1953	70	0	70	52%	1946	94	38%	70%
1954	85	0	85	63%	1965	93	40%	69%
1955	60	0	60	45%	1963	92	41%	68%
1956	120	0	120	89%	1999	90	42%	67%
1957	69	0	69	51%	1966	89	43%	66%
1958	135	0	135	100%	1940	89	44%	66%
1959	63	0	63	47%	1971	88	46%	66%
1960	59	0	59	44%	1935	88	47%	65%
1961	29	0	29	21%	1927	88	48%	65%
1962	79	0	79	59%	1954	85	49%	63%
1963	92	0	92	68%	1993	83	51%	62%
1964	58	0	58	43%	1923	83	52%	62%
1965	93	0	93	69%	1985	81	53%	60%
1966	89	0	89	66%	1989	80	54%	60%

Agenda

SWP Table A Deliveries for 2015 Study					Probability Curve			
Year	Delivery w/o Article 56 Carryover (TAF)	Article 56 Carryover (TAF)	Total Table A Delivery (TAF)	Percent of Maximum Table A	Year	Total Table A Delivery (TAF)	Exceedence Frequency (%)	Percent of Maximum Table A
1967	118	0	118	88%	1962	79	56%	59%
1968	73	0	73	54%	1950	75	57%	56%
1969	135	0	135	100%	1968	73	58%	54%
1970	97	0	97	72%	1972	70	59%	52%
1971	88	0	88	66%	1948	70	60%	52%
1972	70	0	70	52%	1953	70	62%	52%
1973	105	0	105	78%	1957	69	63%	51%
1974	101	0	101	75%	1926	66	64%	49%
1975	95	0	95	71%	2003	66	65%	49%
1976	61	0	61	45%	1930	64	67%	47%
1977	11	0	11	8%	1925	64	68%	47%
1978	116	0	116	86%	1932	63	69%	47%
1979	101	0	101	75%	1959	63	70%	47%
1980	134	0	134	100%	1976	61	72%	45%
1981	58	0	58	43%	1955	60	73%	45%
1982	135	0	135	100%	1960	59	74%	44%
1983	135	0	135	100%	2002	59	75%	44%
1984	116	0	116	86%	1964	58	77%	43%
1985	81	0	81	60%	1981	58	78%	43%
1986	108	0	108	80%	1949	57	79%	42%
1987	29	0	29	22%	1944	54	80%	40%
1988	21	0	21	15%	1947	51	81%	38%
1989	80	0	80	60%	1933	48	83%	36%
1990	19	0	19	14%	1994	39	84%	29%
1991	22	0	22	16%	1934	39	85%	29%
1992	32	0	32	24%	2001	38	86%	28%
1993	83	0	83	62%	1939	33	88%	24%
1994	39	0	39	29%	1992	32	89%	24%
1995	118	0	118	87%	1987	29	90%	22%
1996	98	0	98	73%	1961	29	91%	21%
1997	114	0	114	85%	1931	27	93%	20%
1998	126	0	126	94%	1929	25	94%	18%
1999	90	0	90	67%	1924	24	95%	18%
2000	96	0	96	72%	1991	22	96%	16%
2001	38	0	38	28%	1988	21	98%	15%
2002	59	0	59	44%	1990	19	99%	14%
2003	66	0	66	49%	1977	11	100%	8%
Average	**80**	**0**	**80**	**60%**		**80**		**60%**
Maximum	**135**	**0**	**135**	**100%**		**135**		**100%**
Minimum	**11**	**0**	**11**	**8%**		**11**		**8%**

Appendix E

Groundwater Adjudication Judgments

Bear Valley CSD Groundwater Management Plan

To be included in Final Plan

Appendix F

Water Shortage Contingency Plans, Resolutions, and Ordinances

Agenda

RESOLUTION NO. 20-11

A RESOLUTION OF THE BOARD OF DIRECTORS OF TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT AMENDING THE RULES AND REGULATIONS FOR THE SALE, USE AND DISTRIBUTION OF WATER

I. Recitals.

(i) California Water Code Section 31024 provides that a county water district may establish rules and regulations for the sale, distribution, and use of water and may provide that water shall not be furnished to persons against whom there are delinquent water rates.

(ii) By Resolution No. 15-76, the District first adopted rules and regulations for the sale, use and distribution of water ("Rules and Regulations") which have been amended from time to time thereafter.

(iii) The Rules and Regulations need to be amended to adopt a new form of Term M&I Agreement for recharge water customers.

II. Resolution.

NOW, THEREFORE, be it found, determined and resolved by the Board of Directors of Tehachapi-Cummings County Water District as follows:

1. Each of the above recitals is true and correct and the Board so finds and determines.

2. Section 1 of Part C of the Rules and Regulations is hereby amended to read as follows:

> "Section 1. Contents. Except in circumstances requiring other forms of agreement, as determined by the Board in its discretion, Term M&I Agreements for surface delivery of SWP water shall be substantially in form and content as set forth in Appendix 1 hereto and Term M&I Agreements for subsurface delivery of recharged SWP water shall be substantially in form and content as set forth in Appendix 2 hereto."

3. Appendix 2, as referred to in Section 1 of Part C as amended above, is attached hereto.

4. Section 3 of Part C of the Rules and Regulations is hereby deleted.

ADOPTED and APPROVED this 21st day of December, 2011.

Harry M. Cowan, President

ATTEST:

Lori Bunn, Secretary

SECRETARY'S CERTIFICATE

I, LORI BUNN, Secretary to the Board of Directors of the Tehachapi-Cummings County Water District, do hereby certify that the foregoing Resolution was introduced at a Regular Meeting of the Board of Directors of said District, held on the 21st day of December, 2011 and was adopted at that meeting by the following vote:

Lori Bunn, Secretary

AYES: Cowan, Hadley, Hall, Prel and Schultz

NOES: None

ABSTAIN: None

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TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

RULES AND REGULATIONS
FOR THE SALE, USE AND DISTRIBUTION OF WATER

PART A. DEFINITIONS. The following terms, as used in all parts of these Rules and Regulations shall have the following meanings, unless the context requires another meaning.

Section 1. "District" – Tehachapi-Cummings County Water District.

Section 2. "Agricultural water" - water used primarily in the commercial production of agricultural crops or livestock, including domestic use incidental thereto, on tracts of land operated in units of more than two (2) acres.

Section 3. "M&I water" - water used for any use so that the same is not agricultural water within Section 2 hereof.

Section 4. "General Manager" - the General Manager of District, or in the event of his absence the employee designated by the Board of Directors of District to assume the General Manager's duties.

Section 5. "Person" - any natural person or artificial person, including but not limited to, a partnership, corporation, association, public entity or any other type of entity.

Section 6. "Term M&I Agreement" - a written agreement entered into between District and a water user or prospective water user wherein that person agrees to purchase water from District for a term and with provisions as provided for in Part C, Section 1 of these Rules and Regulations.

Section 7. "These Rules and Regulations" or "Hereof" or Other Words Referring to these Rules and Regulations or Some Part or Section Hereof – these Rules and Regulations as amended from time to time and any successor Rules and Regulations as amended from time to time.

Section 8. "Water User" - any person whose application for water service has been approved by the General Manager and which applicant has complied with all provisions of these Rules and Regulations precedent to entitling him to commencement of water service.

Section 9. "Prospective Water User" - a person desiring water service from District, but who is not yet a water user within the preceding definition.

Section 10. "Board" – The Board of Directors of the District.

APPENDIX 1

PART B. RATES.

Section 1. Setting Rates.

The Board from time to time shall by resolution set rates for water sold by the District. Rates shall be set for the following categories:

(a) M&I water delivered pursuant to a Term M&I Agreement;

(b) M&I water delivered other than pursuant to a Term M&I Agreement;

(c) Agricultural water.

The Board shall establish appropriate recharge surcharges for any of the above categories where the water user pumps recharged water in lieu of taking delivery on the surface. Such recharge surcharges shall be set to recover the unreimbursed capital costs of acquiring and constructing recharge facilities and the costs of maintaining and operating such facilities. The recharge surcharge shall also include the cost of imported water lost on account of evaporation, phreatophyte consumption or any other losses incurred in the transportation and spreading of recharge water.

Section 2. General Policies Governing Rate Setting.

In setting rates, the Board shall consider the following general policies adopted on account of facts and circumstances unique to the District:

(i) The District purchases State Water Project ("SWP") water from the Kern County Water Agency ("KCWA") pursuant to the two written contracts, both dated December 16, 1966 (the KCWA Contracts"), one for up to 15000 AF of M&I water, the other for up to 5000 AF of Agricultural water. The KCWA Contracts obligate the District to pay a specified percentage of (a) KCWA's "fixed obligations" (i.e., "the capital cost and minimum operation, maintenance, power and replacement components of the Delta Water Charge and Transportation Charge") to the State Department of Water Resources ("DWR") under the "Master Contract" between DWR and KCWA, and (b) KCWA's "variable obligations" (i.e., "the variable operation, maintenance, power and replacement components of the Transportation Charge") applicable to delivering the District's Table 1 entitlement to the District's turnout in Reach 16 of the California Aqueduct. The District's "fixed obligations" to KCWA must be paid irrespective of the quantity of SWP water actually delivered. In other words, the District must pay its share of "fixed obligations" even if DWR is unable to deliver any SWP water.

(ii) From its turnout in the California Aqueduct, the District lifts SWP water some 3425 feet by means of four pump stations and 31 miles of transmission lines into its storage reservoir in Brite Valley. The District's main transmission line continues eastward through Tehachapi Valley and ends in Oak Creek Canyon at California Portland Cement Company's plant. The District also owns and operates various distribution lines, recharge facilities in the Tehachapi and Cummings Basin, and water wells as part of its Imported Water System.

(iii) Pursuant to the holding of Fourth District Court of Appeal in *Goodman v. County of Riverside* (1983) 140 Cal.App.3d 900, the District's obligations to the KCWA under the KCWA Contracts are prior voter approved indebtedness and, consequently, the District may levy ad valorem real property taxes to meet the District's obligations, in whole or in part, to the KCWA under the KCWA Contracts.

(iv) The full cost of SWP water purchased by the District from the KCWA pursuant to the KCWA Contracts and pumped and delivered through the Imported Water System far exceeds the ability of either M&I or Agricultural customers to pay. It is the policy of the District to set water rates such that M&I and Agricultural users in the aggregate pay the full cost of operating and maintaining the District's Imported Water System, including reasonable reserves for repairs and replacement, less a major portion of the District's share of the 1% general ad valorem tax levy. It is additionally the policy of the District, on account of the benefit to property owners District-wide bestowed by the SWP water supply made available pursuant to the KCWA Contracts, to levy ad

valorem taxes each year to meet the District's annual obligations under the KCWA Contracts.

(v) In setting rates for M&I water, it is the policy of the District that the rate for M&I water delivered other than pursuant to a Term M&I Agreement (the "normal M&I rate") shall be set to recover the full cost to the District of purchasing and delivering such water on a non-scheduled occasional demand basis, including all costs under the KCWA Contracts. The rate for M&I water sold pursuant to a Term M&I contract or other contractual basis shall be set at a lower rate than the normal M&I rate on account of the long term contractual commitment of the water user to the District to purchase a portion of the District's Table I entitlement. Further, the ultimate retail purchaser of water sold to wholesale purveyors under Term M&I Agreements pay real property taxes, which support District operations, while non-contract purveyors of M&I water typically are not taxpayers within the District. Further, a lower rate is justified since Term M&I contract customers must schedule their anticipated deliveries six years in advance which assists the District in meeting its obligations to the KCWA under the KCWA Contracts to likewise schedule its deliveries six years in advance.

(vi) As set forth in Part K hereof, the District owns all return flows from SWP water purchased from the KCWA under the KCWA Contracts and imported into the District through the District's Imported Water System. In setting rates for agricultural water, it is the policy of the Board to take into account the fact that the percentage of return flows back into the ground from agricultural water is substantially higher that from M&I uses. It is the policy of the District to avoid, to the extent possible, setting rates higher than the ability of its customers to pay for water since it is in the District's best interests to maximize water sales revenues.

PART C. TERM M&I AGREEMENTS.

Section 1. Contents. Except in circumstances requiring other forms of agreement, as determined by the Board in its discretion, Term M&I Agreements for surface delivery of SWP water shall be substantially in form and content set forth in Appendix 1 hereto and Term M&I Agreements for subsurface delivery of recharged SWP water shall be substantially in form and content as set forth in Appendix 2 hereto.

Section 2. Policy Concerning New Term M&I Customers. Not all of the SWP facilities authorized and necessary for the DWR to deliver all of the KCWA's Table A entitlement under the Master Contract (and necessary for the KCWA to deliver all of the District's Table 1 entitlement under the KCWA Contracts) have been constructed. Recent court decisions adverse to the DWR water supply cast further uncertainty as to the amount and dependability of the District's SWP water supply. It has been and remains the District's policy to routinely extend Term M&I Agreements upon conclusion of their stated terms since the District's wholesale customers and their retail customers have built water distribution systems, homes, businesses and other public and private improvements in reliance on the long term availability of SWP water from the District. Before entering into new Term M&I Agreements or other contracts with new customers, it is the District's policy to carefully consider whether any SWP water under the KCWA Contracts, surplus to the anticipated long term needs of the District's existing Term M&I and other contract customers, exists and will continue to exist during the entire duration of the new customer's anticipated demand. In allocating its available water supply, the District will first meet the reasonable present and future needs of its existing M&I Term customers, other existing contract customers and existing agricultural customers. If and when such needs cannot be met, it is District's policy that new customers, as a condition of service, shall provide the District with such additional water supply as needed to meet such customer's long term water requirements.

PART D. WATER SERVICE; APPLICATIONS; CONNECTION AND RECONNECTION CHARGES; DEPOSITS. Water service will be furnished in accordance with the policy and rules herein adopted and the connection and reconnection charges herein established, subject to all other provisions of these Rules and Regulations.

Section 1. District Service Policy: Domestic Use. It is the current policy of District to act as a wholesaler of water and not as a retailer, i.e., to transmit such water and not to distribute the same. It shall be consistent with this policy to provide agricultural water service to users who connect at their own expense to District's transmission facilities from time to time. Except for sales to "Exchangees" pursuant to the Amendment to Judgment in the Tehachapi Basin case[1], the District will provide M&I water service only to: (a) entities or persons constituting recognized public purveyors, including public agencies, public utilities under the jurisdiction of the Public Utilities Commission, and mutual water companies; (b) entities or persons for industrial and other non-domestic uses; and (c) for agricultural direct use but for ultimate M&I use under an approved exchange agreement. Included in (a) above shall be improvement districts, whether of this District or other public entities, established to furnish water service to the public. Transmission facilities additional to those now provided for may be provided by District from time to time in the discretion of the Board, and it shall be in the discretion of the Board to determine whether and to what extent any particular proposed facility is a transmission facility.

Section 2. Point of Service. Except as additional turnouts are authorized by the Board, all services shall be from existing turnouts, and from the turnout as determined by the General Manager after consultation with the prospective water user.

Section 3. Preliminary Information; Past Due Amounts. Prior to filing with District an application for service, the prospective water user shall furnish in writing to District, on a form which the General Manager shall prepare, information from which the General Manager may determine the size of service required and the turnout at which service would be provided, any special facilities required to provide service, and whether the prospective water user or owner of the property on which the water will be used owes any past due charges of any kind to District, or whether there is a lien on said property for any such charges. If there exists any such past due charges or lien, no application for service shall be accepted for filing unless such amounts, together with all interest, are first paid.

Section 4. Application. Each prospective water user ("applicant") must make an application for the service desired. Except where a water purveyor is the applicant, each application for service shall be jointly signed by all the persons constituting the owner of the property on which the water is to be used ("owner" collectively hereafter in these Rules and Regulations) and in the event the prospective water user is not the owner, by such owner and prospective water user, and they shall all be jointly and severally liable for all water charges and other charges. Application shall be made at District's office (presently located at 22901 Banducci Road, Tehachapi, California, 93561). Where the prospective water user is not the owner, District's General Manager is given discretion to waive such requirement that the owner sign, provided that the prospective water user shall provide a deposit equivalent to two (2) months' charges as estimated by District's General Manager (which required deposit may be revised from time to time based on experience). If the prospective water user desires to have a refund of the deposit, he may do so by having a duplicate original of the application executed by the owner and by himself, and filing the same with District. Each such application shall contain the following information, in addition to such other information as may be provided for on said form by the General Manager: (1) Name and address of applicant; (2) Date of application; (3) Location of the premises upon which the water will be used; (4) Date service is requested to be commenced; (5) The purpose for which the water is to be used; (6) Prospective water user's mailing address, if different from the first address listed; (7) a copy of the vesting deed shall be attached; (8) The turnout from which service is requested, which shall be as determined by the General Manager; (9) The size service requested, which shall be as determined by the General Manager; and (10) as to M&I service, whether a Term M&I Agreement is desired. The application shall be accompanied by all required charges required prior to the furnishing of service. Above the

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[1] *Tehachapi-Cummings County Water District v. City of Tehachapi, etc, et al.*, Kern County Superior Court Case No. 92710.

applicant's signature shall be contained the following in type or print of a size or style to fairly distinguish it from the remainder of the application:

> "The undersigned applicant understands that upon approval of this application, District will take steps toward installation of the necessary facilities for service. However, applicant understands that District is not liable for any direct or consequential damages of any kind to applicant by reason of delay in the commencement of service. Applicant also understands that as a part of this service contract, it is subject to the Rules and Regulations for the Sale, Use and Distribution of Water as adopted by Resolution No._13-09 of the Tehachapi-Cummings County Water District (the "Rules and Regulations"), as the same may have been heretofore amended, or as the same may be hereafter amended, and to any successor Rules and Regulations as may be thereafter adopted, and that all rates, charges and other rules and regulations are subject to amendment at any time without prior notice to applicant. Applicant acknowledges receipt of a copy of the Rules and Regulations. If this application results in a Term M&I Agreement, the provisions of said Term M&I Agreement will modify the provisions of this paragraph."

Section 5. Where New Turnout Required. If the applicant desires service from a point requiring construction of a new turnout, an application for service shall state the location thereof. The application shall not be approved until the Board has approved the location of the new turnout, and the estimated cost thereof, which amount shall be an additional connection charge which must be deposited prior to approval of the application.

Section 6. Approval of Application. When all conditions precedent to entitlement to service have been met, the General Manager shall endorse approval on the application form and return one executed counterpart to the prospective water user. Where a Term M&I Agreement is to be executed, service shall not commence until such agreement is executed in two (2) counterparts by District and the prospective water user.

Section 7. Separate Applications for Each Connection. A separate application shall be required for each separate service connection, but a delinquency by a water user as to any service connection shall constitute a delinquency as to all of the water user's connections. A reconnection for the same water user where service has been discontinued under Sections 2 through 4 of Part E shall not require a new application if reconnection is made within three (3) months of disconnection, and any owner who has signed the initial application shall remain responsible for charges.

Section 8. Connection and Reconnection Charges. The Board by resolution shall set connection and reconnection charges to recoup the full cost of each initiation of water service or reestablishment thereof.

Section 9. Connection or Reconnection, Pursuant to Exchange Pool Requirements Under Adjudications. To the extent that any water user is required by the Court in any of the ground water adjudications (Kern County Superior Court Case Nos. 92709, 92710 and 92711) to purchase water from District in connection with the physical solution imposed by the Court under any exchange pool or similar arrangement, connection charges otherwise payable prior to connection or reconnection shall be paid by District, except such reconnection charges as arise by reason of disconnection under Sections 2 through 4 of Part E.

Section 10. Lateral Distribution Lines Privately Financed. Lateral distribution lines, the cost of construction of which is paid for or substantially all paid for by a person or persons for service to specific property or properties, when and as dedication thereof is accepted by this District, shall be accepted on the following condition:

"Water deliveries from said lateral distribution line for the benefit of properties other than the described property (the "described property" hereafter) shall not be permitted to the extent that use of the said line's capacity therefore would prevent the District from meeting reasonable beneficial demands for the described property. Nothing herein contained shall relieve grantors or their successors or the described property from the effect of any ordinance, rule or regulation of District, now or hereafter established, relating to scheduling of deliveries, interpretability of service for one or more types of use or sub-categories of a use or uses, handling of shortages of water or shortages of water available for certain types of uses or sub-categories of uses, priority of one or more uses or sub-categories of uses or purposes, or any other ordinance, rule or regulation, whether or not of the same or a different type than any of the foregoing, provided the ordinance, rule or regulation is not solely occasioned by or applicable only to said lateral distribution line solely by reason of shortage of capacity occasioned by deliveries or desired deliveries of water there from to properties other than the described properties".

The foregoing provisions shall not apply to lateral distribution lines financed through assessment districts or improvement districts, or if the offered dedication expressly provides that it is not subject to the foregoing and is accepted on that basis by the District. Nothing herein affects or purports to affect the powers of the District as Tehachapi Basin Watermaster under the judgment as amended from time to time in "Tehachapi-Cummings County Water District, a body corporate and politic, vs. City of Tehachapi, a municipal corporation, et al.", Kern County Superior Court No. 97210.

PART E. DISCONNECTION OF SERVICE. Disconnection of service may be made in the following instances, but shall not excuse the water user or owner from payment of all charges otherwise payable.

Section 1. Disconnection at User's Request. Any water user who desires service disconnected shall give at least one full business day advance written notice to District (a business day being other than a District holiday or any Saturday or Sunday). A water user in addition to being responsible for water delivered to him shall be responsible for charges for any use of water from his connection by any unauthorized person until the end of such one full business day following said written notice. Notwithstanding, when District has knowledge that the water user has vacated the premises in question or has- otherwise permanently discontinued use of water, District may make a disconnection.

Section 2. Disconnection for Non-Payment. District may disconnect any water user's connection when any bill for water service rendered or other charge has become delinquent. District shall not be required to apply any deposits on hand to avoid such disconnection. A delinquency as to any service connection shall be a delinquency as to all service connections of that water user under this section.

Section 3. Emergency Disconnection for Detrimental or Damaging Conditions. If a condition unsafe or hazardous to District facilities or water supplies is found to exist on the water user's premises, or if the use of water thereon is found to be detrimental or damaging to District facilities or water supply for any reason, including but not limited to, chemicals, fertilizers or other substances applied with or added to such water, or water user's equipment, application, consumption, use and disposition of such water, the service may be disconnected without prior notice. District will notify the water user of the reasons for the disconnection and the corrective action to be taken by the water user before service may be restored.

Section 4. Disconnection for Failure to Comply with Rules and Regulations. The District may disconnect any water user's connection for any other failure to comply with these Rules and Regulations.

Section 5. Notice and Hearing. Prior to any disconnection of any water user's connection, except an emergency disconnection under Section 3 of this part, the General Manager shall notify the water user in writing of the basis for the District's proposed action; the date the District proposes to disconnect the connection; that the water user, upon timely

request, may have a hearing before the Board to present any objections to the proposed District action; and the last date upon which the request must be received by the District. If the water user does not timely request a hearing before the Board, the District shall proceed to disconnect the connection. If the water user timely requests a hearing before the Board, the Board shall schedule the hearing at the next regular Board meeting, consider the objections of the water user, and make such decision as appears proper under all of the circumstances.

PART F. STATEMENTS. Statements for water charges shall be rendered as follows:

Section 1. Regular Statements. Statements for water delivered shall be mailed monthly on or before the tenth (10th) day of the month with respect to water delivered the preceding month. However, late mailing shall not extend the dates hereafter set forth. All such statements are due and payable immediately, and become delinquent if not paid by the twenty-eighth (28th) day of the month, or if the same not be a District business day, by the next succeeding business day; provided, that as to a public entity water user, a statement shall not become delinquent if paid within twenty-one (21) days after the first regular or adjourned regular meeting of its governing body held after receipt of the billing. If service is discontinued prior to a statement being mailed, it may likewise include charges for water furnished through date of discontinuance.

Section 2. Closing Statements. Closing statements, other than as provided above, shall be mailed promptly upon discontinuance of service and shall be due and payable within fifteen (15) days after the date on which mailed, or the next succeeding District business day if such fifteenth (15th) day be not a business day. If not paid within that time, they are delinquent.

Section 3. Water User's Obligation to Request Statement. If any water user has not received a statement or bill which should have been received by him under the foregoing rules, it shall be his obligation to timely obtain a duplicate statement from District, and risk of loss in the mails shall not be the responsibility of District.

Section 4. Meter Readings. Bills for water service will state the date on which read, the date of the last prior reading, the respective meter readings on those two (2) dates, the amount of the bill and the last- day for payment before the same becomes delinquent, in addition to any other matters determined by the General Manager. Billings will be based on meter readings. However, if there has been a substantial malfunction or failure of a meter, it shall be the responsibility of the General Manager to cause an investigation and to determine the estimated actual quantity used. Any supplementary statements rendered on account thereof shall be payable within a like period and with like consequences, as a closing bill, as provided in Section 2 of this part. If a previously over-billing has been involved such amounts shall be credited or refunded, if request for refund is made.

Part G. Delinquent Charges; Deposits; Liens; Actions to Collect. In addition to and not in substitution of District's other rights and remedies, the following provisions shall apply.

Section 1. Late Payment Charges. If any statement for water delivered shall become delinquent (See Part F) there shall be added to the other applicable charges interest at the maximum rate authorized by law, commencing with the date on which the same became delinquent, and an administration charge, which the Board hereby determines to be reasonable in relation to District's anticipated costs, of Two Hundred Fifty Dollars ($250.00) or ten percent (10%) of the billed amount involved, whichever is the lesser, in addition to any reconnection charges under Section 8, Part D.

Section 2. Deposits for Service. Any water user against whom late payment charges have accrued shall be required to make a deposit with District in an amount equal to estimated charges for water for the highest two (2) months of anticipated use in any calendar year, such amount to be determined in the discretion of District's General Manager. Such deposit shall be maintained until the water user has timely paid all bills without delinquency, for a period of twelve (12) consecutive calendar months. Failure to pay any required deposit within ten (10) days of written notice thereof, where service has not theretofore been discontinued, shall be further ground for discontinuance of service by District with reconnection charges as provided in Section 8, Part D.

District may, but is not required to, apply any deposit to outstanding amounts due and owing. When a deposit has been made, but is no longer required, the same will be refunded to the water user after deduction of any charges or indebtedness to District which are due and owing, or applied against succeeding water bills. Absent written direction as to the first alternative, District may apply the same to succeeding water bills.

Section 3. Unpaid Charges a Lien on Property. To the extent permitted by law, any unpaid charges, including connection charges and other charges, shall constitute a lien on the property of the water user as specifically provided by the County Water District Act (Water Code Section 31701.7). The District may record with the County Recorder a notice or "certificate" of any such lien and thereafter file suit to foreclose such lien in the manner provided by law.

Section 4. Actions to Collect. In the event any action is brought to collect any of unpaid charges, including connection and other charges, whether separately or apart from any foreclosure of lien, the District shall be entitled to recover, in addition to any such charges, its reasonable attorneys fees and court costs.

PART H. NON-LIABILITY OF DISTRICT; INDEMNIFICATION AND HOLD HARMLESS OF DISTRICT BY WATER USERS.

Section 1. Untreated Water - No Warranty. All water sold by the District will be untreated water. It shall be the responsibility of the water user utilizing, serving or otherwise disposing of the same for human or animal consumption to cause such treatment thereof as may be required by any applicable law, rule or regulation for any such use and as may in addition thereto be necessary or desirable for any such use. District expressly disclaims any warranty or representation of suitability for any of the above uses, and the water user shall assume full responsibility therefore. The water user shall provide any person to whom the water is otherwise sold or disposed of a copy of this section, unless such user shall have treated said water in accordance with all applicable laws, rules and regulations. No water user or other person shall serve water obtained directly or indirectly from the District in a domestic water system without first complying with all applicable laws, rules and regulations. There is further no warranty or representation concerning any use of delivered water as to content of dissolved or undissolved solids in the water, salts, or absence of impurities or foreign objects in any water delivered, nor as to the long or short-term effect on soils, pipes or fittings of utilization of water delivered.

Section 2. District Not Liable; Indemnifications. Notwithstanding the term "sale" or like terms in these Rules and Regulations, which may be used for convenience, any service of water to any water user is a water service agreement. Any such water user shall be required to and shall be deemed to have consented to accept water service at the location served subject to such conditions of pressure and service as may be provided from time to time, and such condition may be changed by the District's General Manager, consistent with these Rules and Regulations. The District, its Directors, agents, employees and independent contractors shall not be liable to any water user or any person to whom a water user provides water, directly or indirectly, for any claimed damage or expense occasioned from any of the following, whether or not occasioned by the concurrent or contributory negligence, actual or alleged, of District or its Directors, agents, employees or independent contractors: quality or content of water, whether relating to a matter specified in the preceding section or otherwise; delayed commencement or recommencement of service; interruptions of service; low pressure; high pressure fluctuations of pressure; shortage or insufficiency of supply; the control, carriage, handling, use, disposal or distribution of water delivered to a water user once it reaches a point beyond the facilities owned and operated by District. Notwithstanding any provisions in these Rules and Regulations, any water service agreement is solely between District and the applying water user (subject to liability of any co-signing owner), notwithstanding that that water user may in turn supply such water to others, and no provision in this agreement shall be deemed to make any other person a beneficiary, third party or otherwise, of any provision of said water service agreement, or to establish any contractual relationship between such other party and District. It is the responsibility of the water user to provide terms and conditions as a part of any furnishing of water to others. Each water user shall indemnify and hold the District, its Directors, agents, employees and independent contractors harmless from any claims by any such other persons, whether from matters set forth in this section, or based on any other ground, and whether or not occasioned by the concurrent or contributory negligence, actual or alleged, of District or its Directors, agents,

employees or independent contractors.

PART I. SERVICE CONNECTION FACILITIES INSTALLED BY DISTRICT; FACILITIES TO BE INSTALLED BY WATER USER; PROTECTION OF DISTRICT FACILITIES. The following: facilities will be installed and maintained by District and water user respectively, subject to all other provisions of these Rules and Regulations.

Section 1. Installation by District. Upon approval of an application for service, payment of all required connection charges and execution by District and water user of any other required agreement, the facilities to be installed by District will consist of any new turnout approved under Part D, Section 5 hereof, a mainline valve, propeller meter, manhole, all required pipe, fittings and couplings, and any and all pipeline to the boundary of District's permanent easement. The facilities may include, as determined by the General Manager, a manifold, secondary valve and a check valve. All such facilities to the boundary of said easement shall be the property of and be maintained by District.

Section 2. District's Assistance in Necessary Rights-of-Way and Easements. Notwithstanding any other provision of these Rules and Regulations, District, under appropriate agreement approved by its Board, may acquire, either consensually or through condemnation proceedings, easements and rights-of-way for lateral or other lines to prospective water users who cannot otherwise obtain such easements and rights-of-way. Such water users will be required to bear all costs and expenses of easement acquisition and installation of facilities therein, which the District will own.

Section 3. Water User's Responsibility for Distribution System. The water user shall provide his own installation and maintenance of facilities from the terminus of District facilities.

PART J. CERTAIN USES OF WATER AND OTHER ACTS PROHIBITED; RATES FOR PROHIBITED WATER USES. The following uses and acts are prohibited, and, for prohibited uses and acts, water rates shall be payable in accordance with the following.

Section 1. No Water to be Conveyed to Third Person Except by a Water Purveyor. No water user, except a water purveyor (being one regularly engaged in the business of distributing M&I water) shall, without the prior written consent of District, sell or convey any water obtained from District to any other person or permit any other person to obtain the same from water user's distribution facilities.

Section 2. Uses for Which Rates Have Not Been Established. No water user shall use or permit to be used any water obtained from District for any use or category for which rates have not been established or which requires the consent of District where that consent has not been first obtained in writing. Each water user shall be absolutely responsible for the acts of its distributees in this regard.

Section 3. Unauthorized Connection or Reconnection. Only District personnel are authorized to connect or reconnect service. No other person shall do so.

Section 4. Charges and Rates for Violation. Any water user who violates any of the foregoing sections of this part, and any other person who violates Section 3 of this Part, or who bypasses a District meter, shall be deemed to have agreed to pay double the normal M&I rate, and in the case of a Section 3 violation, all charges which would otherwise be imposed for an authorized connection or reconnection. Nothing herein shall preclude District from disconnecting. In the event of a by-pass of a District meter, it shall be presumed that such by-pass occurred immediately after the last meter reading, and that water has been taken twenty-four (24) hours a day each day thereafter at the full rate of flow which the connection is capable of transmitting, and it shall be the burden of that person to demonstrate to the contrary. The General Manager in such event shall determine the amounts due and, payable from time to time and render a billing which is immediately due and payable.

Section 5. Only District Personnel to Operate or Control District Facilities. No person other

than authorized District personnel shall operate, control or otherwise disturb any District water system equipment or facilities.

PART K. DISTRICT'S RIGHT IN WASTE, SEEPAGE AND RETURN FLOW. District has and claims all right, title and interest in and to all return flow into any ground water basin within District's boundaries resulting from water imported by District, along with the right to later recapture or otherwise utilize the same, provided, however, the District does not claim title to return flow from imported water purchased by a public entity from the District which is intentionally spread for storage in a groundwater basin by such public entity pursuant to rules and regulations promulgated therefore by the District acting as Watermaster of any such basin. The District's claim extends to all return flow from water imported by the District, whether from spreading operations by the District, from waste or seepage before any delivery of water by the District, from waste or seepage thereafter, and from percolation after or as a result of use or resuse of imported waters by any water user or other person, except imported water purchased from the District by a public entity which is intentionally spread for storage in a groundwater basin by such public entity pursuant to rules and regulations promulgated by the District acting as Watermaster of any such basin. District hereby expresses its intention to later recapture or otherwise utilize such return flow. Nothing herein shall prevent any person from engaging in drainage or other activities to protect his land or the use thereof from return flow which otherwise would injure or would threaten injury to the enjoyment or utilization of such land.

PART L. SHORTAGES. District retains the right and power to later provide, consistent with any then applicable provisions of law, for priorities, restrictions, prohibitions and exclusions in the event of shortage or other emergency, including cessation or interruption of sale of water to particular users.

PART M. MANAGEMENT OF DISTRICT WATER SYSTEM; ACCESS. The following provisions apply to management of District's system and access to lands of water users.

Section 1. Management - General Manager and Employees. Subject to the Board's overall control, District's water system is under the exclusive management and control of the General Manager who is a person appointed by District's Board to manage the affairs of District pursuant to its direction. No other person except said General Manager or a person operating under his authority shall operate any of the facilities of District's system. The General Manager shall supervise the activities of all District employees in connection with operation and maintenance of District's water system and all other activities of District. Any controversy between a water user and District shall be handled by the General Manager, or in his absence the employee designated by the Board to act.

Section 2. Right of Access. District employees authorized by the General Manager shall have reasonable access to lands and irrigation facilities within District for the purpose of conducting District business which may include the following: (a) Inspection of the lands upon which water delivered by District is being applied for the purpose of determining water users' compliance with these Rules and Regulations or performing any function under these Rules and Regulations; (b) Inspection, maintenance, repair or modification of facilities of District's water system.

Section 3. Scheduling of Agricultural Water. When deemed necessary or desirable by the General Manager, he may schedule the delivery of agricultural water in such manner as he deems advisable.

PART N. DECISIONS OF GENERAL MANAGER; APPEAL TO BOARD. In order to assure fairness to water users, the following provisions are established relative to decisions of the General Manager and appeals there from.

Section 1. General Manager Decisions. Any person desiring to appeal a decision of the General Manager affecting that person as a water user or prospective water user shall first request that the decision be placed in writing and provided that person. It shall be the duty of the General Manager to promptly do so, who may also reduce any

decision to writing without such a request.

Section 2. Appeals. If any such written decision involves the payment of any charge or amount of money, any appeal there from as hereinafter provided for shall not excuse the payment when otherwise due and payable had there been no appeal. Provided that all such payments have been made to the District, the water user or prospective water user may file an appeal in writing to the Board within twenty (20) days after the written decision is deposited in the mails or personally delivered to the person affected, specifying the decision appealed from and the grounds of the appeal. The Board shall thereafter hear the evidence on the matter and make its determination in writing. Failure to timely pay any amount involved which becomes due and payable after the filing of the appeal but before hearing shall be deemed an abandonment of the appeal unless the Board should otherwise rule. Any such hearing shall be conducted as close as possible in accordance with normal rules of evidence, but the acceptance of inadmissible evidence shall not be grounds for voiding the decision of the Board. If any refund is then indicated it shall be promptly made, or if the water user or prospective water user so consents shall be credited against subsequent charges. If no appeal is filed within twenty (20) days after the written decision is mailed to the person or personally delivered to him, or any payment called for by said decision is not made concurrently with or before the filing of any such appeal, the decision of the General Manager becomes final and conclusive, unless for good cause shown the Board grants relief from any default in timely filing an appeal or making any payment otherwise due and payable under said decision.

PART O. SEVERABILITY; INTERPRETATION.

Section 1. Severability. If any provision of these Rules and Regulations is determined to be invalid, it is the intention that the remainder of these Rules and Regulations shall not be affected thereby.

Section 2. Interpretation. In the event of any ambiguity in these Rules and Regulations or its application, the Board's interpretation shall be final and conclusive.

PART P. SPECIAL RULES AND REGULATIONS GOVERNING THE USE OF RECYCLED WATER.

Section 1.1. Introduction. The District by contract with the California Department of Corrections & Rehabilitation (CDCR) will receive disinfected tertiary recycled water ("recycled water") from CDCR's California Correctional Institution in Cummings Valley ("CCI"). The District intends to sell water for irrigation uses enumerated in and in accordance with subpart (a) of section 60304 of Title 14 of the California Code of Regulations. For any other recycled water uses in the future including, but not limited to, industrial processes and commercial, landscape or recreational impoundments, wildlife habitat, and groundwater recharge, the District shall submit additional plans and documents to the State of California, Department of Health Services and the Central Valley Regional Water Quality Control Board for review and approval. These future recycled water applications will be evaluated on a case-by-case basis and shall be evaluated in accordance with the California Environmental Quality Act.

Section 1.2. Purpose. The purpose of these special recycled water rules and regulations is to promote the conservation and reuse of water resources and to ensure maximum public benefit from the use of District's recycled water supply by regulating its use in accordance with applicable federal, state and local regulations. These rules and regulations are also intended to be those required as a condition of issuing a master recycled water project permit pursuant to section 13523.1(b)(3) of the Water Code.

Section 1.3. Policy. Recycled water supplies shall be used to the maximum extent possible for any approved beneficial use. This shall be accomplished through the beneficial use of recycled water in compliance with applicable federal, state and local regulations.

Section 1.4. Intent. The District shall provide recycled water wherever the District determines its use is economically and technically feasible and consistent with these rules and regulations and its

contractual obligations to CDCR.

Pursuant to Water Code section 13523.1(b)(3), the establishment and enforcement of these rules and regulations shall govern the design, construction and use of recycled water distribution and disposal systems within the District.

It is further, the intent of these rules and regulations to be consistent with the following criteria:

- California Code of Regulations, Title 22, Division 4, Chapter 3, *Wastewater Reclamation Criteria;*
- California Code of Regulations, Title 17, Division 1, Chapter 5, Group 4, Articles 1 & 2;
- The State Department of Health Services (State DHS), *Preparation of an Engineering Report for the Production, Distribution and Use of Recycled Water;*
- Any measures that are deemed necessary for protection of public health, such as the American Water Works Association (AWWA) California/Nevada Section, *Guidelines for the Distribution of Non-Potable Water and Guidelines for Retrofitting to Recycled Water* or alternate measures that are acceptable to the State DHS.
- The General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water as Adopted by the State Water Resources Control Board.

Section 1.5. Scope. These special rules and regulations establish the requirements for recycled water use and the provision of recycled water service by the District to its customers. If there is any conflict between the provisions of these rules and regulations and the provisions of any of the documents incorporated by reference, the most stringent requirement will govern.

Section 1.6. Incorporation of Supporting Documentation. The following documents and programs, as may be amended hereafter, are incorporated herein and by this reference made a part hereof as though fully set forth:

A. California Code of Regulations, Department of Health Services, Title 22, Division 4;

B. Department of Health Services, "Manual of Cross-Connection Control/Procedures and Practices"

C. California Code of Regulations, "Regulations Relating to Cross-Connections" (Title 17, Chapter 5, Subchapter 1);

D. California State Water Recourses Control Board, "General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water"

E. California-Nevada Section American Water Works Association "Guidelines for Distribution of Non-potable Water"

F. California-Nevada Section American Water Works Association "Guidelines for the On-Site Retrofit of Facilities Using Disinfected Tertiary Recycled Water."

G. T-CCWD "Recycled Water Use Guidelines And Best Management Practices" (Sections 7.1-7.7).

H. T-CCWD "Recycled Water Inspection And Monitoring Program" (Sections 8.1-8.6).

I. All other Federal, State or local statutes, regulations, ordinances governing the distribution and use of recycled water.

Section 2.1. Definitions.

A. **"Applicant"**. Party requesting a Recycled Water Service Connection and/or recycled water service from District.

B. **"As-Built Drawings"**. Engineered drawings that depict the completed facilities as constructed or modified.

C. **"Backflow"**. A condition that results in the flow of water into District pipelines from a source other than an approved water supply.

D. **"Board"**. The Board of Directors of Tehachapi-Cummings County Water District.

E. **"Cross Connection"**. Any unapproved and/or unprotected connection between a standard District water system and a non-potable system.

F. **"Customer/User"**. Recipient of recycled water service from the District.

G. **"District"**. Tehachapi-Cummings County Water District and/or the Staff thereof.

H. **"Service Connection".** The District=s valve and meter through which a customer takes delivery from the District of recycled water.

I. **"Recycled Water"**. Disinfected tertiary treated recycled water as defined in section 60301.230 of Title 14 of the California Code of Regulations.

J. **"District's Standard Rules and Regulations."** The Rules and Regulations for the sale, use and distribution of water, of which theses special regulations for recycled water are a part (Part P), as adopted by Resolution No. 13-09, and as may be amended in the future.

K. **"Non-Potable Water".** Water that is not acceptable for human consumption in conformance with federal, state and local drinking water standards.

L. **"Off-Site Recycled Water Facilities".** Facilities under the control of the District from the source of supply (CDCR) to the point of connection to the

customer's on-site facilities normally up to and including the Service Connection.

M. **"On-Site Recycled Water System"**. The customer operated portion of the recycled water system facilities, extending from the Service Connection to the customer's parcel to be provided with recycled water service and including recycled water system facilities on the parcel to be irrigated with recycled water.

N. **"Potable Water".** Water which conforms to the latest federal, state and local drinking water standards.

O. **"Recreational Impoundment".** A body of water used for recreational activities including, but not limited to, fishing, boating, and/or swimming.

P. **"Recycled Water Agreement".** An executed contract between the District and the customer, as a condition for obtaining recycled water service.

Q. **"Regulatory Agency".** Individually, or in concert, the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, the Central Valley Regional Water Quality Control Board, State Water Resources Control Board, State Department of Health, California Department of Fish and Game, the Kern County Department of Environmental Health Services, and the District.

R. **"Standard District Water".** Water, other than recycled water, supplied by the District.

S. **"Unauthorized Discharge".** Any release of recycled water that violates the provisions of these rules and regulations or any applicable federal, state, District, or local statutes, regulations, ordinances, contracts or other requirements.

T. **"Use Area".** The specific area designated to be served recycled water through on-site recycled water facilities.

Section 3.1. Off-Site Recycled Water Facilities and Service Connections.

A. Off-site recycled water facilities and Service Connections shall be planned, furnished and installed by the District at customers' expense in accordance with applicable federal, state and local statutes, ordinances and regulations.

B. The District reserves the right to determine the location, size, capacity, manufacturer and model(s) of off-site recycled water facilities and Service Connections.

C. Requests for modification or relocation of an existing Service Connection shall be made to the District in writing and paid for in advance before the District will begin the involved work.

D. The District reserves the right to limit the use area to be supplied by one Service Connection to one customer. A Service Connection shall not be used to supply adjoining property of a different customer unless approved by the District, in writing in advance of any new use.

E. Every Service Connection shall be equipped with a valve on the inlet side of the meter to control the water supply through the meter assembly.

F. District ownership and maintenance responsibilities terminate at the valve on the user's side of the meter assembly.

G. The standard District water supply system or any public water supply shall not be used as a backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602(a) and 7603(a) of Title 17 and the approval of the District or the operator of the public water system has been obtained. If a "Swivel-ell" type connection is used it must be used in accordance with the provisions of the Department of Health Services Policy Memo 2003-003. Approved backflow prevention devices shall be provided, installed, tested, and maintained by the recycled water user in accordance with the applicable provisions of Title 17, Division 1, Chapter 5, Group 4, Article 2.

Section 3.2. On-Site Recycled Water Facilities.

A. Each customer shall be responsible for furnishing, installing, operating and maintaining all facilities necessary to convey water from the meter assembly at the Service Connection to the use area in a manner that does not harm or damage any person or property, including any employees or property of the District.

B. On-site recycled water facilities shall be constructed in accordance with applicable federal, state and local statutes, ordinances and regulations.

C. The District shall inspect the construction of all recycled water facilities to ensure compliance with applicable regulations.

D. The District shall approve irrigation system schedules of its customers who shall be obligated to coordinate the scheduling of their irrigation demand among themselves so that all of the District's customers receive their share of recycled water supplied by CDCR to the District in an efficient manner. The District shall have the right to impose schedules upon its recycled water customers if the customers fail to agree.

E. On-site recycled water facilities shall be tested under active conditions in the presence of the District inspector and most likely a representative from the State DOHS, Kern County Department of Environmental Health Services, Central Valley Regional Water Quality Control Board or other regulatory agency to ensure compliance with local, state and federal conditions.

Section 3.3. Conversion of Existing Facilities.

A. Conversion of Existing Facilities to Recycled Water Use. Prior to the conversion of an existing irrigation system to recycled water use, the District at the customer's expense shall, at a minimum, review the record drawings, prepare required reports, and determine the measures necessary to bring the system into

full compliance. No existing irrigation facilities shall be converted to, or incorporated into, a recycled water system without proper testing and approval by District and/or other regulatory agencies.

Section 3.4. Marking Water Facilities.

A. The exposed portions of the customer's recycled water piping and appurtenances shall be clearly identified in accordance with local and health department requirements. The method of identification shall be clearly detailed on all plans, specifications, and engineering reports.

B. Water meters used for recycled water service shall not be used for any other water service.

Section 3.5. Cross-Connection Prevention.

A. Backflow Assembly. Backflow assemblies are required at every recycled water service connection and at every back up connection between a customer recycled water system and the standard District water system or with any public system. The customer, at his/her sole expense, shall install, test, and maintain an approved backflow assembly in accordance with Title 17 of the California Code of Regulations as a prerequisite to receiving recycled water service.

Any backflow prevention device installed to protect the standard District water system or other public water system shall be tested, inspected, and maintained in accordance with section 7605 of Title 17, California Code of Regulations.

B. System Testing. As required by the State Department of Health Services or the regulatory agency, the District will periodically conduct a cross-connection control test of the integrity of the on-site recycled water system at those facilities having both standard District water service or other public water service and recycled water service. Methods of system testing include, but may not be limited to: 1) isolating each system in turn and recording the internal pressure of the isolated system; or 2) introducing tracer dyes into the system to determine existence of backflow into the standard District or other public water system. The recycled water system shall be tested as described above for possible cross connections at least once every four (4) years.

C. The District shall provide adequate notice prior to conducting a cross-connection control test to the State Department of Health Services and any other regulatory agency requesting notice.

D. The cost of testing and any repairs or corrections identified during the testing shall be paid for solely by the customer.

Section 4.1. General Statement. The District shall provide recycled water where the District

determines recycled water is technically and economically feasible. However, each use must be approved on a case-by-case basis. Determination of the specific uses shall be in accordance with the treatment standards and water quality requirements set forth in Title 22, Division 4, Chapter 3 of the California Code of Regulations and to preserve the public health. Each use shall, in addition, be subject to the availability of distribution facilities or the technical and economic feasibility of making such facilities available, as determined by District.

Section 4.2. District's Liability. The District is not responsible for any condition of the recycled water itself, or any substance that may be mixed with or be in recycled water as delivered to any customer, except as required by Title 22 and applicable regulations. The District shall not be liable for any damage from recycled water, including that resulting from inadequate capacity, interrupted service, defective plumbing, broken or faulty services, or recycled water mains; or any conditions beyond the control of the District. All users shall accept the pressure provided at the location of the Service Connection and hold the District harmless from any and all liability, damage, loss, costs, fees or expenses of whatever type or nature, arising from low pressure or high pressure conditions, or from interruptions of service.

Section 4.3. Conditions of Service. Recycled water service will be made available to the customer in accordance with the following terms and conditions:

A. Compliance with Regulations. The District's recycled water shall be used in a manner that complies with all applicable federal, state, and local statutes, ordinances, regulations and other applicable requirements for the treatment level supplied, as determined by the District.

The use of recycled water shall not, at any time, cause pollution, contamination, or a private or public nuisance, as defined by section 13050 of the California Water Code. Recycled water shall be used by customers at all times in a manner that does not cause illness or injury to any person and in a manner that does not harm or damage any real or personal property of any person or entity, including the District. Customers shall not discharge recycled water into any watercourse unless Waste Discharge Requirements for such discharge have been previously obtained by the customer from the Central Valley Regional Water Quality Control Board.

B. Studies and Reports. The cost and preparation of any study or report necessary to comply with California Environmental Quality Act (CEQA) or obtaining any permit or other approval required from a regulatory agency shall be the responsibility of the applicant.

C. Service Constraints. All service is contingent on the quantity and quality of recycled water available to the District from CDCR at CCI and shall be provided in accordance with the terms of the Agreements between the District and CDCR and between the District and the customer.

D. Distribution. The District reserves the right to control and schedule distribution as necessary to: 1) maintain an acceptable working pressure; 2) safeguard the public health; 3) manage the availability of recycled water supply to each of the District's customers; and 4) construct, maintain, and operate the facilities.

E. Deliveries. Deliveries (or runs) of recycled water shall, in no event, be less than 15% or more than 100% of the rated capacity (as determined by the District) of the involved meters.

F. Metering. All recycled water use shall be metered, and all recycled water used on any premises where a meter is installed must pass through a meter. Customers shall be held responsible and charged for all recycled water passing through the meter(s), unless otherwise specified by the District.

G. Best Management Practices. Each applicant must demonstrate its ability to comply with the Recycled Water Use Guidelines and Best Management Practices (Sections 7.1.1 – 7.1.6 hereafter), including, but not limited to, an adequate reuse system, including adequate tailwater ponds and recycling pumps.

Section 4.4. Request for Service.

A. Application. All requests for recycled water service must be made by the applicant completing and signing the appropriate District application form. Upon receipt of an application, the District will review the application and may prescribe requirements and conditions in the District's sole discretion, in writing to the applicant as to the off-site and on-site facilities necessary to be constructed, the manner of connection, the financial responsibility, and the use of the recycled water. Prior to receiving recycled water service, the proposed use shall be approved by the District and any other regulatory agency which asserts jurisdiction to approve the proposed use. The District will inspect on-site recycled water facilities to assure initial and future continued compliance with the District's regulations and other applicable requirements.

B. Recycled Water Use Agreement. Upon approval of the application by the District in its sole discretion, and issuance of all required regulatory agency permits, a Recycled Water Agreement shall be executed between the District and customer authorizing the applicant to receive recycled water service subject to the terms and conditions of these rules and regulations and federal, state, and local regulatory agencies rules and regulations. Such agreement shall include, but not be limited to, the property location, quantity of recycled water to be used, permitted uses, and rate to be charged for the recycled water. Such agreement shall require any customer before applying recycled water to any land the customer does not own to supply to the District the landowner's consent on a form be supplied by the District.

Section 4.5. Disputed Recycled Water Bills. The District will investigate any dispute over the correctness of a recycled water bill. Bills reflecting clerical or meter errors shall be adjusted, taking into consideration the volume of business, seasonable demand, and any other factors that may assist in determining an equitable charge.

Section 4.6. Non-Registering Recycled Water Meter. When a meter is found to be out of order, the charge for water will be based on, at the option of the District, either the average monthly consumption for the preceding months during which the meter is known to have registered correctly, or the consumption as registered by a "substitute meter". Consideration will also be given to volume of business, seasonal demand and any other factors that may assist in determining an equitable charge.

Section 4.7. Wholesale Recycled Water Service. Wholesale recycled water service to another water agency shall be specifically dealt with in a special agreement, by and between the involved water agency and the District covering the terms and conditions for service.

Section 4.8. Discontinuance of Service.

A. Turn-off At Customer's Request. A customer may request that service be discontinued, either temporarily or permanently, only if permitted and in the manner provided in the Recycled Water Agreement.

B. Turn-off by the District. The District may discontinue a customer's service for any of the reasons set forth in Part E of the District's Standard Rules and Regulations and for the following additional reasons:

1. Water Quality. Service may be discontinued if CDCR discontinues recycled water deliveries to the District for any reason or, at any point in the District's distribution system, the recycled water does not meet the requirements of the District or any regulatory agency. Service will, in the latter case, be restored at such time as recycled water again meets the requirements of regulatory agencies.

2. For Non-Compliance With Terms & Conditions Contained in District's Recycled Water Agreement. The customer's failure to comply with any of the terms and conditions contained in the District's standard recycled water agreement shall result in an enforcement action. The District shall have the right to enforce the agreement by any method provided in the agreement or by any applicable federal, state or local law, rule or regulation.

3. For Non-Compliance With Regulations. Service may be suspended or terminated in the manner provided herein at any time the customer's operations do not conform to these special rules and regulations as determined by the District in its sole discretion. Where safety of water supply or public health is endangered, or regulations have been violated, service may be suspended immediately without notice. Otherwise, all defects noted shall be corrected within the period of time specified by the District.

4. For Waste of Water. In order to protect against serious and negligent waste or misuse of recycled water, the District may suspend service if such wasteful practices are not remedied after notice to such effect has been given to the customer.

5. For Unauthorized Use of Recycled Water. When the District has discovered an unauthorized use, the service may be suspended without notice. Any person obtaining recycled water without District approval will be liable for a penalty charge, as set forth in Part J of these Rules and Regulations. The District shall, as appropriate, notify the State Department of Health Services and the Kern County Department of Environmental Health Services of such unauthorized use. Repeated

unauthorized usage shall be considered as tampering with District property and may result in the offender being charged and prosecuted.

Section 4.9. Re-Establishment of Service. The District shall have the right to refuse to re-establish service following termination of service for violation of these provisions or any Recycled Water Agreement. Any request to re-establish service subsequent to the termination of recycled water service shall be in the manner prescribed for initially obtaining recycled water service from the District, which may include the collection of a security deposit, as set forth in Part G of these Rules and Regulations.

Section 4.10. Special Rules Pertaining to Use of Recycled Water in the Cummings Basin.

A. No recycled water shall be used in the Cummings Basin north and west of the South Quarter Corner of Section 25, T.32S., R.31E., M.D.B.&M., that is, west of Pellisier Road [County Road No. 241] and north of the westerly extension of Highline Road.

B. Customers using recycled water to irrigate crops (including turf grass) in the Cummings Basin as a condition of receiving recycled water for irrigation shall elect to participate in the Southern San Joaquin Valley Water Quality Coalition, Kern River Sub-Basin. The District shall establish a surface water quality monitoring station in Chanac Creek at the eastern boundary of Parcel Map No. 4117 subject to approval of the Central Valley Regional Water Quality Control Board, and shall take and analyze samples collected therefrom when and as may be required by the Regional Board as part of any WDR Conditional Waiver Program.

C. The District shall monitor Cummings Basin groundwater quality on a monthly basis by taking and analyzing samples from Well No. 36C2 near the Northwest Corner of Section 36, T.32S., R.31E., M.D.B.&M., commonly referred to as "SSCSD's Cummings Valley Well No. 1." Analyses of such samples shall be public documents, available to inspection and copying by members of the public.

D. Customers in the Cummings Basin shall not discharge recycled water into Chanac Creek or any other water course except pursuant to Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board. Any such discharge shall be grounds for termination of the Recycled Water Agreement between the customer and the District.

E. Customers using recycled water to irrigate crops in the Cummings Valley shall demonstrate to the District's satisfaction that their recycling systems, including tailwater ponds and pumps, are sized, constructed, located and maintained such so as to preclude any accidental overflows or discharges to adjoining lands or Chanac Creek. Customers shall grant the District the right to position mobile diesel pumps at tailwater ponds for emergency back up operation by customers in the event a customer's pump fails. All costs of operating District mobile diesel pumps shall be promptly reimbursed by the customer. At a minimum, the District shall install a mobile diesel pump at any tailwater pond which has overflowed in the previous five years.

F. As used herein, "Cummings Basin" shall mean all the land overlying the Cummings Valley Groundwater Basin and all non-overlying lands within the Cummings Valley Watershed as defined in Findings of Fact and Conclusions of Law in Kern County Superior Court Case No. 97210.

Section 5.1. On-Site Facilities. Customer shall operate, maintain and control all on-site recycled water facilities in accordance with the requirements established by District, federal, state, and local regulatory agencies. It shall be the sole responsibility of the recycled water user to:

A. Designate a recycled water supervisor who is responsible for the recycled water system at each use area under the user's control. Specific responsibilities of the recycled water supervisor include the proper installation, operation, and maintenance of the irrigation system; compliance of the project with the District's rules and regulations, prevention of potential hazards, implementation of Best Management Practices and preservation of the recycled water distribution system in its "as built" form. Designated recycled water supervisors shall obtain instruction in the use of recycled water from an institution approved by the State DOHS.

B. Maintain a copy of these rules and regulations, irrigation system layout map, and a recycled water system operations manual at the use area. These documents shall be available to operating personnel at all times.

C. Ensure that all on-site operations personnel are trained and familiarized with the use of recycled water.

D. Furnish its operations personnel with maintenance instructions, irrigation schedules, controller charts, and record drawings to ensure proper operation in accordance with the on-site facilities design, the Recycled Water Agreement, and these rules and regulations.

E. Prior to the initiation of recycled water service, the recycled water user shall submit plans and specifications for recycled water distribution facilities to the District for review and approval.

F. The recycled water user shall provide written notification, in a timely manner, to the District of any material change or proposed change in the character of the use of recycled water.

G. Ensure that the design and operation of customer's recycled water facilities remain in compliance with all the terms of the Recycled Water Agreement and all the terms of these rules and regulations.

H. Implement on-site controls, which meet the requirements established by District, federal, state, and local regulatory agencies to protect the health of customer's employees and the public.

I. Notify the District immediately of any and all failures in the system resulting in an unauthorized discharge or a contamination of another system due to a cross-connection on the premises. Customer complaints or complaints received by

customers concerning recycled water use that may involve public illness shall be reported to the State DOHS, the Kern County DEH, and to the District which shall maintain a log of all complaints regarding recycled water.

J. Protect all recycled water storage facilities, including tailwater ponds, against erosion, overland runoff, and other impacts resulting from a 20-year, 24-hour frequency storm unless the Central Valley Regional Board Executive Officer approves relaxed storm protection measures for the facility.

K. Protect all recycled water storage facilities against 20-year frequency peak stream flows as defined by the Flood Plain Management Division of the Kern County Engineering and Survey Services Department, unless the such division approves relaxed storm protection measures for the facility.

L. Protect all potable drinking water fountains and eating facilities from spray of recycled water.

M. Ensure that the recycled facilities are operated at all times in full compliance with all federal, state, local and District recycled water requirements.

N. Ensure that all recycled facilities are operated at all times in a manner that does not result in a discharge of recycled water into a watercourse, or cause illness or injury to any person or damage any real or personal property of any person, including the District.

Section 5.2. District Recycled Water System Facilities.

A. Ownership, operation and maintenance of all recycled water system facilities up to, and including, the District's valve meter assembly at the Service Connection, shall be the responsibility of the District.

1. Tampering with District Property. No person shall at any time tamper with District property. Such tampering constitutes a misdemeanor or felony criminal violation punishable by law. Only authorized District personnel may operate District facilities. A customer may operate District recycled water facilities only if expressly authorized in a Recycled Water Agreement.

2. Unauthorized Use of Recycled Water. Customers who open the valve of a Service Connection without District approval may be liable for a penalty charge, as determined by the District, and for the cost of water usage, based either on the meter reading (if available) or the estimated consumption during the time water service was received without proper arrangements. Repeatedly turning on service without making proper arrangements shall be considered as tampering with District property and may result in the offender being charged and prosecuted.

Use of recycled water on a site that has not been approved for the use of recycled water requires the immediate notification of State DOHS and/or Kern County DEH and/or Central Valley Regional Water Quality Control Board.

3. Property Damage. Any repair costs incurred by District as a result of damage inflicted by the customer or others will be billed to the responsible party. Failure by the responsible party to pay for such costs shall constitute grounds for discontinuance of water service and/or legal action by the District. Amounts paid by the District shall incur interest at 12% per month until paid in full.

Section 5.3. Access to customer's Premises.

A. The Tehachapi-Cummings County Water District, the Central Valley Regional Water Quality Control Board, the State DOHS, the Kern County DEH, or any other regulatory agency, and any authorized representative of these agencies, upon presentation of proper credentials, shall have the right to enter upon the recycled water use site during reasonable hours, or at any time during an emergency, for the following reasons:

1. Monitoring and inspecting all recycled water systems to ascertain compliance with these rules and regulations and other regulatory requirements of any regulatory agency.

2. Installing, maintaining, repairing and reading District owned facilities serving the customer's premises.

Where necessary, keys and/or lock combinations shall be provided to the District for site access.

Section 6.1. Termination of Service. Tehachapi-Cummings County Water District may terminate service to a recycled water user who uses, transports, or stores such water in violation of these special rules and regulations, in violation of the District's Standard Rules and Regulations, or in violation of any Recycled Water Agreement with the District.

The Central Valley Regional Water Quality Control Board may initiate enforcement action against any recycled water user, including but not limited to, the termination of the reclaimed water service, who:

A. Discharges recycled water in violation of any applicable discharge requirement prescribed by the Regional Board or by the State Water Resources Control Board, or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.

B. Uses, transports, or stores such water in violation of the rules and regulations governing the design, construction and use of recycled water distribution and disposal systems promulgated by the District; or in a manner which creates or threatens to create conditions of pollution, contamination, or nuisance, as defined in Water Code section 13050.

Section 6.2. Investigation and Initial Determination. District shall investigate all reports of non-compliance with any provision of these special rules and regulations and/or the Recycled Water Agreement to determine the seriousness of the violation. Determination regarding the seriousness will be based upon: 1) the magnitude and duration of the violation; 2) its effect on the operation of the District's

recycled water system; 3) its effect on third parties; 4) its impact on public and environmental health and safety; 5) the history and good faith of the customer; and 6) its effect on District's compliance with regulatory agency rules and regulations or regulatory agency permit conditions.

Section 7.1. Recycled Water Use Guidelines and Best Management Practices. As a supplier of recycled water, the District must ensure that the District's customers are aware of their responsibilities regarding recycled water use. The following Sections 7.1.1 through 7.1.6 constitute the District's Recycled Water Use Guidelines and Best Management Practices ("BMP"). The BMP are consistent with those promulgated by the State of California Department of Health Services, in Title 17 and Title 22 of the California Code of Regulations. The implementation of the BMP is essential in controlling soil erosion, over spray and ponding, promoting efficient irrigation practices and preventing discharged of recycled water offsite or into watercourses.

Section 7.1.1. General Operational Controls.

A. The use of recycled water must be limited to the areas designated and approved by the District.

B. All recycled water valves and outlets shall be properly tagged to warn the public and employees that the water is not safe for drinking.

C. All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Chapter 7.9, section 4049.54 of the California Health and Safety Code.

D. Where feasible, different piping materials should be used to assist in water system identification.

E. All recycled water valves, outlets and sprinkler heads should be of a type that can only be operated by designated personnel.

F. No recycled water shall be discharged into any watercourse.

G. The recycled water piping system shall not include any hose bibbs. The use or installation of hose bibbs on any on-site water system that presently operates or is designed to operate with recycled water, regardless of the hose bibb style, construction or identification is strictly prohibited.

H. No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying standard District water. Backflow preventers shall be required at the discretion of the district.

I. The use of recycled water shall at no time create odors, slime, deposits, become a public or private nuisance or create a trespass of any kind.

J. The use area shall be maintained to prevent the breeding of flies, mosquitoes or other vectors.

K. Reclaimed water facilities shall be operated in accordance with best management practices (BMP's) to prevent direct human consumption of reclaimed water and to minimize misting, ponding, and runoff. BMP's shall be implemented that will minimize public contact and preclude discharges onto areas not under customer control and discharges into watercourse.

L. Customers shall ensure that all recycled water facilities are maintained, operated and repaired at all times in a manner that does not cause illness or injury to any person and in a manner that does not cause damage or injury to the real or personal property of any person or entity, including the District.

Section 7.1.2. Posting of On-Site Notices. All use areas where recycled water is used and that are accessible to the public shall be posted with conspicuous signs, in a size no less than 4 inches by 8 inches, that include the following wording and picture in a size no less than 4 inches high by 8 inches wide: "RECYCLED WATER - DO NOT DRINK". The sign(s) shall be of a size easily readable by the public. The prescribed wording should also be translated into Spanish and other appropriate languages and included in the required signs.

Figure 1

All water outlets shall be posted as "potable" or "non-potable", as appropriate

Section 7.1.3. Worker/Public Protection. Workers, residents, and the public shall be made aware of the potential health hazards associated with contact or ingestion of recycled water, and should be educated about proper hygienic practices to protect themselves and their families.

A. Workers and others must be notified that recycled water is in use, through the posting of signs, etc.

B. The following measures should be taken to minimize contact with recycled water:

1. Workers/public should not be subjected to recycled water sprays.

2. Workers should be provided with the appropriate clothing during prolonged contact with recycled water.

C. Potable drinking water should be provided for workers.

D. Toilet and washing facilities should be provided.

E. Precautions should be taken to avoid contact with food and food should not be taken into areas that are still wet with recycled water.

F. A first aid kit should be available on site, to prevent cuts and other injuries to contact recycled water.

Section 7.1.4. General Crop Irrigation Uses. All windblown spray and surface runoff of reclaimed water applied for irrigation onto property not owned or controlled by the discharger or reclaimed water user shall be prevented by implementation of BMP's.

Irrigation with reclaimed water shall be during periods of minimal human use of the service area. Consideration shall be given to allow an adequate dry-out time before the irrigated area will be used by the public.

All drinking fountains located within the approved use area shall be protected by location and/or structure from contact with recycled water spray, mist, or runoff. Protection shall be by design, construction practice, or system operation.

Facilities that may be used by the public, including but not limited to eating surfaces and playground equipment and located within the approved use areas, shall be protected to the maximum extent possible by siting and/or structure from contact by irrigation with recycled water spray, mist or runoff. Protection shall be by design, construction practice or system operation.

Section 7.1.5. Efficient Irrigation. The following methods of irrigation management should be applied to reduce run off, ponding and over spray and preclude discharges of recycled water to watercourses. When followed, these methods will result in uniform irrigation and efficient operation.

A. Hardware.

All irrigation systems must have the appropriate equipment/hardware for the application.

1. Install irrigation system according to the design.

2. Make sure all sprinkler heads are uniform in brand, model and nozzle size. Where different arcs are needed at the same station, match precipitation rates by changing nozzles.

3. Measure spacing between sprinkler heads. Place heads per manufacturer's recommendations.

4. Where lower precipitation rates are required, such as on slopes, reduce nozzle size and spray angle per manufacturer's recommendations.

5. Install booster pumps to increase pressure where needed.

6. Install pressure reducers to decrease pressure where needed, often on steep hillsides where main lines run downhill.

7. Make sure piping is sized to transmit water in the quantity demanded by the system.

8. Use check valves either in-line or built into the sprinkler head assembly to virtually eliminate low head drainage after the valve has closed. THESE DEVICES SUBSTANTIALLY REDUCE RUN OFF AND PONDING FROM INDIVIDUAL SPRINKLER HEADS.

9. Use automatic flow control devices that shut down a system if a break or other similar high flow/low pressure situation develops during irrigation. THESE DEVICES CAN SAVE SIGNIFICANT AMOUNTS OF WATER AND ELIMINATE RUN OFF OR PONDING IF A BREAK SHOULD OCCUR.

10. The use of centralized control systems or controllers that measure or can be programmed to use evaporation rates, or systems that use controls such as moisture sensors is recommended.

B. Maintenance.

Maintenance is often the most overlooked irrigation system component. Perform the following routinely, and to fix a problem with the irrigation system.

1. Adjust sprinkler heads so they achieve 80% head to head coverage through out their intended arc. There should be no obstruction that would interfere with the free rotation and smooth operation of any sprinkler, such as trees, tall grass, shrubs, signs, etc. The system should be tested during the daytime so adjustments can be made.

2. Adjust valves or pressure regulators so that the systems are operating at the pressure required by the sprinkler heads or emitters. Test pressures periodically with a pressure gauge to maintain appropriate pressure levels.

3. Routinely test the accuracy of time clocks. Have the time clock recalibrated or repaired as necessary.

4. Repair or replace broken risers, sprinklers, valves, etc. as soon as they are discovered. Replace with appropriate make and model of equipment to maintain uniformity through out the system.

5. Routinely check backflow devices, pumps, etc. for leaks and repair or replace as necessary.

6. Routinely clean screens and backwash filters to keep systems operating optimally.

C. Management

System management determines: 1) the appropriate duration of the irrigation cycle, and 2) the frequency at which irrigation occurs.

1. Duration: The duration or length of an irrigation cycle (run time) should be long enough to fill up the root zone reservoir. If total run times are longer than required, then deep percolation losses occur. There are exceptions to this general rule. A common and important exception to this rule is to reduce levels of salts in the root zone reservoir. This is accomplished by applying additional water to force salts down past the root zone. This process, called leaching, is a common use of irrigation water. Run times are also dependent on distribution uniformity (DU). DU is a measurement of how evenly water is applied to the irrigated area. Run times are reduced by higher levels of DU.

2. Frequency: The frequency of an irrigation cycle should be as often as necessary to meet the water requirements of the vegetation. This is determined by measuring the amount of moisture remaining in the root zone reservoir between irrigation cycles. When an appropriate moisture level is determined, the irrigation cycles should be scheduled to ensure watering frequency is such to maintain that level.

3. Practices for optimizing management of an irrigation system:

   a) Use tensiometers, gypsum blocks, soil probes, the "feel method", and/or the California Irrigation Management Information System to estimate soil moisture levels. Inspect and maintain regularly to ensure accuracy and reliability.

   b) Use automatic rain shut-off devices to reduce irrigation if significant rainfall occurs.

   c) Use multiple rain shut-off devices to reduce ponding if precipitation rate is higher than the infiltration rate of the soil.

   d) Irrigate in the evening or early morning to avoid the heat and/or windy parts of the day. This will reduce evaporation losses and minimize windblown spray from entering unintended areas.

   e) Group irrigated areas into zones of similar water use. For example, irrigate grass areas separately from shrub areas, sunny areas separately from shady areas, etc.

f) As needed, aerate the soil to improve infiltration of air and water into the soil.

g) Provide as much flexibility as possible into the design of the irrigation system. Built in ability to make changes as necessary can add to the efficiency of the system.

h) Perform good horticultural practices; fertilization, mowing, de-thatching, aeration, and pest control, as necessary to create the best growing environment for landscape vegetation.

Because irrigation systems have constant wear and tear, periodic checks and adjustments are all part of good landscape water management programs.

D. Reuse System and Tailwater Ponds:

1. Each customer shall have a system to collect and reuse tailwater, including tailwater ponds with recycling booster pumps of sufficient number, size, construction and location to (a) recycle all excess irrigation water for reuse, (b) contain and confine all irrigation water on the customer's fields and (c) preclude discharge of any recycled water onto adjoining lands or into any watercourse.

2. Each customer shall allow the District to position on those customer tailwater ponds the District selects District owned mobile diesel pumps to be operated by a customer as an emergency backup if a customer's recycling pump fails. At a minimum, the District shall position a mobile diesel pump on any tail water pond which within the previous five years has overflowed onto adjoining land or into a watercourse. The customer shall provide fuel for such pumps and shall promptly reimburse the District for any costs incurred by the District during emergency operation of such backup pumps.

Section 7.1.6. Use of Recycled Water Adjacent to Potable Wells.

A. Irrigation with recycled water shall not take place within 50 feet of any domestic water supply well unless all of the following conditions have been met:

1. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface.

2. The well contains an annular seal that extends from the surface into the aquitard.

3. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.

4. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.

5. The owner of the well approves of the elimination of the buffer zone requirement.

B. No impoundment of recycled water shall take place within 100 feet of any domestic water supply well.

C. Crop Irrigation with recycled water shall be prohibited within the Cummings Valley north and west of the intersection of Pellisier Road (County Road No. 241) and the western extension of Highline Road.

D. Other special restrictions applicable to use of recycled water in the Cummings Valley and its watershed are set forth in section 4.11 of the District's Rules and Regulations Governing Use of Recycled Water.

Section 8.1. Recycled Water Inspection and Monitoring Program. The Recycled Water Inspection and Monitoring Program set forth in the following Sections 8.1.1 through 8.1.5 is designed to insure compliance with all federal, state and local regulations governing the use of recycled water. The District's "Rules and Regulations Governing the Use of Recycled Water" provides the legal authority for the implementation of this Recycled Water Inspection and Monitoring Program. The key components of this program include the District's Cross Connection Control Program. In addition, educational information may be provided by the District's staff to prevent any unintentional misuse of recycled water.

Section 8.1.1. Plan Check Function. All new recycled water users proposing to install recycled water irrigation systems are required to submit plans for review and approval by the District and Regulatory Authority. Plan review is conducted by the District's staff to verify conformance with District standards. The irrigation system is inspected following construction to verify conformance with the approved plans.

Section 8.1.2. Application for Service. The District's "Rules and Regulations Governing the Use of Recycled Water" requires all customers desiring or required to obtain recycled water service to submit an application on a form developed by the District. This provision also requires that an agreement be signed prior to any connection to any District owned recycled water facilities.

Section 8.1.3. Recycled Water Agreement. After review of the application for service, a recycled water service agreement is prepared. This agreement is between the District and the customer, and is a condition of obtaining recycled water service.

Section 8.1.4. Inspection and Monitoring. Recycled water meters are read periodically by District water operators, meter readers and other District personnel. If any problems are discovered (ponding, run-off, inappropriate use, over spray, missing signs, etc.), the Wastewater/Recycled Water Supervisor, or his designee, will respond within 72 hours. Any issues that have potential health risks will be responded to immediately and reported to the County Department of Environmental Health Services.

In addition, all recycled water users will be inspected a minimum of annually. This routine inspection is conducted to verify compliance with the provisions established in the District's "Rules and Regulations Governing the Use of Recycled Water", the Recycled Water Agreement, and any other federal, state or local regulations. The inspection will be conducted with the designated "On-Site Recycled Water Supervisor". Any violations, deficiencies, or unacceptable findings will be noted and the On-Site Recycled Water Supervisor will be required to perform corrective action.

Section 8.1.5. Non-Compliance Issues. It is the policy of the District to remedy a violation as soon as possible through progressive enforcement procedures. This procedure provides the customer due process, and considers the seriousness of the violation when determining the appropriate enforcement action.

Enforcement mechanisms (notices, penalties, fines and termination of service) are described in more detail in the District's "Rules and Regulations Governing the Use of Recycled Water". Enforcement mechanisms are also included in the District's Recycled Water Agreements.

PART Q. RIGHT TO AMEND, ETC.; PROVISIONS PART OF EVERY WATER SERVICE AGREEMENT; CERTAIN OTHER CONTRACTS.

Section 1. Right to Amend. The District retains the right at any time and from time to time, with or without notice, to amend, repeal, or add provisions additional to, any provision in these Rules and Regulations, either by actual amendment hereof, or by successor Rules and Regulations and amendments thereto. Any such change, including but not limited to, increases in rates or re-categorization or uses for rate purposes, or any rule or regulation, shall apply to water service commenced theretofore or thereafter, except to the extent as may be provided in any Term M&I Agreement or other contract.

Section 2. Provisions as Amended Part of Water Service Agreements. Every provision of these Rules and Regulations, as the same may be changed from time to time, whether before or after the entering into of any water service agreement (whether by approval of application alone or by reasons of a Term M&I Agreement) shall be deemed a part of each such water service agreement, and without thereby limiting the foregoing, each water user and co-signing owner shall be deemed to have agreed to District's right to waste, seepage and return flow as provided in Part K, and to have quitclaimed to District any otherwise right, title or interest of water user therein.

Section 3. Incorporation of Provisions of the KCWA Contracts and Master Contract. Every water service agreement is also subject to the provisions of the KCWA Contracts as they may be hereafter amended, and to the extent provided or later provided therein, or otherwise by law, to the provisions of the Master Water Supply Contract between DWR and the KCWA, as the same may be hereafter amended.

TERM M & I AGREEMENT

THIS AGREEMENT is entered into effective _____, _____, by and between TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, a county water district ("District" hereinafter) and _____ _____ ("Water User" hereinafter).

A. Recitals.

(i) Water User has filed an application with District for water service under date of _____, _____, for M & I use as defined in District's Rules and Regulations. To the extent any water taken by Water User qualifies for agricultural rates, the Rules and Regulations shall govern the same and this agreement shall be inapplicable thereto.

(ii) This is a "term M & I agreement", entered into pursuant to the Rules and Regulations.

B. Agreement.

Now, therefore, it is agreed between the parties, in consideration of the concurrent approval of Water User's application for service, and the lower rates for M & I water taken pursuant to a term M & I agreement, as follows:

1. During the term of this agreement, and each annual period hereunder, Water User agrees to purchase from District all water used, sold or distributed by Water User for M & I use as defined in the District's Rules and Regulations, over and above quantities of "local water available to Water User", and used, sold or distributed by it, as that quoted term is defined and limited in paragraph 2 hereof. Such water to be purchased from District after consideration of local water available to and used by Water User is hereinafter referred to as the "net imported M & I requirement".

2. "Local water available to Water User" shall include only the following:

(a) As to water intended to be produced, extracted or diverted from Tehachapi Basin or its watershed, Brite Basin, or its watershed, or Cummings Basin, or its watershed, as such terms

[Revised 2009]

are defined in the three judgments in the respective ground water adjudications,[1] local water available to Water user shall include only the following annual quantities and other rights of which Water User owns or leases, and as such annual quantities and other rights are or shall have been reduced, and thereafter adjusted from time to time, by the Court in allocating the allowable annual production from the particular basin, or otherwise reduced in any annual period pursuant to any provisions of the particular judgment as amended from time to time: (i) Such annual quantity or other right originally adjudicated to said Water User in the particular judgment (if any), as so reduced and adjusted, and (ii) such annual quantity or other right originally adjudicated to another party in the particular judgment but subsequently acquired or leased by Water User, as so reduced and adjusted, provided that such transfer complied with all conditions and procedures set forth in the particular judgment.

Notwithstanding the foregoing, said quantities and rights shall be local water available to Water User only in the quantities used or to be used (i) within the basin area as to which the water rights were adjudicated, (ii) within an area to which water appropriated pursuant to an adjudicated water right under the particular judgment may legally be transported.[2] If Water User was entitled under any written agreement in effect when the particular judgment was entered to a transfer of any water right, such quantity shall, upon such transfer, be considered as "originally adjudicated" to said Water User.

(b) Local sources of water not consisting of water which would be produced, extracted or diverted from Tehachapi Basin or its watershed, Brite Basin or its watershed, or Cummings Basin or its watershed, and which would not, if left uncaptured, percolate into any one of said basins. Notwithstanding the foregoing sentence, "Local water available to Water User" shall not include appropriations of groundwater in Cummings Basin as distinguished from extractions by a person exercising overlying rights.

3. As Water User's net imported M & I requirement increases, it shall pay for the installation of any new turnout and connection in the same manner as upon original application, and shall file application therefor, or obtain the remainder of said requirement through any Exchange Pool or similarly named vehicle which may be established pursuant to the reserved jurisdiction of the Court in any of the referenced groundwater adjudications, to the extent the requirement is available therefrom.

4. This agreement is subject to all the provisions of the District's Rules and Regulations including all future amendments thereof. Any application for service concurrently approved or hereafter approved shall likewise constitute a part of this agreement.

5. Within thirty (30) days of the execution of this agreement, and prior to each August 15 thereafter during the term of this agreement, Water User shall furnish to District a written estimate of its

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[1] Tehachapi-Cummings County Water District v. Frank Armstrong, et al., Kern County Superior Court No. 97209 (Cummings Basin); Tehachapi-Cummings County Water District v. City of Tehachapi, a municipal corporation, et al., Kern County Superior Court No. 97210 (Tehachapi Basin); and Tehachapi-Cummings County Water District v. Irving P. Austin, et al., Kern County Superior Court No. 97211 (Brite Basin).

[2] If there is a connected water system of Water User serving either of said types of areas, and other areas, the form of this agreement must be first revised to provide for the method of treatment thereof.

net imported M & I requirement for each calendar year, or portion thereof, then remaining under this agreement. This estimate shall not constitute a contractual obligation to take the estimated quantity. Nothing herein shall limit the right of District to require other and further reports pursuant to the powers reserved under paragraph 4.

6. Notwithstanding any other provision of this agreement, Water User agrees to pay District for a minimum quantity of five (5) acre-feet per each annual period or any partial annual period under this agreement, unless failure of Water User to receive that quantity is due to inability of District to deliver.

7. If the Water User should at any time substantially fail to comply with this agreement, and District on account thereof terminates this agreement, or should Water user terminate the same other than for a reason hereinabove set forth, Water User shall be obligated to forthwith pay to District, in addition to any amounts otherwise owing to District, the difference between the amount of money which Water User was obligated to pay to District for water sold and delivered pursuant to this agreement and the amount of money which Water User would have been obligated to pay to District had said water so sold and delivered been originally sold and delivered at the normal M & I rate. Nothing herein contained is intended to foreclose the District from seeking such damages as it may sustain from any breach, substantial or not, of this agreement by Water User whether or not such breach leads to District's termination of this agreement.

8. The annual period under this agreement shall be the calendar year, and if the first annual period be less than a full calendar year, "local water available to Water User" for that short annual period shall be in such proportion as the number of days under this agreement in that calendar year bears to 365. It is contemplated that any injunction and "physical solution" under any of the referenced judgments will be on a calendar year basis. If one should at any time be on another basis, Water User agrees to an amendment to the annual period under this agreement with such prorations as may be equitable to accomplish the purpose and intent of this agreement.

9. In lieu of Water User taking direct delivery from District of all water used, sold, or distributed by Water User for M & I use over and above quantities of local water available to Water User, and used, sold, and distributed by it, such supplemental water requirements may be taken by Water User under and pursuant to the provisions of the Exchange Pool contained in the amendment to judgment in the Tehachapi Basin adjudication, Kern County Superior Court No. 97210. If Water User's application states that it intends to obtain such requirements through the Exchange Pool, so long as it does so, no connection shall be required.

10. This agreement shall have a term ending _____, _____. (Here insert the end of the calendar year which is closest to six years from the effective date of this agreement, whether said date is more or less than six years in total.)

WHEREFORE, the parties have executed this agreement as of the dates opposite their respective signatures.

Dated:

TEHACHAPI-CUMMINGS COUNTY
WATER DISTRICT

By_____
President

By_____
Secretary

Dated:

_____
DISTRICT

By_____
President

By_____
Secretary

TERM M&I AGREEMENT
[For Existing Recharge Water Customers]

THIS AGREEMENT is entered into effective _____, _____, by and between TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT, a county water district ("District" hereinafter) and _____ ("Water User" hereinafter).

A. Recitals.

(i) As provided in Part C of the District's Rules and Regulations, it is District policy to meet the present and future needs of its Term M&I Agreement Customers from the District's State Water Project ("SWP") water supply pursuant to the District's two water supply contracts with the Kern County Water Agency ("KCWA") both dated December 16, 1966 (the "KCWA WATER SUPPLY CONTRACTS"). Water User for many years has had a Term M&I Agreement with the District, for M&I use as defined in District's Rules and Regulations, and wishes to enter into a further Term M&I Agreement, as herein provided. To the extent any water taken by Water User qualifies for agricultural rates, the Rules and Regulations shall govern the same and this agreement shall be inapplicable thereto.

(ii) This is a "Term M&I Agreement", entered into pursuant to the Rules and Regulations.

(iii) Pursuant to Part K of the District's Rules and Regulations, as amended, the District claims all right, title and interest in and to all return flows into any groundwater basin within the District's boundaries of water imported by the District, whether by means of waste, seepage or percolation before or after delivery, use or reuse, or from the District's intentional recharge of IMPORTED WATER by the District in District spreading areas, together with the right to recapture and otherwise utilize same (all such return flows hereafter "RECHARGE WATER").

(iv) Pursuant to Section 3 of Part C of the District's Rules and Regulations, as amended, the District in its discretion may elect to allow retail purveyors having Term M&I Agreements with the District to pump RECHARGE WATER in lieu of taking surface deliveries of IMPORTED WATER.

(v) Water User wishes to reduce the cost of treating IMPORTED WATER by substituting therefor RECHARGE WATER to be pumped by Water User from the _____ Basin.

(vi) In accordance with the longstanding holdings of the California Supreme Court (*City of Los Angeles v. City of Glendale* (1943) 23 Cal. 2d 68, 76-77 and *City of Los Angeles v. City of San Fernando* (1975) 14 Cal. 3d 123, 257-261), and other holdings of the Courts, the District and the Water User have the right to recharge, store and withdraw IMPORTED WATER from the _____ Basin.

B. Agreement.

Now, therefore, it is agreed between the parties, in consideration of the terms hereof, and the lower rates for M&I water taken pursuant to a Term M&I Agreement, as follows:

1. During the term of this agreement, and each annual period hereunder, Water User agrees to purchase from the District (a) all water used, sold or distributed by Water User for M&I use as defined in the District's Rules and Regulations, over and above quantities of "LOCAL WATER AVAILABLE TO WATER USER", as that quoted term is defined and limited in paragraph 2 hereof, (hereinafter referred to as the "NET IMPORTED M&I REQUIREMENT") provided, however, District shall have no obligation to sell to Water User more than _____ [insert Water User's 2040 projected

SWP water demand from Table 2-13 of the 2010 Tehachapi Regional UWMP] and (b) sufficient water to establish and maintain Water User's BANKED WATER RESERVE ACCOUNT as provided in paragraph 3 hereafter. Water User shall pay the District for the water purchased hereunder at the Term M&I rate for the Water User's pressure zone, as such rates and zones are established and modified from time to time by the District's Board of Directors.

2. "LOCAL WATER AVAILABLE TO WATER USER" shall include only the following:

(a) As to water intended to be produced, extracted or diverted from Tehachapi Basin or its watershed, as such terms are defined in the judgment, as amended, in *Tehachapi-Cummings County Water District v. City of Tehachapi, a municipal corporation, et al.*, Kern County Superior Court No. 97210 (Tehachapi Basin), LOCAL WATER AVAILABLE TO WATER USER shall include only the following annual quantities and other rights of which Water User owns or leases, and as such annual quantities and other rights are or shall have been reduced, and thereafter adjusted from time to time, by the Court in allocating the allowable annual production from the Basin, or otherwise reduced in any annual period pursuant to any provisions of the judgment as amended from time to time: (i) Such annual quantity or other right originally adjudicated to said Water User in the judgment as so reduced and adjusted, and (ii) such annual quantity or other right originally adjudicated to another party in the judgment but subsequently acquired or leased by Water User, as so reduced and adjusted, provided that such transfer complied with all conditions and procedures set forth in the judgment.

(b) As to water intended to be produced, extracted or diverted from the Brite Basin or its watershed, as such terms are defined in the judgment in *Tehachapi-Cummings County Water District v. Irving P. Austin, et al.,* Kern County Superior Court No. 97211 (Brite Basin), LOCAL WATER AVAILABLE TO WATER USER shall include only extractions by Water User lawfully exercising overlying rights until such time as such rights may be curtailed or modified in any future amendment to such judgment.

(c) As to water intended to be produced, extracted or diverted from the Cummings Basin or its watershed, as such terms are defined in the judgment in *Tehachapi-Cummings County Water District v. Frank Armstrong, et al.*, Kern County Superior Court No. 97209 (Cummings Basin), local water available to Water User shall only include extractions by Water User lawfully exercising overlying rights until such time as such rights may be curtailed or modified in any future amendment to such judgment.

(d) As to water intended to be produced or diverted from any basin other than the Tehachapi, Brite and Cummings Basins, any native water which Water User has a right to divert or pump.

3. In addition to its NET IMPORTED M&I REQUIREMENT, Water User shall purchase from the District and direct the District to spread and store in the Tehachapi [or Cummings] Basin for Water User's account sufficient water to establish and thereafter maintain a BANKED WATER RESERVE ACCOUNT ("BWRA") equal to, at a minimum, five times the annual average of Water User's SWP water demand over the previous five calendar years as set forth in the table entitled "BANKED WATER RESERVE ACCOUNT CALCULATION" attached hereto as **Exhibit A** which the District shall update annually by February 1 (the "BWRA TABLE"). Water User may spread and store water for its BWRA in its own recharge facilities in whole or in part in lieu of directing the District to spread its BWRA water in District spreading facilities. Water User shall pump and draw from its BWRA whenever the District is unable to supply all of the Water User's NET IMPORTED M&I REQUIREMENT on account of drought, damage to SWP or District facilities, or any other event. During the first ten years of the term of this agreement, Water User shall purchase each year, at a minimum,

sufficient water to achieve its BWRA goal as set forth in the BWRA TABLE by December 31, _____[insert 10th year from effective date]. Water User shall not be required in any one year to purchase for its BWRA more than twice its NET IMPORTED WATER REQUIREMENT for such year. Upon termination of this agreement, Water User shall own the water in its BWRA free of any and all restrictions imposed by this agreement and Water User may continue to store, or may pump, or may sell, or otherwise dispose of such water as it sees fit.

4. This agreement is subject to all the provisions of the District's Rules and Regulations including all future amendments thereof, except to the extent inconsistent with a material term of this agreement.

5. Within thirty (30) days of the execution of this agreement, and prior to each November 1 thereafter during the term of this agreement, Water User shall furnish to District a written estimate of its NET IMPORTED M&I REQUIREMENT for the next calendar year. This estimate shall not constitute a contractual obligation to take the estimated quantity. Nothing herein shall limit the right of District to require other and further reports pursuant to the powers reserved under paragraph 4 above.

6. Notwithstanding any other provision of this agreement, Water User agrees to pay District for a minimum quantity the greater of (i) its scheduled BWRA input or (ii) if its BWRA is full, five (5) acre-feet per each annual period or any partial annual period under this agreement, unless failure of Water User to receive that quantity is due to inability of District to deliver all or a portion of such supply.

7. If the Water User should at any time substantially fail to comply with this agreement, and District on account thereof terminates this agreement, or should Water User terminate the same other than for a reason hereinabove set forth, Water User shall be obligated to forthwith pay to District, in addition to any amounts otherwise owing to District, the difference between the amount of money which Water User was obligated to pay to District for water sold and delivered pursuant to this agreement and the amount of money which Water User would have been obligated to pay to District had said water so sold and delivered been originally sold and delivered at the normal M&I rate during the calendar year of such termination or substantial failure to comply with this agreement. Nothing herein contained is intended to foreclose the District from seeking such damages as it may sustain from any breach, substantial or not, of this agreement by Water User whether or not such breach leads to District's termination of this agreement.

8. The annual period under this agreement shall be the calendar year, and if the first annual period be less than a full calendar year, "LOCAL WATER AVAILABLE TO WATER USER" for that short annual period shall be in such proportion as the number of days under this agreement in that calendar year bears to 365.

9. In lieu of Water User taking direct delivery from District, Water User's NET IMPORTED M&I REQUIREMENT may be provided in accordance with this paragraph 9. For purposes of this paragraph 9, (i) "IMPORTED WATER" means SWP water purchased by the District pursuant to the KCWAWATER SUPPLY CONTRACTS and (ii) "WATER USER'S WELL[S] " means that [those] certain well[s] in the _____ Basin as listed in **Exhibit B** hereto, as such list may be modified from time to time as a result of Water User constructing or acquiring new wells and/or abandonment of then existing wells, provided, however, Water User shall obtain the District's prior written consent to change Water User's extraction wells which shall not be withheld unless the District reasonably determines that such new well or wells will substantially interfere with another well or wells in the vicinity.

(a). Substitution of Recharge Water. Water User may pump RECHARGE WATER in lieu of taking surface delivery of IMPORTED WATER at the price and subject to the terms

and provisions hereinafter set forth.

(b). Place of Delivery. Any RECHARGE WATER supplied by the District in lieu of surface deliveries of IMPORTED WATER shall be delivered underground in the _____ Basin at the depth of groundwater as it fluctuates in WATER USER'S WELL[S]. Water User shall be responsible for all costs, liability and expense of pumping RECHARGE WATER to the surface and transporting same for use within Water User's boundaries.

(c). Place of Use. Water User shall use RECHARGE WATER to provide retail water to its customers within the District's boundaries and for no other purpose.

(d). Scheduling. On or before November 1 of each year for the balance of the term of the agreement, Water User shall notify the District in writing of the proportion of its NET IMPORTED M&I REQUIREMENT for the following calendar year it wishes to be met with RECHARGE WATER in lieu of surface deliveries of IMPORTED WATER. On or before February 28th of each year, the District shall notify Water User of the estimated amount of RECHARGE WATER which is available to be substituted for surface deliveries of IMPORTED WATER in such calendar year. Periodically thereafter, the District shall provide updated estimates as SWP delivery allocations are revised.

(e). Metering. The Water User shall install a meter of manufacture and model approved by the District at WATER USER'S WELL[S] at Water User's expense. The meter shall be maintained in good working order and regularly calibrated so as to comply with the standards of the American Water Works Association per their manuals M6, M33 and M36. Water User shall provide the District with proof satisfactory to the District that Water User has obtained the right to exclusively operate WATER USER'S WELL[S] for the purposes set forth herein and that the owner of WATER USER'S WELL[S] and surrounding lands has conveyed to the District in writing the right to enter such lands to take meter readings at WATER USER'S WELL[S].

(f). Reduction or Termination of Substitute Deliveries. In the event a third party demonstrates that new or increased pumping of RECHARGE WATER by Water User as herein provided is causing significant impacts on the third party's existing well or wells, the Water User shall confer with such third party and mitigate such impacts to a level acceptable to such third party, failing which the District in its sole discretion may determine the rate of pumping and quantities of RECHARGE WATER which Water User may extract in lieu of surface deliveries of IMPORTED WATER provided, however, the District shall provide Water User with fifteen (15) days prior written notice of any reduction or termination of allowed pumping of RECHARGE WATER hereunder.

(g). Price. For RECHARGE WATER delivered and metered by the District hereunder, except for water recharged through facilities owned and operated by the Water User, Water User shall pay the District, in addition to the Term M&I rate, a surcharge determined by the District from time to time to recapture the construction, operation and maintenance costs of the District's recharge facilities.

(h). Spreading Loss Factor. For all water spread, whether in the District's or the Water User's spreading facilities, a spreading loss factor of 6% will be imposed pursuant to Section 1 of Part B of the District's Rules and Regulations for losses on account of evaporation, phreatophyte consumption and any other losses incurred in the transportation and spreading of RECHARGE WATER.

(i). Disclaimer. Water User acknowledges that the District's right to RECHARGE WATER within the Cummings, Brite and Tehachapi Basins has not been determined but is a matter within the continuing jurisdiction of the Kern County Superior Court in Case No. 97209, 97210

and 97211. Water User acknowledges that paragraph 2 of the Judgments in each such case generally prohibits the exportation outside of the particular groundwater basin of any native groundwater extracted from such basin. Water User further acknowledges that paragraph 5 of the Judgments in each such case provides, in part:

> "Nothing in this Judgment contained shall be deemed a determination whether the Plaintiff or any other party will or will not have any rights in any return flow from water subsequently imported, which matter shall be within the continuing jurisdiction of the Court."

Water User further acknowledges that the State of California, a defendant in Case No. 97209, has objected to the District's Amended Findings of Fact, Conclusions of Law and Judgment in Case No. 97209, in which the District claims the right to return flow from the use of imported waters or waste or seepage from the District's imported water project in the Cummings Basin, and that the Court has not ruled on such objection. While the District has claimed and continues to claim a right to return flow from the use of imported waters in the Cummings, Brite and Tehachapi Basins, including the right to extract and export outside of such basins imported SWP water intentionally percolated by the District in District recharge areas for storage in such basins and subsequent extraction and beneficial use, all consistent with rulings from the California Appellate Courts, the District makes no warranties or representations to Water User as to the validity of the District's position on these issues. Water User has sought its own legal advice concerning the validity of the District's claim to RECHARGE WATER and Water User's right to export RECHARGE WATER for use on lands which do not overlie the groundwater basin from which the RECHARGE WATER will be pumped and has relied upon its own independent legal advice in entering into this agreement and acquiring rights in and improving and repairing WATER USER'S WELL[S]. Accordingly, Water User acknowledges that the District shall have no liability to Water User in the event that it is ultimately determined in Case Nos. 97209, 97210 and 97211 or any other proceeding that the District does not have the right to sell RECHARGE WATER in the Cummings, Brite and Tehachapi Basins or Water User may not export RECHARGE WATER for use outside of the basin or basins in which the District had spread RECHARGE WATER.

10. The District's obligation to supply water hereunder is conditioned upon the availability of sufficient SWP water under the KCWA WATER SUPPLY CONTRACTS to enable the District to meet all of its Customers' water demands. In event the District in any year has insufficient SWP water available to meet the full needs of Water User pursuant to the terms of this agreement and its other customers, the District's available SWP water in that year shall be allocated in accordance with the District's Rules and Regulations or other policies adopted by the District from time to time, provided that such policies recognize any priorities mandated by statute or recognized under the KCWA WATER SUPPLY CONTRACTS OR KCWA's contract with the State of California referenced therein. Provided, however, the Water User shall draw upon Water User's BWRA to make up any such shortages.

11. This agreement shall have a term ending _____, _____ [(Here insert the end of the calendar year which is closest to 10 years from the effective date of this agreement, whether said date is more or less than 10 years in total.)]; provided, however, that each year on the anniversary date of this agreement, this agreement shall extend one additional year, unless, at least 90 days prior to such anniversary date either party provides notice to the other that it will not consent to such further extension(s) of this agreement and further, provided, however, this agreement shall terminate upon termination of the KCWA WATER SUPPLY CONTRACTS (December 31, 2039) unless and to the extent the terms of such agreements are extended.

WHEREFORE, the parties have executed this agreement as of the dates opposite their respective signatures.

Dated: _____

TEHACHAPI-CUMMINGS COUNTY
WATER DISTRICT

By_____
President

By_____
Secretary

("District")

Dated: _____

_____

By_____
President

By_____
Secretary

("Water User")

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Agenda

ORDINANCE 2015-1

AN ORDINANCE OF THE TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT ESTABLISHING RESTRICTIONS AND PRIORITIES AS TO SALE OF DISTRICT WATER IN VIEW OF THREATENED WATER SHORTAGE EMERGENCY

A. RECITALS

(i) There is a threatened water shortage during the calendar year 2014 of water from the State Water Project, and in turn a threatened shortage to this District under its contract with Kern County Water Agency for State Water Project water.

(ii) Water Code Sections 31026 and 31027 permit this District to establish restrictions and prohibitions of specific uses during a water shortage emergency.

(iii) It is the intent of this ordinance to establish the same through priorities of use.

B. ORDINANCE

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT AS FOLLOWS:

Sec. 1. The Board of Directors finds and determines in all respects as set forth in Part A of this Ordinance.

Sec. 2. The priority of sales of District water during calendar year 2015 shall be as follows:

1. Wheeled water for water rights holders in Tehachapi Basin.
2. Maintain enough water in the system to provide for fire-fighting efforts all year.
3. Direct-delivery M&I use, including normal M&I demand for construction projects; Voluntary 20% reduction for existing customers compared with 2014.
4. Agricultural water:
    a. Stock water for animals
    b. Permanent crops
    c. Food crops grown in hothouses
    d. Cover crops primarily for erosion control, including grains and cereals
    e. Annual food crops for human consumption
        i. On land cultivated in 2014
        ii. On land that was fallow in 2014
    f. Turf sod where recycled water is available
    g. Annual crops for animal consumption
        i. On land cultivated in 2014

ii. On land that was fallow in 2014

h. Non-food crops

i. On land cultivated in 2014

ii. On land that was fallow in 2014

5. Conjunctive use recharge water for current year demand where return-flow or banked water is available
6. Recharge water for groundwater banking
   a. M&I end uses
   b. Agricultural end uses

Cut off of water sales shall be in the reverse of the order listed above. Notwithstanding other provisions of this ordinance, if conflicts occur between different water users within the same category, priority of water service will be given to crops having already been planted over crops anticipated to be planted. Depending on conditions, water may be withheld from any land where the proposed crop is not yet planted, regardless of its place in the priority list.

Sec. 3. The following additional findings are hereby made in support of Section 2 and succeeding sections of this Ordinance:

1. The District pumps water from District wells for water rights holders in Tehachapi Basin and delivers that water through the District's system to turnouts at the point of use. The water is part of the adjudicated safe yield of the native groundwater of the Basin and has nothing to do with imported water supply or shortages thereof.
2. Jacobsen Reservoir needs to be maintained at a minimum elevation of 4,341', which is approximately 450 acre-feet of storage, in order to provide sufficient pressure to flow to all dip tanks in the system. It may be necessary to temporarily curtail flow to customers during a fire event to preserve sufficient pressure in the system to provide water to dip tanks.
3. Direct-delivery M&I customers typically have no substitute water supply. It is important to the local economy and to the District's tax base that local construction projects not be delayed due to the lack of water. Some of the District's direct-delivery M&I customers are large landscape accounts primarily for maintenance of grass (parks, schools, cemeteries). These types of accounts can reduce consumption 20% without permanent damage to their facilities. The District will develop and distribute monthly water budgets for these accounts by June 1.
4. Agricultural water service is prioritized so as to cause the least economic dislocation

to those who have relied on agriculture for their living and to protect the highest irretrievable investment among agriculture.

a-c. For this reason, animals, permanent crops and food crops grown in hothouses, which involve substantial investment, are given highest priority.

d. Although cover crops are typically not harvested for profit, and therefore have no direct economic impact, their cultivation is critical to preserving topsoil from wind erosion. Sufficient water needs to be preserved in the system to provide for the establishment of cover crops on tilled ground during autumn.

e. New food crops for human consumption are the next priority due to the importance of food sources, particularly during a drought wherein food production from other areas in California will be severely reduced. Land farmed in the prior year has a higher priority over newly cultivated land. This is true for Categories f and g as well.

f. Turf sod farmers who have signed up to receive recycled water need a backup supply in the event that the recycled water cannot be delivered. To encourage these farmers to enroll in the District's recycled water program, they are given a higher priority for imported surface water than some other uses.

g. Annual crops for animal consumption, such as alfalfa hay, are given a higher priority than non-food crops because of the substantial local market for such commodities.

h. Non-food crops are given the lowest agricultural priority because they are not essential to sustaining life and their temporary absence will cause no great harm.

5. The District has sufficient banked groundwater to supply conjunctive use customers in 2015; therefore, providing new recharge water during the drought is considered a low priority.

6. The 20% State Water Project allocation means that providing water for new groundwater banking during 2015 is impossible; therefore, this is given the lowest priority of all. In future years, when normal SWP allocations are restored, groundwater banking will be done on a large scale to replenish emergency supplies used during 2015.

Sec. 4. The General Manager shall:

(a) Report to the Board of Directors at frequent intervals concerning anticipated available water and requests therfore;

(b) Report to the Board of Directors promptly any desirable amendments to this ordinance;

(c) Cause the permissible over-extractions under the Amendments to Judgment in said Tehachapi Basin case to be administered in such fashion as to minimize the effect of the anticipated shortage of State Water, with due regard for the ultimate "repayment" of any such over-extractions; and

(d) Assist persons in other basins within the District toward maximum utilization of groundwater for the same purpose as stated in (c) above.

Sec. 5. This Ordinance shall be effective and operative immediately upon adoption.

Sec. 6. The General Manager shall forthwith send a copy of this Ordinance to every heretofore or anticipated customer for District water.

Sec 7. In accordance with Water Code Section 31027, the Secretary of this District and Board of Directors shall cause a copy of this Ordinance to be published once in the Tehachapi News within ten (10) days, but such direction shall not delay the effective and operative date of this Ordinance.

ADOPTED AND APPROVED this 18th day of March, 2015.

David E. Worden, President

ATTEST:

Lori Bunn, Secretary to the Board of Directors

WATER SHORTAGE CONTINGENCY PLAN

BEAR VALLEY CSD

Bear Valley CSD, being totally supplied by groundwater, does not address in this plan, a 50% loss of State Water Project (SWP) water supplies as they have only peripheral effect on the District.

In the best interest of Bear Valley and its consumers, BVCSD has existing water shortage regulations (Ord. 06-221) adopted in advance of an actual or threatened water shortage in order to reduce consumption and reserve a sufficient supply of water for public health and safety. BVCSD also has in place more aggressive measures to support water supply interruptions in excess of 30% and up to 50% from catastrophic failure due to earthquake fire or extensive power failure.

The State of California requires that an urban water shortage contingency plan include up to a 50% reduction in consumption. It is not known how much the existing water shortage regulations will reduce consumption. The mandatory measures alone would not reduce consumption by 50% and this goal could probably only be achieved with strict enforcement and significant voluntary reductions.

STAGES OF ACTION

The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by BVCSD and/or its consumers. When staff determines that water supply condition warrants activating a water alert or stage change, the General Manager will approve and notify the board. Presently there are not any defined triggers (i.e., water allocations, snow pack levels, etc.) for moving from one stage to the next. Any decision to change stages will however be based on the combination of water supplies, weather conditions, trends in water usage, groundwater levels, and water production.

Conservation measures gradually increase with each stage. The consumers are given opportunities to voluntarily reduce consumption in Stage 1. If these efforts are not sufficient, then Stage II is implemented which includes additional mandatory and voluntary measures. If these are not sufficient, then Stage III, which includes several other mandatory regulations, is implemented.

ESTIMATE OF MINIMUM SUPPLY NEXT 3 YEARS

Over the past two decades BVCSD has pumped groundwater to meet all water supply demands. During dry years there is less water infiltrating from rainfall, snowfall, runoff and irrigation, and the localized impact on groundwater supplies can be somewhat significant. As a result, BVCSD closely monitors groundwater levels in its wells. There has not been a significant problem when proper pumping levels are monitored and applied and fairly consistent water supplies have been available during different hydrologic years. It is expected that there will be no water shortages during the next three years.

CATASTROPHIC SUPPLY INTERRUPTION PLAN

BVCSD has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply (i.e. power outage, system failure, natural disaster, etc.). The water shortage regulations would be used to reduce consumption after a catastrophic supply interruption and additional more stringent methods such as strict water rationing could be put in place.

PROHIBITION, PENALTIES AND CONSUMPTION REDUCTION METHODS

Description of prohibitions, penalties and consumption reduction methods in each stage of the water shortage regulations are provided below:

STAGE ONE CONDITIONS

During a stage one condition, customers are asked to use water wisely and to practice water conservation measures so that water is not wasted. All water withdrawn from district facilities shall be put to reasonable beneficial use. Water conservation measures include, but are not limited to:

1. Preventing excessive water from flowing off the property served onto adjacent properties or sidewalks, gutters, surface drains, storm drains, or over land.
2. Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or runoff.
3. Immediate repair of all observable leaks of water on the customer's premises.
4. Use of a broom or a blower instead of a hose to clean driveways and paved surfaces.

5. Use of water in washing down of driveways and other paved surfaces only when necessary to alleviate immediate fire or sanitation hazards.
6. Being careful not to leave a hose running while washing a vehicle.
7. Use of low flow shower heads and shortening the time spent in the shower.
8. Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or wastebasket.
9. Reduction in water consumption for bathing, hand dishwashing and irrigation by reduction of flow time for these activities.
10. Running only full loads in the washing machine and dishwasher.
11. Capturing cold tap water while waiting for hot water to come down the pipes, to be used later on house plants or garden.
12. Serving water to customers at the Oak Tree Country Club and Mulligan Room only upon specific request.

STAGE TWO CONDITIONS

During a stage two condition, the following water conservation measures shall apply, including all provisions of a stage one condition:

1. Lawn Watering:

a. Lawn watering and landscape irrigation is permitted only Monday through Saturday between the hours of five o'clock (5:00) P.M. and eight o'clock (8:00) A.M., local time. However, this watering is permitted at any time on these days if a handheld hose is used, equipped with a nozzle that automatically shuts off when released, or when a handheld container or a drip irrigation system is used.

b. Lawn watering and landscape irrigation is prohibited on Sundays.

2. Construction Water: Construction water for grading and compacting may be used at any time, provided the water is from a source other than the BVCSD potable water system.

3. Potable Metered Water: Potable metered water may be used for other construction between seven o'clock (7:00) A.M. and five o'clock (5:00) P.M., local time.

4. Washing Vehicles, Equipment: Washing of vehicles or other equipment is permitted only if done using a handheld bucket or a handheld hose equipped with a nozzle that automatically shuts off when released.

STAGE THREE CONDITIONS

During a stage three condition, all the provisions of stages one and two conditions shall apply, and in addition, the following restriction shall apply: All high volume users (defined as over 4,000 cubic feet per month) shall submit to BVCSD water use curtailment plans for at least thirty percent (30%) overall reduction in water use. The plans shall be furnished on a district form within ten (10) days of notice by BVCSD of the declaration of a stage three condition.

ENFORCEMENT AUTHORITY:

Based on meter information provided by the district water supervisor of the water supplies available, the general manager is authorized and directed to implement the provisions of this chapter. Additionally, the general manager is authorized to make minor and limited exceptions to prevent undue hardship or unreasonable restrictions; provided, that water shall not be wasted or used unreasonably and the purpose of this chapter can be accomplished. Any exceptions shall be reported to the board at its next meeting.

DURATION OF CONSERVATION LEVELS:

As soon as a water shortage condition is determined to exist, the water conservation measures provided for by this chapter for that condition shall apply to all district water service until a different condition is declared.

USE OF NONPOTABLE WATER:

Nothing in this chapter shall prohibit or limit the use of non-potable water on the golf course or for other irrigation purposes, provided the state department of health services has determined that the use would not be detrimental to public health.

WATER RATES AND SURCHARGES:

Special water conservation rates shall apply during stage conditions one, two and three, and in addition, surcharges shall apply during stage conditions two and three, as established by resolution of the board of directors.

IMPLEMENTATION OF STAGE ONE, TWO OR THREE CONDITIONS:
The general manager or his designee shall monitor BVCSD's projected supply and demand for water on a daily basis and determine the extent of the conservation required through the implementation or termination of stages one, two and three conditions in order for the district to prudently plan for and supply water to its customers. Thereafter, the general manager may order that stage one, two or three conditions be implemented or terminated in accordance with the applicable provision of this chapter. The declaration of a stage condition shall be made by public announcements, posting of notices in three (3) locations accessible to the public and publication of the notice in the "Tehachapi News" and on the BVCSD website. The stage designated shall become effective immediately upon announcement. The declaration of any stage condition shall be reported to the board at its next meeting. The board shall then ratify the declaration, rescind the declaration or direct the declaration of a different stage.

EXCEPTION:
Notwithstanding any other provision of this chapter, failure to practice the stage one condition water conservation measures specified in subsection 7-4-6 A of this chapter shall not be considered a violation of this chapter.

REMEDIES:

A. Water Use Curtailment Plans: The general manager is authorized to require submission of water use curtailment plans from high volume users in order to protect the minimum supplies necessary to provide for public health, sanitation, and fire protection. Failure to provide curtailment plans in a timely manner or plans that do not meet the required cutbacks shall authorize BVCSD to install flow restrictors at the meter or termination of service.

B. Remedies Not Exclusive: Remedies for violations of this chapter are not exclusive and may be imposed cumulatively in the discretion of BVCSD. For example, a violator may pay a surcharge, be subject to a flow restrictor, have water service be discontinued, and be prosecuted criminally.

C. Property Owner Responsible For Charges: Surcharges and the cost of disconnecting or limiting service shall be the responsibility of the property owner and the person in whose name service is maintained. Surcharges shall be considered normal charges for water used, and collected through BVCSD's routine water billing process.

NOTICE or APPEAL:

A. Notice: The general manager shall determine if and when violations occur and mail a notice of violation, together with a copy of this chapter, to the property owner or to the person in whose name the service is maintained. In making this determination, the general manager may grant an exemption in emergency situations for health and safety reasons.

B. Appeals Of Violations: Any customer disagreeing with the notice of violation may appeal by written notice received by BVCSD within ten (10) days of the mailing of the notice of violation. Any notice not appealed within ten (10) days is final. Upon timely filing of an appeal, BVCSD shall mail a notice to the property owner and the person in whose name service is maintained at least ten (10) days prior to the regular or special meeting at which the appeal will be heard. The board may, in its discretion, affirm, reverse, or modify the notice of violation.

PENALTY:
Any person violating any of the provisions of this chapter or wilfully and knowingly refusing to comply with the rules, regulations, and determinations of BVCSD shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished according to section 1-4-1 of the Bear Valley CSD Code.

RESOLUTION 14/15-16

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BEAR VALLEY COMMUNITY SERVICES DISTRICT, DECLARING THE EXISTENCE OF A STAGE THREE CONDITION APPLICABLE TO WATER USAGE THROUGHOUT THE DISTRICT PURSUANT TO BEAR VALLEY COMMUNITY SERVICES DISTRICT CODE CHAPTER 7-4 (WATER CONSERVATION) AND IN FURTHERANCE OF THE EMERGENCY WATER CONSERVATION REGULATIONS ADOPTED BY AND PENDING BEFORE THE STATE WATER RESOURCES CONTROL BOARD

The Board of Directors of the Bear Valley Community Services District resolves as follows:

Section 1. **Findings.** The Board finds as follows:

A. On January 17, 2014, Governor Edmund G. Brown Jr. issued Governor's Proclamation No. 1-17-2014, declaring a State of Emergency in California due to severe drought conditions. The Proclamation called on all Californians to reduce their water usage by 20 percent.

B. On April 25, 2014, the Governor issued an executive order to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water.

C. On July 15, 2014, the California Water Resources Control Board ("State Water Board") adopted Resolution No. 2014-0038, which made findings that emergency drought conditions existed that warranted the need for emergency regulations to prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water, and to promote water recycling and water conservation throughout the state.

D. The resolution added a new Article 22.5, including Sections 863, 864, and 865 to Title 23 of the California Code of Regulations ("CCR"), which established certain emergency water conservation regulations ("Emergency Regulations").

E. Among other things, the Emergency Regulations required public water supply distributors, such as the Bear Valley Community Services District ("District"), to implement a mandatory water conservation measure or measures intended to achieve a comparable reduction in water consumption by persons served relative to the amounts consumed in 2013.

F. In response to the Emergency Regulations, the District declared the existence of a Stage Two Condition pursuant to District Code Chapter 7-4 by the adoption of Resolution 14/15-4. The declaration of the Stage Two Condition required customers to follow all water conservation measures listed in District Code section 7-4-6(A) through (B). The declaration also triggered the imposition of a 20% surcharge in basic water rates under the District's applicable water rate resolution for amounts used by residential customers in excess of 10 Units (1,000 cubic feet), which surcharge went into effect commencing with the District's October 2014 billing cycle.

G. Drought conditions continue to persist in California due to record low snowpack in the Sierra Nevada mountains, decreased water levels in most of California's reservoirs, reduced flows in the state's rivers and shrinking supplies in underground water basins. The area within and surrounding the District has experienced similar limited snow and rainfall over the winter

months and is subject to the same drought conditions experienced throughout the state, which are the basis for the Governor's Executive Order and the revised Emergency Regulations.

H. As a result of these conditions and the low likelihood of additional precipitation in 2015 that would reduce the severity of the existing drought conditions, on March 17, 2015, the State Water Board adopted Resolution No. 2015-0013, which readopted and amended the Emergency Regulations for an additional 270-day period commencing on March 27, 2015. Among the amendments to the Emergency Regulations was a revision to 23 CCR § 865 that requires distributors of public water supplies such as the District to take one or more of the following actions by May 11, 2015:

(1) Limit outdoor irrigation of ornamental landscapes or turf with potable water by the persons it serves to no more than two days per week; or

(2) Implement another mandatory conservation measure or measures intended to achieve a 20 percent reduction in water consumption by persons it serves relative to the amount consumed in 2013.

I. On April 1, 2015, Governor Brown issued Executive Order B-29-15 ("Executive Order"), which, among other things, directed the State Water Board to impose additional water conservation measures to achieve a 25 percent reduction in potable urban water usage as compared to amounts used in 2013.

J. On April 17, 2015, the State Water Board released draft revisions to the Emergency Regulations, which are intended to implement Governor Brown's Executive Order. As applicable to the District, the draft revisions are similar to the amended Emergency Regulations adopted by the State Water Board on March 17, 2015, except that the proposed revision to 22 CCR § 865 would require the District to implement one or more mandatory conservation measures intended to achieve a 25 percent reduction in water consumption by persons it serves relative to the amount consumed in 2013.

K. The proposed amended Emergency Regulations would require the District to submit a report by December 15, 2015 to the State Water Board that includes: (A) the total potable water production (i.e., usage), by month, from June through November, 2015, and total potable water production, by month, for June through November 2013; <u>or</u> (B) Confirmation that the District has limited outdoor irrigation of ornamental landscapes or turf with potable water by the persons it serves to no more than two days per week.

L. The proposed amended Emergency Regulations would also add monitoring and enforcement authority to the State Water Board under draft regulation 23 CCR § 866, which provides that when a water supplier such as the District does not meet its conservation standard required by Section 865, then the State Water Board's Executive Director or designee may issue conservation orders requiring additional actions by the supplier to come into compliance with the applicable conservation standard (e.g., 25% reduction in usage for the District over 2013 levels).

M. The State Water Board anticipates adoption of the draft revised Emergency Regulations by May 6, 2015, with an implementation date shortly thereafter.

N. During the five full months in which District water customers have been subject to the Stage Two Condition (October 2014 – February 2015), residential customers have reduced water consumption by approximately 12 percent over the corresponding months in 2013.

O. While the efforts to date of District residents to conserve water during the Stage Two Condition are commendable, in order to achieve the goal of a 25 percent reduction in usage over 2013 levels additional conservation measures will be necessary.

P. Accordingly, in order to promptly address the existing and pending water conservation mandates under the Emergency Regulations, it is necessary for the Board of Directors to Declare a Stage Three Condition and implement the additional corresponding water conservation measures set forth in District Code section 7-4-6(C).

Section 2. Declaration of Stage Three Condition. Based on the above findings, the Board hereby declares the existence of a Stage Three Condition throughout the District. During the duration of the Stage Three Condition, customers are required to follow all water conservation measures listed in District Code section 7-4-6(A) through (C).

Section 3. Adjustment of Water Rates and Surcharges. In accordance with District Code section 7-4-10, the special water conservation rates and surcharges adopted by the Board for a Stage Three Condition are hereby imposed and will become effective at the start of the June 2015 billing cycle for each applicable customer of the District.

Section 4 Publication and Posting. Pursuant to District Code section 7-4-11, the General Manager is directed to cause notice to be posted declaring the Stage Three Condition and the implementation of the related mandatory water conservation measures under the District Code in three locations accessible to the public within the District, and to also cause notice of the declaration to be published in the "Tehachapi News" and on the District's website.

Section 5. Effective Date and Termination Date. This resolution will become effective immediately upon adoption. Unless extended or previously repealed by the Board, this resolution and the Stage Three Condition declared hereunder will terminate on January 30, 2016.

PASSED, APPROVED AND ADOPTED on April 23, 2015, by the following vote:

AYES: BARON, GRACE, LACLAIRE, RITCHIE, ZANUTTO

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE

_____
Charlene LaClaire, Board President
Bear Valley Community Services District

ATTEST:

_____
Kristy McEwen
Secretary to the Board of Directors

Agenda

Chapter 13.22 - WATER SHORTAGE CONTINGENCY MEASURES

Sections:

13.22.010 - Purpose.

The purposes of this chapter are to address conditions when the city's production and supply of water is insufficient to meet customer demand and to implement state regulations addressing drought conditions presently existing in the state of California which requires a water shortage contingency plan to address water shortage situations which include shortages of ten percent to fifty percent. This chapter provides for three stages of alert conditions. When any stage is implemented by the city, the stage and this chapter shall supersede Chapter 13.20 where the two are inconsistent and the more restrictive measures of this chapter shall apply.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

13.22.020 - Guidelines for determination of water conservation stages.

A water conservation stage shall be determined in accordance with the provisions of this chapter. A water conservation stage shall be called and imposed by resolution of the city council and shall remain in full force and effect until otherwise determined or discontinued by resolution of the city council declaring that existing water supply conditions and the supply of water available for distribution within the city's service area has been replenished or augmented. The city manager shall promulgate guidelines (the "guidelines") which shall set forth the criteria for determining when a particular conservation stage is to be implemented and terminated.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

13.22.030 - Water conservation stages.

A water conservation stage shall be determined in accordance with the provisions of this chapter and the guidelines.

A. Water Conservation Stage 1. A water conservation stage 1 ("stage 1") shall be called pursuant to the guidelines or emergency or drought-related regulations imposed by state or federal regulatory agencies. During stage 1, compliance shall be voluntary. All water withdrawn from city facilities shall be put to reasonable beneficial use. Water conservation measures shall include the following as well as such other measures as may be implemented by the city from time to time:
    1. Preventing excessive run-off from entering adjacent properties, sidewalks, gutters, surface drains or storm drains.
    2. Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or runoff.
    3. Repair of any and all observable leaks of water on the premises.
    4. Use of a broom or blower to clean driveways and paved or hard surfaces.
    5. Use of water for washing down driveways and paved or hard surfaces only when necessary to alleviate immediate fire or sanitation hazards.
    6. Use of a shut off nozzle when using a hose to wash a vehicle or hand watering.

7. Use of low flow shower heads and shortening time in the shower.
8. Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or wastebasket.
9. Reduction in water consumption for bathing, hand dishwashing and irrigation by reduction of flow time for these activities.
10. Running only full loads in the washing machine and dishwasher.

B. Water Conservation Stage 2. A water conservation stage 2 ("stage 2") shall be called pursuant to the guidelines and when it is apparent that the city's production or supply facilities cannot meet customer demand under a stage 1 conditions or pursuant to emergency or drought-related regulations imposed by state or federal regulatory agencies. During stage 2, all measures in stage 1 shall apply and shall be mandatory. In addition to the stage 1 measures, the following shall apply in stage 2 which shall be mandatory:

1. Irrigation of lawns, landscaping, foliage, gardens, flowerbeds, and other outdoor areas shall be limited as follows: street addresses ending in odd numbers may only water on Mondays, Wednesdays, and Fridays; and addresses ending in even numbers may water only on Tuesdays, Thursdays and Saturdays. Irrigation of any type is prohibited on Sundays. The only exception shall be areas irrigated with non-potable water. Any single irrigation station may not run longer than ten minutes per day.
2. Outdoor irrigation of turf and ornamental landscaping shall be prohibited between the hours of ten a.m. and four p.m. daily.
3. Any and all observable leaks of water on a resident's premises shall be repaired within twenty-four hours of notification to customer.
4. No hosing down of non-landscaped or hardscape areas.
5. Construction water shall be prohibited during a stage 2 alert condition.
6. The washing of boats, vehicles or mobile equipment shall only be allowed in car washes or by using a bucket and hose with an automatic shut off nozzle for rinsing.
7. The use of water in ornamental fountains or water features shall only be permitted if the water is recirculated.
8. The city manager will have the right to reduce the amount of water used in irrigating any park site, greenbelt or open areas within the city limits.
9. No outdoor irrigation shall be permitted during and forty-eight hours after a measurable rainfall event.
10. Restaurants and other food service establishments shall serve water to customers only on request.
11. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily and prominently display notice of this option.
12. Other restrictions may be imposed if deemed necessary by the city manager or city council.

C. Water Conservation Stage 3. A water conservation stage 3 ("stage 3") shall be called pursuant to the guidelines and when it is apparent that the reductions achieved from stage 1 and stage 2 conditions are not sufficient to allow the city's production and supply to meet customer demand or pursuant to any emergency or drought-related regulations imposed by state or

federal regulatory agencies. During stage 3, all measures in stages 1 and 2 shall apply and shall be mandatory. In addition to the stage 1 and stage 2 measures, the following restrictions on water use shall apply which shall be mandatory:

1. No irrigating of lawns. Plants, trees and bushes may be irrigated by use of a bucket or the use of reclaimed gray water as allowed by state and county health rules and regulations. No runoff shall occur.
2. Hosing down of unlandscaped or hard surfaces is prohibited.
3. The introduction of water into swimming pools, wading pools and spas shall be prohibited.
4. No washing of motor or recreational vehicles, except at a car wash facility.
5. Parks may irrigate trees and shrubbery with buckets only or other methods which ensure that no more than twenty gallons of water are used on a single tree or shrub during a period of one week. Irrigation of playing fields and open spaces shall be prohibited.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

13.22.040 - Extensions of water conservation stages.

In the event the city experiences a facility malfunction or supply interruption during high water use periods, stages 1, 2, or 3 restrictions may be implemented immediately by the city manager. In the event of a prolonged stage 3 condition, the city council shall have the authority to take any other action available to ensure that the city's water supply is not jeopardized.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

13.22.050 - Enforcement.

A. Civil Enforcement. The city shall have all remedies available in its Municipal Code and ordinances for the enforcement of this chapter including, without limitation, Section 1.16.065 (administrative citations). Any fine, penalty, interest, or costs imposed on a violator of this chapter may, in addition to all other remedies available to the city thereunder, be added to the violator's water bill and thereafter be subject to enforcement therein including, without limitation, disconnection or turnoff of water service.

B. Criminal Enforcement. Any person violating any provision of this chapter or failing to comply with any of its requirements shall be deemed guilty of a misdemeanor unless the violation is made an infraction by ordinance and shall be punishable as described in Chapter 1.20 of the Municipal Code.

(Ord. No. 15-05-724, § 1(Exh. A), 4-20-2015)

Golden Hills Community Services District
Water Shortage Contingency Plan

In the best interest of the Golden Hills CSD and its consumers, Golden Hills CSD has adopted water shortage regulations in advance of an actual or threatened water shortage in order to reduce consumption and reserve a sufficient supply of water for public health and safety. Golden Hills CSD staff is investigating more aggressive measures to encourage water conservation. Because the Golden Hills CSD is totally supplied by groundwater, it is unlikely that a 50% reduction in the State Water Project (SWP) supply will have much impact in any single year.

Stages of Action

The water shortage regulations include three stages of implementation. Actions in each stage would be undertaken by the Golden Hills CSD and/or its consumers. When staff determines that the water supply condition warrants activating a water alert or stage change, the General Manager will implement the appropriate alert or change and notify the board. Presently there are no defined triggers (i.e., water allocations, snow pack levels, etc.) for moving from one stage to the next. However, any decision to change stages will be based on the combination of water supplies, weather conditions, trends in water usage, groundwater levels, water tank levels, and water production.

Conservation measures gradually increase with each stage. The consumers are given opportunities to voluntarily reduce consumption in Stage I. If these efforts are not sufficient, then Stage II is implemented which includes additional mandatory and voluntary measures. If these are not sufficient, then Stage III, which includes several other mandatory regulations, is implemented.

The State of California requires that an urban water shortage contingency plan include up to a 50% reduction in consumption. The voluntary measures alone would not reduce consumption by 50% and this goal could probably only be achieved with strict enforcement of significant mandatory reductions.

Estimate of Minimum Supply – Next 3 Years

Over the past two decades the Golden Hills CSD has pumped groundwater to meet all water supply demands. While there may be less water infiltrating from rainfall, snowfall, runoff and irrigation during dry years, it does not critically impact groundwater supplies in the short term. The Golden Hills CSD has taken an active role in groundwater banking and currently has banked approximately a four year supply which exceeds the Golden Hills CSD’s allowed pumping allocation. As a result of its conjunctive use programs, the Golden Hills CSD should have fairly consistent water supplies during different hydrologic years. It is expected that no water shortages would occur during the next three years.

Table X-1: Minimum Three Year Supply

Source	Year 1	Year 2	Year 3	Normal
Tehachapi Basin Service Area				
Golden Hill CSD Supply [1]				
Tehachapi Basin owned Allowed Pumping Allocation	866	866	866	866
Tehachapi Basin leased Allowed Pumping Allocation	603	603	603	603
Imported Water				
Current Year Supply	-	-	-	-
Recovery of water previously banked in Tehachapi Basin	395	395	395	395
Golden Hills CSD Minimum Supply	1,864	1,864	1,864	1,864
Notes:				
[1] Presumes that Golden Hills and Tehachapi would each recover 20% of the water they have in storage at the beginning of each year. Presumes that Golden Hills and Tehachapi would both forgo SWP water as their supply is adequate without new imports.				

Catastrophic Supply Interruption

The Golden Hills CSD has written guidelines in its Emergency Response Plan to address a catastrophic non-drought related interruption in water supply (i.e. power outage, system failure, natural disaster, etc.). The water shortage regulations could be used to reduce consumption after a catastrophic supply interruption.

Prohibition, Penalties, and Consumption Reduction Methods

Description of prohibitions, penalties and consumption reduction methods in each stage of the water shortage regulations are provided below:

Stage I Water Alert

Stage I Water Alert activates voluntary water conservation by Golden Hills CSD customers, and the desired reduction would be at least ten percent (10%) of normal water usage. There would be no change to the rate structure.

Stage II Water Alert

A Stage II Water Alert shall apply when it is apparent that even with a ten percent (10%) decrease from normal demands or Stage I Water Alert measures, the Golden Hills CSD's water production facilities or supply cannot meet customer demand. A fifteen percent (15%) increase of the current water rates may be imposed. In addition to pricing incentives, the General Manager may implement the following water restrictions on the use of water:

1. Alternate day irrigation of landscaping. There shall be no run-off as a result of irrigation. (West side would water on Monday, Wednesday and Friday. East side would water on Tuesday, Thursday and Saturday. There would be no watering on Sunday.)
2. No hosing down of un-landscaped areas.
3. The washing of boats and vehicles shall only be allowed in car washes or by using a bucket for the wash water and a hose equipped with a shutoff nozzle for rinsing.
4. The use of water in ornamental fountains shall only be allowed where all water in the fountain is re-circulated.

5. The introduction of water into swimming pools, wading pools, and spas shall be prohibited.
6. The Golden Hills CSD will have the right to reduce the amount of water used in irrigating any park site or any other greenbelt or open area within its boundaries. All irrigation of park, greenbelt or open area landscaping will be performed during the hours of 8:00 PM and 6:00 AM, and no run-off will be allowed.
7. Other restrictions may be imposed if deemed necessary and appropriate by the General Manager and Board of Directors of the Golden Hills CSD.

Stage III Water Alert

Should the District lose twenty-five percent (25%) or more of its water production capabilities, a Stage III Water Alert would be declared. The current base rate and increments may be increased by twenty-five percent (25%), and any or all of the following restrictive uses may be applied by the General Manager:

1. No irrigating of lawns. Plants and bushes may be watered by use of a bucket or the use of reclaimed gray water as allowed by State and County Health rules and regulations. No run-off will occur.

2. No hosing down of un-landscaped areas.

3. No washing of motor or recreational vehicles, including boats, except at a car wash facility.

4. The management of the car wash must provide the General Manager with evidence that a normal wash/rinse cycle can be accomplished at the site through the use of 10 gallons water or less. Such washing shall require use of an automatic shut-off nozzle.

5. The introduction of water into swimming pools, wading pools, and spas shall be prohibited.

6. The Golden Hills CSD will have the right to reduce the amount of water used in irrigating any park site or any other greenbelt or open area within its boundaries. All irrigation of park, greenbelt or open area landscaping will be performed during the hours of 8:00 PM and 6:00 AM, and no run-off will be allowed.

7. Parks may irrigate trees and shrubbery only with buckets or other methods which insure that no more than twenty (20) gallons of water are used on a single tree or shrub during a period of one (1) week. Irrigation of playing fields and open spaces shall be prohibited.

In the event that the Golden Hills CSD experiences a line breakage or facility malfunction during high water usage periods (late spring and summer), Stage III Water Alert restrictions may be implemented at once.

In the event of a prolonged Stage III Water Alert, which may include drought conditions, the Board of Directors shall have the authority to take any other action available to insure that the Golden Hills CSD's water supply is not jeopardized and may impose a building moratorium until such time as the water supply is increased by either the construction of additional water storage and production facilities, or natural supply.

Enforcement of Water Restrictions

Any failure to comply with any of these provisions shall constitute a violation, regardless of whether the failure to comply is caused by an account holder, a consumer, or any other person or entity.

In the event of violation of any terms of these water restrictions imposed by the Golden Hills CSD, the General Manager will have the authority to issue warnings and/or impose surcharges on the water uses, as indicated below, Such surcharges are incentives to comply with the water restrictions and to recover part of the costs incurred to monitor water use and impose these restrictions during times of water supply deficiencies. In the event of continued water abuse, the General Manager will have the authority to lock the meter or remove the meter from the property. The account holder and/or tenant shall be notified of each violation by 1st class mail or by delivery of a notice to the household.

1. During a Stage II Water Alert, the General Manager shall have the authority to impose the following surcharge to the account holder or their tenant:

    a. First violation within twelve months: Issuance of written warning; no surcharge.

    b. Second violation within twelve months: $50.00 surcharge on next billing.

    c. Third violation within twelve months: $100.00 surcharge on the next billing plus the possible installation of flow restriction devices at the discretion of the General Manager.

    d. Fourth and subsequent violation within twelve months: $250.00 surcharge on the next billing, plus the possible installation of flow restriction devices at the discretion of the General Manager or shutoff of service at the discretion of the Board of Directors.

2. During a Stage III Water Alert, the General Manager shall have the authority to impose the following surcharges on the account holder or their tenant:

    a. First violation within twelve months: Issuance of written warning; no surcharge.

    b. Second violation within twelve months: $100.00 surcharge on next billing.

    c. Third violation within twelve months: $200.00 surcharge on the next billing plus the possible installation of flow restriction devices at the discretion of the General Manager.

d. Fourth and subsequent violation within twelve months: $500.00 surcharge on the next billing, plus the possible installation of flow restriction devices at the discretion of the General Manager or shutoff of service at the discretion of the Board of Directors.

Analysis of Revenue Impacts of Reduced Sales During Shortages

The Golden Hills CSD bills its customers on a one hundred (100) cubic foot basis. As a result, water shortage regulations which aim to reduce water consumption can also reduce revenue for the Golden Hills CSD. Water conservation during droughts has a major impact on revenue. Although the decrease in water deliveries means reduced pumping costs, there are considerable fixed expenses and overhead costs which are not affected by the amount of water delivered.

The Golden Hills CSD has developed a plan that raises water rates in water shortages by up to twenty-five percent (25%). The higher unit rate is intended to discourage use, but it will also help to offset the revenue lost by selling a lower volume of water. The suitability of this twenty-five percent (25%) increase is not known.

Implementation of the water shortage regulations will have a large impact on expenditures and revenues. Additional costs are expected for billing and operations. Golden Hills CSD staff will provide personnel to implement the plan. It is likely that expenses will increase for public notification and informational programs. Fines collected for water waste will be source of revenue, although it is anticipated to be minor. Overall, the Golden Hills CSD anticipates that the increase in revenue will be less than the increase in expenses.

Draft Ordinance and Monitoring Procedure

The Golden Hills CSD has previously (2007) adopted Ordinance No. 30, which provides the establishment of rules and regulations for water service and connections. Water meters are read monthly, but during a period of drought, the water consumption can be tracked more frequently. Reading customers' water meters more frequently would be time consuming and costly. During a shortage the data will be evaluated to determine its effectiveness in reducing water consumption.

Agenda

GOLDEN HILLS COMMUNITY SERVICES DISTRICT
2015 WATER SHORTAGE CONTINGENCY PLAN

Stage III Water Alert is effective immediately. Details of water irrigation schedule are in red:

- Alternate day irrigation of landscaping. There shall be no run-off as a result of irrigation. Odd numbered homes (example 21001) will water on **Tuesday, Thursday and Saturday**. Even numbered homes (example 21002) will water on **Wednesday, Friday and Sunday**. There will be no watering on Monday, and no irrigation between the hours of 10:00 am – 4:00 pm.
- The washing of boats and vehicles shall only be allowed in car washes or by using a bucket for the wash water and a hose equipped with a shutoff nozzle for rinsing.
- The use of water in ornamental fountains shall only be allowed where all water in the fountain is re-circulated.
- No hosing down of unlandscaped areas.
- The management of the car wash must provide the General Manager with evidence that a normal wash/rinse cycle can be accomplished at the site through the use of 10 gallons water or less. Such washing shall require use of an automatic shut-off nozzle.
- The introduction of water into swimming pools, wading pools, and spas shall be prohibited.
- The District will have the right to reduce the amount of water used in irrigating any park site or any other greenbelt or open area within its boundaries. All irrigation of park, greenbelt or open area landscaping will be performed during the hours of 8:00 PM and 6:00 AM, and no run-off will be allowed.

Enforcement of Water Restrictions

Any failure to comply with any of these provisions shall constitute a violation, regardless of whether the failure to comply is caused by an account holder, a consumer, or any other person or entity.

In the event of violation of any terms of the water restrictions herein imposed by the District, the General Manager will have the authority to issue warnings and/or impose surcharges on the water users, as indicated below. Such surcharges are compliance

incentives and a process to respond to decreased consumption revenues, along with increased monitoring costs. In the event of continued water abuse, the General Manager will have the authority to lock the meter or remove the meter from the property. The account holder and/or tenant shall be notified of each violation by 1st class mail or by delivery of a notice to the household.

1. First violation within twelve months: Issuance of written warning; no surcharge.
2. Second violation within twelve months: $100.00 surcharge on the next billing.
3. Third violation within twelve months: $200.00 surcharge on the next billing plus the possible installation of flow restriction devices at the discretion of the General Manager.
4. Fourth and subsequent violation within twelve months: $500.00 surcharge on the next billing, plus the possible installation of flow restriction devices at the discretion of the General Manager or shutoff of service at the discretion of the Board of Directors.

ORDINANCE NO. 30

AN ORDINANCE PROVIDING FOR ESTABLISHMENT OF RULES AND REGULATIONS FOR WATER SERVICE AND CONNECTIONS; PROVIDING FOR MEANS OF COLLECTION OF CHARGES AND FOR PENALTIES AND ENFORCEMENT MEASURES IN CASE OF NONPAYMENT OF CHARGES OR FOR CERTAIN VIOLATIONS; PROVIDING FOR APPEALS IN CERTAIN CIRCUMSTANCES; PROVIDING FOR DISPOSITION OF REVENUES RECEIVED PURSUANT TO THIS ORDINANCE, AND FOR USES TO WHICH SUCH REVENUES RECEIVED PURSUANT TO THIS ORDINANCE, AND FOR USES TO WHICH SUCH REVENUES SHALL BE APPLIED; PROVIDING FOR EFFECTIVE DATE OF THIS ORDINANCE AND OF CHARGES HEREUNDER; AND REPEALING ORDINANCES IN CONFLICT HEREWITH CONSOLIDATED INCLUDING UNAMENDED PORTIONS OF ORDINANCE NO. 2 (11/22/67) AS AMENDED BY ORDINANCE NOS. 16 (5/22/89), 19 (2/25/91), 21 (11/25/91), 22 (3/3/93), 25 (4/5/95) and 26 (11/14/95)

BE IT ORDAINED BY THE BOARD OF DIRECTORS OF THE GOLDEN HILLS COMMUNITY SERVICES DISTRICT, as follows:

SECTION 1

Definitions

The following terms when used in this Ordinance shall have the following respective meanings:

1. *"Board of Directors"* or *"Board"* shall mean the Board of Directors of the Golden Hills Community Services District.

2. *"Commercial user"* shall mean any user who is not a residential user, industrial user or institutional user.

3. *"Commercial water service"* shall mean the furnishing of water to a commercial user.

4. *"Date of presentation"* shall mean the date upon which a bill or notice is mailed or delivered personally to the consumer.

E. In the event a user of a hydrant meter service violates any District ordinances, rules and regulations as may additionally be augmented by contract with the user, such a violation shall be deemed a misdemeanor punishable pursuant to section 19 of the Penal Code.

F. All contracts for hydrant meter service shall include a provision which shall set a civil penalty in an amount provided for in the then current Water Rates Resolution for the taking of water by the user through a bypass of the hydrant meter or at any point along the District service system other than the metered connection provided to the user for such purpose. Additionally, such a violation shall result in the immediate discontinuance of service to the user; shall be deemed a misdemeanor punishable pursuant to section 19 of the Penal Code; and, may be charged criminally under applicable sections of the Penal Code including section 592.

SECTION 15

Shortages of Supply, Service Interruptions or Excessive Pressure

1. The District will exercise reasonable diligence to provide continuous and adequate water service to users and to avoid any shortage or interruption of water delivery. However, the District cannot, and does not, guarantee complete freedom from shortage or interruption.

2. The District shall have the right to suspend water service temporarily to

make necessary repairs or improvements to the District's water system. In each case of temporary suspension of service, the District will make reasonable efforts to notify the users affected as soon as circumstances permit and will prosecute the work of repair or improvement with due diligence.

3. During any period of threatened or actual water shortage, the District shall have the right through a resolution or ordinance to apportion its available water supply among users in such a manner as appears most equitable under the circumstances then prevailing and with due regard to public health and safety. Failure by a user, or other individual, to abide by the District's apportionment shall be deemed a violation of this Ordinance and shall be a misdemeanor punishable pursuant to section 19 of the Penal Code.

4. The Board may adopt, from time to time, water shortage regulations by resolution or ordinance. Said regulations shall be kept on file at the District's office and a violation of those regulations shall be deemed a violation of this Ordinance and shall be a misdemeanor punishable pursuant to section 19 of the Penal Code.

5. The District shall not be liable for interruption, shortage or insufficiency of water supply or insufficient or excessive water pressure, or variations in water quality or any loss or damage occasional thereby.

6. An adequate pressure reducing valve may be necessary on the user's service line to control water pressure. Installation, maintenance and the

determination of whether there is a need for an individual pressure regulating valve will be the sole responsibility of the user.

SECTION 16

Temporary/Vacation Disconnections

1. Users may request that the District temporarily shut off water service to their premises at any time and for any duration. However, such service disruptions and reconnections shall only be accomplished during normal District operating hours and the user shall agree to hold the District harmless for any problems that may arise from the disconnection and reconnection of service to the user's water system. Furthermore, unless expressly requested by the user, the District shall not lock off the water meter in question. The costs, if any, for such service shall be provided for in the then current Water Rates Resolution.

SECTION 17

Tampering With District Property, Improper and Unauthorized Connections

1. No one except an authorized District employee shall, at any time, in any manner, operate the curb cocks or valves or water main valves or pumps within the District's system or interfere with meters or their connections or parts of the water distribution system. The only exception to this rule is

Agenda

RESOLUTION NO. 745 OF THE BOARD OF DIRECTORS OF GOLDEN HILLS COMMUNITY SERVICES DISTRICT

ADOPTION OF WATER SHORTAGE REGULATIONS

WHEREAS, Government Code section 61621.5 provides that a community services district may adopt by ordinance regulations to govern the use of its facilities and property; and

WHEREAS, with adoption of Ordinance No. 2, as amended from time to time, this District has established rules and regulations for water service and connections, and Ordinance No. 16 amending Ordinance No. 2, adopted May 22, 1989, provides at section 5, paragraph 2 as follows:

> "During any period of threatened or actual water shortage the District shall have the right to apportion its available water supply among users in such a manner as appears most equitable under the circumstances then prevailing and with due regard to public health and safety."

;and

WHEREAS, it is in the best interest of the District and its landowners and consumers that explicit regulations be adopted in advance of an actual or a threatened water shortage in order to expeditiously reduce water consumption and preserve sufficient water for public health and safety.

NOW, THEREFORE, BE IT RESOLVED that acting pursuant to the above-referenced provisions of Ordinance No. 16, the attached water shortage regulations are adopted.

BE IT FURTHER RESOLVED, that District the General Manager is authorized and directed to do all things necessary and appropriate to disseminate information regarding adoption of these water shortage regulations and to implement such regulations, when appropriate.

All the foregoing, being on the motion of Director Mitchell, and seconded by Director Morse, is hereby authorized by the following vote, namely:

AYES: Directors Cassil, Cornelison, Sharp, Mitchell, Morse

NOES: None

ABSENT: None

Edgar R. Sharp
President

Agenda

I hereby certify that the foregoing is a true copy of the Resolution of the Board of Directors of GOLDEN HILLS COMMUNITY SERVICES DISTRICT as duly passed and adopted by said Board of Directors on July 6, 1993.

Secretary of the Board of Directors

(SEAL)

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STALLION SPRINGS COMMUNITY SERVICES DISTRICT
WATER SHORTAGE CONTINGENCY PLAN

In the best interest of the District and its consumers, the District has adopted water shortage regulations, in advance of an actual or threatened water shortage, in order to reduce consumption and reserve a sufficient supply of water for public health and safety. District staff is also investigating more aggressive measures to encourage water conservation.

FINDINGS:

The Stallion Springs Community Services District (SSCSD) Board recognizes that water shortages have occurred in the past and will occur in the future due to: increased demand or limited supplies of potable water as the result of drought or curtailment of supply.

The SSCSD Board also finds that Southern California has been experiencing a gradual reduction in per capita water supply resulting from population growth and lack of supply replacement. Demographic changes in population, within Stallion Springs CSD boundaries, have caused additional demand that will be challenging in times of supply shortages.

ESTIMATE OF MINIMUM SUPPLY OVER THE NEXT THREE YEARS

Stallion Springs CSD relies primarily on groundwater for production. During dry years there is less water infiltrating from rainfall, snowfall, runoff and irrigation and the localized impact on groundwater can be somewhat significant. In addition to these natural water basin recharge supplies, groundwater is also dependent upon State Water Project recharge.

Because the District's water supply is delivered through a combination of sources, including imported State Water Project water (recharged into the Cummings Basin for Stallions Springs CSD use), groundwater from the Cummings Basin and groundwater from within the Stallion Springs CSD boundaries (outside of the adjudicated basin),a 50% reduction in the State Water Project (SWP) supply will have an impact in any given year.

Stallion Springs CSD closely monitors levels in its wells. There has not been a significant problem when proper pumping levels are monitored and observed. Fairly consistent water supplies have been available during different hydrologic years. It is expected that there will not be a water supply shortage within the next three years.

SCOPE OF CONSERVATION PROGRAM:

The provisions of this Water Shortage Contingency Plan is to develop protocols to respond to long term and short term water shortages by authorizing the Board to select the most appropriate level of conservation measures based on then current conditions. The Board shall conduct duly noticed public meetings to inform water customers of any change in the

level of water conservation needed to meet the limited water supply and measures needed to meet those limitations.

WATER REDUCTION STAGE TRIGGERING MECHANISMS

Emergency response stage actions become effective when the Stallion Springs CSD Board of Directors declares that the District is unable to provide sufficient water supply to meet ordinary demands, to the extent that insufficient supplies would be available for human consumption, sanitation and/or fire protection.

WATER SHORTAGE CONDITIONS DESCRIBED:

A. Stage One Condition - Moderate Water Shortage: This condition exists when the District determines that it may not be able to meet ninety percent (90%) or more of the projected water demands of its customers, either now or within six (6) months, and that water use should be reduced by not less than ten percent (10%).

B. Stage Two Condition - Severe Water Shortage: This condition applies during periods when the District determines that it may not be able to meet eighty percent (80%) or more of the projected water demands of its customers, either now or within six (6) months, and that water use should be reduced by not less than twenty percent (20%).

C. Stage Three Condition - Critical Water Shortage: A stage three condition applies during periods when the District determines that it will not be able to meet seventy percent (70%) or more of the projected water demands of its customers now or within six (6) months, and that a reduction of not less than thirty percent (30%) in potable water use is required to meet minimal needs of all its customers.

D. Stage Four Condition - Urgent Water Shortage: A stage four condition applies during periods when the District determines that it will not be able to meet fifty percent (50%) or more of the projected water demands of its customers now or within (6) months, and that a reduction of not less than fifty percent (50%) in potable water use is required to meet minimal needs of all its customers.

WATER USE IN LANDSCAPING:

A. California Legislature: The California legislature has found and declared that:

1. Landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development; and

2. Landscape design, installation, and maintenance can and should be water efficient.

B. District: The District finds and declares that:

1. The current rate of home construction on unoccupied lots will in the future substantially increase the present demands for potable water.

2. The amount of potable water used for landscaping during the months of summer is about three (3) times the amount used for domestic household purposes, resulting in potential water shortages.

C. Efficient Water Use:

It is the intent of the District, realizing that water shortages can develop at any time, to promote the most efficient use of water in landscaping throughout the year while respecting the economic, environmental, aesthetic, and lifestyle choices of property owners.

D. Landscaping Information Available:

In order to avoid unnecessary expenses, potentially incurred by property owners during periods of water shortages, the District shall provide information to all property owners and renters regarding the design, installation, and maintenance of water efficient landscapes and the use of drought resistant plants and efficient irrigation systems.

WATER REDUCTION MEASURES:

A. **Stage One Conditions**: During a stage one condition, customers are asked to use water wisely and to practice water conservation measures so that water is not wasted. All water withdrawn from District facilities shall be put to reasonable beneficial use. Water conservation measures include, but are not limited to:

1. Preventing excessive water from flowing off the property served onto adjacent properties or sidewalks, gutters, surface drains, storm drains, or over land.

2. Use of drip irrigation systems or other methods designed to prevent excessive surface irrigation of landscaped areas, resulting in conditions such as puddling or runoff.

3. Immediate repair of all observable leaks of water on the customer's premises.

4. Use of a broom or a blower instead of a hose to clean driveways and paved surfaces. Use of water in cleaning of driveways and other paved surfaces only when necessary to alleviate immediate fire or un-sanitation hazards.

5. Being careful not to leave a hose running while washing a vehicle.

6. Use of low flow shower heads and shortening the time spent in the shower.

7. Use of volume reduction devices in toilets and being careful not to use the toilet as an ashtray or wastebasket.

8. Reduction in water consumption for bathing, hand dishwashing and irrigation by reduction of flow time for these activities.

9. Running only full loads in the washing machine and dishwasher.

10. Capturing cold tap water while waiting for hot water to come down the pipes, to be used later on house plants or garden.

11. Serving water to customers at the any and all restaurants within the service is only upon specific request.

B. **Stage Two Conditions**: During a stage two condition, the following water conservation measures shall apply, including all provisions of a stage one condition:

1. Lawn Watering:

a. Lawn watering and landscape irrigation is permitted Monday through Saturday between the hours of five (5:00) P.M. and eight (8:00) A.M. local time. However, this watering is permitted at any time on these days if a handheld hose is used, equipped with a nozzle that automatically shuts off when released, or when a handheld container or a drip irrigation system is used.

b. Lawn watering and landscape irrigation is prohibited on Sundays.

2. Construction Water: Construction water for grading and compacting may be used at any time provided the water is from a source other than the District potable water system.

3. Potable Metered Water: Potable metered water may be used for other construction between seven o'clock (7:00) A.M. and five o'clock (5:00) P.M., local time.

4. Washing Vehicles, Equipment: Washing of vehicles or other equipment is permitted only if done using a handheld bucket or a handheld hose equipped with a nozzle that automatically shuts off when released.

C. **Stage Three Conditions**: During a stage three condition, all the provisions of stages one and two conditions shall apply, and in addition, the following restriction shall apply: All high volume users (defined as over 8,000 cubic feet on a bi-monthly basis) shall submit to the District water use curtailment plans for at least thirty percent (30%) overall reduction in water use. The plans shall be furnished on a District form within ten (10) days of notice by the District of the declaration of a stage three condition.

D. **Stage Four Conditions**: During a stage four condition, all the provisions of stages one, two and three shall apply, and in addition, the following restrictions apply: Water supply conditions are substantially diminished and remaining supplies must be allocated to preserve human health and environmental integrity. All customers are only permitted to use water at

the minimum required for public health protection. Firefighting is the only allowable outdoor water use.

DURATION OF CONSERVATION LEVELS:

As soon as a water shortage condition is determined to exist, the water conservation measures provided for by this chapter for that condition shall apply to all District water service until a different condition is declared.

USE OF NONPOTABLE WATER:

Nothing in this policy shall prohibit or limit the use of non-potable water on the golf course or for other irrigation purposes; provided the California Department of Public Health and the Central Valley Regional Water Quality Control Board have determined that the use would not be detrimental to public health.

IMPLEMENTATION OF STAGE ONE, TWO OR THREE CONDITIONS:

The General Manager, or his/her designee, shall monitor the District's projected supply and demand for water on a daily basis and determine the extent of the conservation required through the implementation or termination of stages one, two, three and four conditions in order for the District to prudently plan for and supply water to its customers. Thereafter, the General Manager may order that stage one, two, three or four conditions be implemented or terminated in accordance with the applicable provision of this policy.

The declaration of a stage condition shall be made by public announcements, posting of notices in three (3) locations accessible to the public and publication of the notice in the "Tehachapi News" and on the District website. The stage designated shall become effective immediately upon announcement. The declaration of any stage condition shall be reported to the Board at its next meeting. The Board shall then ratify the declaration, rescind the declaration or direct the declaration of a different stage.

ENFORCEMENT AUTHORITY:

The Board of Directors shall consider an ordinance consistent with this policy which provides for enforcement authority, legal remedies, including fines, penalties and/or termination of water service, and an appeal procedure.

Agenda

Appendix G

SB X7-7 Verification Forms

Regional Alliance CSD SB X7-7 Verification Form

SB X7-7 RA2 Table-1: Baseline Period Ranges for Regional Alliance			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	5,181	Acre Feet
	2008 total volume of delivered recycled water	0	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1]	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range[2]	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[3]	2007	

[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 ending year must be between December 31, 2004 and December 31, 2010.*

[3] *The ending year must be between December 31, 2007 and December 31, 2010.*

NOTES:

Agenda

Regional Alliance CSD SB X7-7 Verification Form

SB X7-7 RA2 Table 5: Gallons Per Capita Per Day (GPCD) for Regional Alliance				
Baseline Years		Regional Service Area Population*	Regional Annual Gross Water Use* *(in Units selected in Table 0)*	Daily Per Capita Water Use (GPCD)
10 to 15 Year Baseline GPCD				
Year 1	2000	19,746	4,210	190
Year 2	2001	20,031	4,334	193
Year 3	2002	20,422	4,614	202
Year 4	2003	20,870	4,423	189
Year 5	2004	21,791	4,828	198
Year 6	2005	22,419	4,547	181
Year 7	2006	23,708	5,002	188
Year 8	2007	24,297	5,290	194
Year 9	2008	24,647	5,181	188
Year 10	2009	24,827	4,971	179
Year 11				
Year 12				
Year 13				
Year 14				
Year 15				
10-15 Year Average Baseline GPCD				**190**
5 Year Baseline GPCD				
Baseline Years		Regional Service Area Population*	Regional Gross Water Use* *(in Units selected in Table 0)*	Daily Per Capita Water Use
Year 1	2003	20,870	4,423	189
Year 2	2004	21,791	4,828	198
Year 3	2005	22,419	4,547	181
Year 4	2006	23,708	5,002	188
Year 5	2007	24,297	5,290	194
5 Year Average Baseline GPCD				**190**
2015 Compliance Year GPCD				
2015		25,698	3,844	**134**

**All participating agencies must submit population and gross water tables, SB X7-7 Tables 0 through 6, as applicable, showing the individual agency's calculations. These individual agency tables will be submitted with the individual or Regional Urban Water Management Plan.*

NOTES:

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Regional Alliance CSD SB X7-7 Verification Form

SB X7-7 RA2 Table 6: Gallons per Capita per Day for Regional Alliance *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	190
5 Year Baseline GPCD	190
2015 Compliance Year GPCD	134
NOTES:	

SB X7-7 RA2 Table 7: 2020 Target Method for Regional Alliance *Select Only One*		
Target Method		Supporting Documentation
☐	Method 1	SB X7-7 RA2 Table 7A
☐	Method 2	SB X7-7 RA2 Tables 7B, 7C, and 7D *Contact DWR for these tables*
☑	Method 3	SB X7-7 RA2 Table 7-E
☐	Method 4	Method 4 Calculator
NOTES:		

Agenda

Regional Alliance CSD SB X7-7 Verification Form

SB X7-7 RA2 Table 7-E: Target Method 3 for Regional Alliance				
Alliance May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
☐		North Coast	137	130
☐		North Lahontan	173	164
☐		Sacramento River	176	167
☐		San Francisco Bay	131	124
☐		San Joaquin River	174	165
☐		Central Coast	123	117
☑	100%	Tulare Lake	188	179
☐		South Lahontan	170	162
☐		South Coast	149	142
☐		Colorado River	211	200
2020 Target *(If more than one region is selected, this value is calculated.)*				**179**
NOTES:				

SB X7-7 RA2 Table 7-F: Confirm Minimum Reduction for 2020 Target for Regional Alliance			
5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target*	Calculated 2020 Target *From Method Selected in Table 7*	Confirmed 2020 Target
190	181	179	179
** Maximum 2020 Target is 95% of the 5 Year Baseline GPCD*			
NOTES:			

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Regional Alliance CSD SB X7-7 Verification Form

SB X7-7 RA2 Table 8: 2015 Interim Target GPCD for Regional Alliance		
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
179	190	185
NOTES:		

SB X7-7 RA2 Table 9: 2015 Compliance for Regional Alliance						
Actual 2015 GPCD	2015 Interim Target GPCD	OPTIONAL Economic Adjustment*	TOTAL Adjustments	Adjusted 2015 GPCD	2015 GPCD *(Adjusted if applicable)*	Did Alliance Achieve Targeted Reduction for 2015?
134	185	*From Methodology 8 (Optional)*	0	134	134	YES
**Adjustments for extraordinary economic growth can be applied either to the individual suppliers' data or to the aggregate regional allliance data (but not both) depending upon availability of suitable data and methods. (Weather normalization, extraordinary events and changes in distibution area should be made for each individual water supplier, if applicable.)*						
NOTES:						

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Bear Valley CSD SB X7-7 Verification Form

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries		Acre Feet
	2008 total volume of delivered recycled water		Acre Feet
	2008 recycled water as a percent of total deliveries		Percent
	Number of years in baseline period[1]	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range[2]	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2004	
	Year ending baseline period range[3]	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 ending year must be between December 31, 2004 and December 31, 2010.*

[3] *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:	

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Bear Valley CSD SB X7-7 Verification Form

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	2000	4,232
Year 2	2001	4,430
Year 3	2002	4,631
Year 4	2003	4,789
Year 5	2004	4,992
Year 6	2005	5,071
Year 7	2006	5,184
Year 8	2007	5,281
Year 9	2008	5,254
Year 10	2009	5,285
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2004	4,992
Year 2	2005	5,071
Year 3	2006	5,184
Year 4	2007	5,281
Year 5	2008	5,254
2015 Compliance Year Population		
2015		5,314
NOTES:		

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Bear Valley CSD SB X7-7 Verification Form

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	2000	1,055			-		-	1,055
Year 2	2001	1,107			-		-	1,107
Year 3	2002	1,123			-		-	1,123
Year 4	2003	990			-		-	990
Year 5	2004	1,123			-		-	1,123
Year 6	2005	1,018			-		-	1,018
Year 7	2006	1,089			-		-	1,089
Year 8	2007	1,114			-		-	1,114
Year 9	2008	1,102			-		-	1,102
Year 10	2009	1,002			-		-	1,002
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**1,072**
5 Year Baseline - Gross Water Use								
Year 1	2004	1,123			-		-	1,123
Year 2	2006	1,018			-		-	1,018
Year 3	2007	1,089			-		-	1,089
Year 4	2008	1,114			-		-	1,114
Year 5	2009	1,102			-		-	1,102
5 year baseline average gross water use								**1,089**
2015 Compliance Year - Gross Water Use								
2015		654	-		-		-	**654**

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3

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Bear Valley CSD SB X7-7 Verification Form

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	2000	1055		1,055
Year 2	2001	1107		1,107
Year 3	2002	1123		1,123
Year 4	2003	990		990
Year 5	2004	1123		1,123
Year 6	2005	1018		1,018
Year 7	2006	1089		1,089
Year 8	2007	1114		1,114
Year 9	2008	1102		1,102
Year 10	2009	1002		1,002
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	1123		1,123
Year 2	2006	1018		1,018
Year 3	2007	1089		1,089
Year 4	2008	1114		1,114
Year 5	2009	1102		1,102
2015 Compliance Year - Water into Distribution System				
2015		654		654

** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

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Bear Valley CSD SB X7-7 Verification Form

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	2000	4,232	1,055	223
Year 2	2001	4,430	1,107	223
Year 3	2002	4,631	1,123	216
Year 4	2003	4,789	990	185
Year 5	2004	4,992	1,123	201
Year 6	2005	5,071	1,018	179
Year 7	2006	5,184	1,089	188
Year 8	2007	5,281	1,114	188
Year 9	2008	5,254	1,102	187
Year 10	2009	5,285	1,002	169
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**196**
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	4,992	1,123	201
Year 2	2006	5,071	1,018	179
Year 3	2007	5,184	1,089	188
Year 4	2008	5,281	1,114	188
Year 5	2009	5,254	1,102	187
5 Year Average Baseline GPCD				**189**
2015 Compliance Year GPCD				
2015		5,314	654	**110**
NOTES:				

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Bear Valley CSD SB X7-7 Verification Form

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	196
5 Year Baseline GPCD	189
2015 Compliance Year GPCD	110
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:		

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Bear Valley CSD SB X7-7 Verification Form

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
☐		North Coast	137	130
☐		North Lahontan	173	164
☐		Sacramento River	176	167
☐		San Francisco Bay	131	124
☐		San Joaquin River	174	165
☐		Central Coast	123	117
☑	100%	Tulare Lake	188	179
☐		South Lahontan	170	162
☐		South Coast	149	142
☐		Colorado River	211	200
Target *(If more than one region is selected, this value is calculated.)*				**179**
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*	Calculated 2020 Target *Fm Appropriate Target Table*	Confirmed 2020 Target
189	179	179	179
** Maximum 2020 Target is 95% of the 5 Year Baseline GPCD*			
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
179	196	187
NOTES:		

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Bear Valley CSD SB X7-7 Verification Form

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				
110	187	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	110	110	**YES**
NOTES:								

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City of Tehachapi SB X7-7 Verification Form

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	2,178	Acre Feet
	2008 total volume of delivered recycled water	0	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1]	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range[2]	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2004	
	Year ending baseline period range[3]	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 ending year must be between December 31, 2004 and December 31, 2010.*

[3] *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:	

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City of Tehachapi SB X7-7 Verification Form

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	2000	**6558**
Year 2	2001	**6601**
Year 3	2002	**6670**
Year 4	2003	**6748**
Year 5	2004	**6920**
Year 6	2005	**7015**
Year 7	2006	**7465**
Year 8	2007	**7764**
Year 9	2008	**8149**
Year 10	2009	**8436**
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2004	**6920**
Year 2	2005	**7015**
Year 3	2006	**7465**
Year 4	2007	**7764**
Year 5	2008	**8149**
2015 Compliance Year Population		
2015		8,815
NOTES: Population data from DOF Table E-8 for		

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City of Tehachapi SB X7-7 Verification Form

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	2000	1,671			-		-	1,671
Year 2	2001	1,657			-		-	1,657
Year 3	2002	1,833			-		-	1,833
Year 4	2003	1,787			-		-	1,787
Year 5	2004	1,946			-		-	1,946
Year 6	2005	1,835			-		-	1,835
Year 7	2006	2,070			-		-	2,070
Year 8	2007	2,266			-		-	2,266
Year 9	2008	2,178			-		-	2,178
Year 10	2009	2,131			-		-	2,131
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**1,937**
5 Year Baseline - Gross Water Use								
Year 1	2004	1,946			-		-	1,946
Year 2	2004	1,835			-		-	1,835
Year 3	2005	2,070			-		-	2,070
Year 4	2006	2,266			-		-	2,266
Year 5	2007	2,178			-		-	2,178
5 year baseline average gross water use								**2,059**
2015 Compliance Year - Gross Water Use								
2015		1,737	-		-		-	**1,737**

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3

NOTES:

City of Tehachapi SB X7-7 Verification Form

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	2000	1671		1,671
Year 2	2001	1657		1,657
Year 3	2002	1833		1,833
Year 4	2003	1787		1,787
Year 5	2004	1946		1,946
Year 6	2005	1835		1,835
Year 7	2006	2070		2,070
Year 8	2007	2266		2,266
Year 9	2008	2178		2,178
Year 10	2009	2131		2,131
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	1946		1,946
Year 2	2004	1835		1,835
Year 3	2005	2070		2,070
Year 4	2006	2266		2,266
Year 5	2007	2178		2,178
2015 Compliance Year - Water into Distribution System				
2015		1737		1,737

** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

NOTES:

City of Tehachapi SB X7-7 Verification Form

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	2000	6,558	1,671	227
Year 2	2001	6,601	1,657	224
Year 3	2002	6,670	1,833	245
Year 4	2003	6,748	1,787	236
Year 5	2004	6,920	1,946	251
Year 6	2005	7,015	1,835	234
Year 7	2006	7,465	2,070	248
Year 8	2007	7,764	2,266	261
Year 9	2008	8,149	2,178	239
Year 10	2009	8,436	2,131	226
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**239**
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	6,920	1,946	251
Year 2	2004	7,015	1,835	234
Year 3	2005	7,465	2,070	248
Year 4	2006	7,764	2,266	261
Year 5	2007	8,149	2,178	239
5 Year Average Baseline GPCD				**246**
2015 Compliance Year GPCD				
2015		8,815	1,737	**176**
NOTES:				

Agenda

City of Tehachapi SB X7-7 Verification Form

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	239
5 Year Baseline GPCD	246
2015 Compliance Year GPCD	176
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
239	191
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*	Calculated 2020 Target *Fm Appropriate Target Table*	Confirmed 2020 Target
246	234	191	191
** Maximum 2020 Target is 95% of the 5 Year Baseline GPCD*			
NOTES:			

Agenda

City of Tehachapi SB X7-7 Verification Form

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
191	239	215
NOTES:		

SB X7-7 Table 9: 2015 Compliance								
Actual 2015 GPCD	2015 Interim Target GPCD	Optional Adjustments *(in GPCD)* Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD	2015 GPCD *(Adjusted if applicable)*	**Did Supplier Achieve Targeted Reduction for 2015?**
		Extraordinary Events	Weather Normalization	Economic Adjustment				
176	215	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	176	176	**YES**
NOTES:								

Golden Hills CSD SB X7-7 Verification Form

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	1,437	Acre Feet
	2008 total volume of delivered recycled water	0	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1]	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range[2]	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[3]	2007	

[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 ending year must be between December 31, 2004 and December 31, 2010.

[3] 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:	

Agenda

Golden Hills CSD SB X7-7 Verification Form

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	2000	7,434
Year 2	2001	7,505
Year 3	2002	7,576
Year 4	2003	7,647
Year 5	2004	7,872
Year 6	2005	8,059
Year 7	2006	8,642
Year 8	2007	8,795
Year 9	2008	8,880
Year 10	2009	8,727
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2003	7,647
Year 2	2004	7,872
Year 3	2005	8,059
Year 4	2006	8,642
Year 5	2007	8,795
2015 Compliance Year Population		
2015		8,787
NOTES:		

Agenda

Golden Hills CSD SB X7-7 Verification Form

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	2000	1,174			-		-	1,174
Year 2	2001	1,240			-		-	1,240
Year 3	2002	1,324			-		-	1,324
Year 4	2003	1,323			-		-	1,323
Year 5	2004	1,374			-		-	1,374
Year 6	2005	1,295			-		-	1,295
Year 7	2006	1,393			-		-	1,393
Year 8	2007	1,443			-		-	1,443
Year 9	2008	1,437			-		-	1,437
Year 10	2009	1,368			-		-	1,368
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**1,337**
5 Year Baseline - Gross Water Use								
Year 1	2003	1,323			-		-	1,323
Year 2	2004	1,374			-		-	1,374
Year 3	2005	1,295			-		-	1,295
Year 4	2006	1,393			-		-	1,393
Year 5	2007	1,443			-		-	1,443
5 year baseline average gross water use								**1,366**
2015 Compliance Year - Gross Water Use								
2015		1,032	-		-		-	**1,032**

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3

NOTES:

Agenda

Golden Hills CSD SB X7-7 Verification Form

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	2000	1174		1,174
Year 2	2001	1240		1,240
Year 3	2002	1324		1,324
Year 4	2003	1323		1,323
Year 5	2004	1374		1,374
Year 6	2005	1295		1,295
Year 7	2006	1393		1,393
Year 8	2007	1443		1,443
Year 9	2008	1437		1,437
Year 10	2009	1368		1,368
Year 11	0			0
Year 12	0			0
Year 13	0			0
Year 14	0			0
Year 15	0			0
5 Year Baseline - Water into Distribution System				
Year 1	2003	1323		1,323
Year 2	2004	1374		1,374
Year 3	2005	1295		1,295
Year 4	2006	1393		1,393
Year 5	2007	1443		1,443
2015 Compliance Year - Water into Distribution System				
2015		1032		1,032
** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*				
NOTES:				

Golden Hills CSD SB X7-7 Verification Form

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	2000	7,434	1,174	141
Year 2	2001	7,505	1,240	148
Year 3	2002	7,576	1,324	156
Year 4	2003	7,647	1,323	154
Year 5	2004	7,872	1,374	156
Year 6	2005	8,059	1,295	143
Year 7	2006	8,642	1,393	144
Year 8	2007	8,795	1,443	146
Year 9	2008	8,880	1,437	144
Year 10	2009	8,727	1,368	140
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**147**
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	2003	7,647	1,323	154
Year 2	2004	7,872	1,374	156
Year 3	2005	8,059	1,295	143
Year 4	2006	8,642	1,393	144
Year 5	2007	8,795	1,443	146
5 Year Average Baseline GPCD				**149**
2015 Compliance Year GPCD				
2015		8,787	1,032	**105**
NOTES:				

Agenda

Golden Hills CSD SB X7-7 Verification Form

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	147
5 Year Baseline GPCD	149
2015 Compliance Year GPCD	105
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:		

Agenda

Golden Hills CSD SB X7-7 Verification Form

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
☐		North Coast	137	130
☐		North Lahontan	173	164
☐		Sacramento River	176	167
☐		San Francisco Bay	131	124
☐		San Joaquin River	174	165
☐		Central Coast	123	117
☑	100%	Tulare Lake	188	179
☐		South Lahontan	170	162
☐		South Coast	149	142
☐		Colorado River	211	200
Target *(If more than one region is selected, this value is calculated.)*				**179**
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*	Calculated 2020 Target *Fm Appropriate Target Table*	Confirmed 2020 Target
149	141	179	141
** Maximum 2020 Target is 95% of the 5 Year Baseline GPCD*			
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
141	147	144
NOTES:		

Agenda

Golden Hills CSD SB X7-7 Verification Form

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				
105	144	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	105	105	**YES**
NOTES:								

Agenda

Stallion Springs CSD SB X7-7 Verification Form

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	464	Acre Feet
	2008 total volume of delivered recycled water	0	Acre Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1]	10	Years
	Year beginning baseline period range	2000	
	Year ending baseline period range[2]	2009	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2005	
	Year ending baseline period range[3]	2009	

[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 ending year must be between December 31, 2004 and December 31, 2010.

[3] 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:	

Agenda

Stallion Springs CSD SB X7-7 Verification Form

SB X7-7 Table 3: Service Area Population		
Year		Population
10 to 15 Year Baseline Population		
Year 1	2000	1,522
Year 2	2001	1,495
Year 3	2002	1,545
Year 4	2003	1,686
Year 5	2004	2,007
Year 6	2005	2,274
Year 7	2006	2,417
Year 8	2007	2,457
Year 9	2008	2,364
Year 10	2009	2,379
Year 11		
Year 12		
Year 13		
Year 14		
Year 15		
5 Year Baseline Population		
Year 1	2005	2,274
Year 2	2006	2,417
Year 3	2007	2,457
Year 4	2008	2,364
Year 5	2009	2,379
2015 Compliance Year Population		
2015		2,782
NOTES:		

Agenda

Stallion Springs CSD SB X7-7 Verification Form

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	2000	310			-		-	310
Year 2	2001	330			-		-	330
Year 3	2002	334			-		-	334
Year 4	2003	323			-		-	323
Year 5	2004	385			-		-	385
Year 6	2005	399			-		-	399
Year 7	2006	450			-		-	450
Year 8	2007	467			-		-	467
Year 9	2008	464			-		-	464
Year 10	2009	470			-		-	470
Year 11	0	-			-		-	-
Year 12	0	-			-		-	-
Year 13	0	-			-		-	-
Year 14	0	-			-		-	-
Year 15	0	-			-		-	-
10 - 15 year baseline average gross water use								**393**
5 Year Baseline - Gross Water Use								
Year 1	2005	399			-		-	399
Year 2	2006	450			-		-	450
Year 3	2007	467			-		-	467
Year 4	2008	464			-		-	464
Year 5	2009	470			-		-	470
5 year baseline average gross water use								**450**
2015 Compliance Year - Gross Water Use								
2015		421	-		-		-	**421**

* NOTE that the units of measure must remain consistent throughout the UWMP, as reported in Table 2-3

NOTES:

Agenda

Stallion Springs CSD SB X7-7 Verification Form

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	Source 1			
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	2000	310		310
Year 2	2001	330		330
Year 3	2002	334		334
Year 4	2003	323		323
Year 5	2004	385		385
Year 6	2005	399		399
Year 7	2006	450		450
Year 8	2007	467		467
Year 9	2008	464		464
Year 10	2009	470		470
Year 11	0			-
Year 12	0			-
Year 13	0			-
Year 14	0			-
Year 15	0			-
5 Year Baseline - Water into Distribution System				
Year 1	2005	399		399
Year 2	2006	450		450
Year 3	2007	467		467
Year 4	2008	464		464
Year 5	2009	470		470
2015 Compliance Year - Water into Distribution System				
2015		421		421
** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*				
NOTES:				

Agenda

Stallion Springs CSD SB X7-7 Verification Form

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	2000	1,522	310	182
Year 2	2001	1,495	330	197
Year 3	2002	1,545	334	193
Year 4	2003	1,686	323	171
Year 5	2004	2,007	385	171
Year 6	2005	2,274	399	157
Year 7	2006	2,417	450	166
Year 8	2007	2,457	467	170
Year 9	2008	2,364	464	175
Year 10	2009	2,379	470	176
Year 11	0	-	-	
Year 12	0	-	-	
Year 13	0	-	-	
Year 14	0	-	-	
Year 15	0	-	-	
10-15 Year Average Baseline GPCD				**176**
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	2005	2,274	399	157
Year 2	2006	2,417	450	166
Year 3	2007	2,457	467	170
Year 4	2008	2,364	464	175
Year 5	2009	2,379	470	176
5 Year Average Baseline GPCD				**169**
2015 Compliance Year GPCD				
2015		2,782	421	**135**
NOTES:				

Agenda

Stallion Springs CSD SB X7-7 Verification Form

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	176
5 Year Baseline GPCD	169
2015 Compliance Year GPCD	135
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:		

Agenda

Stallion Springs CSD SB X7-7 Verification Form

SB X7-7 Table 7-E: Target Method 3				
Agency May Select More Than One as Applicable	Percentage of Service Area in This Hydrological Region	Hydrologic Region	"2020 Plan" Regional Targets	Method 3 Regional Targets (95%)
☐		North Coast	137	130
☐		North Lahontan	173	164
☐		Sacramento River	176	167
☐		San Francisco Bay	131	124
☐		San Joaquin River	174	165
☐		Central Coast	123	117
☑	100%	Tulare Lake	188	179
☐		South Lahontan	170	162
☐		South Coast	149	142
☐		Colorado River	211	200
Target *(If more than one region is selected, this value is calculated.)*				**179**
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*	Calculated 2020 Target *Fm Appropriate Target Table*	Confirmed 2020 Target
169	160	179	160
** Maximum 2020 Target is 95% of the 5 Year Baseline GPCD*			
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
160	176	168
NOTES:		

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Stallion Springs CSD SB X7-7 Verification Form

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				
135	168	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	*From Methodology 8 (Optional)*	-	135	135	**YES**
NOTES:								

Appendix H

AWWA Water Audit Reporting Worksheets

Agenda

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: TCCWD
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

	Grading	Volume		Master Meter Error Adjustment Pcnt	Value	
Volume from own sources:	5	1,752.000	acre-ft/yr			acre-ft/yr
Water imported:	5	5,160.000	acre-ft/yr			acre-ft/yr
Water exported:			acre-ft/yr			acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 6,912.000 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

	Grading	Volume		Pcnt	Value	
Billed metered:	5	6,056.000	acre-ft/yr			
Billed unmetered:			acre-ft/yr			
Unbilled metered:			acre-ft/yr			
Unbilled unmetered:		86.400	acre-ft/yr	1.25%		acre-ft/yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

Use buttons to select percentage of water supplied **OR** value

AUTHORIZED CONSUMPTION: ? 6,142.400 acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption) 769.600 acre-ft/yr

Apparent Losses

	Grading	Volume		Pcnt	Value	
Unauthorized consumption:		17.280	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

	Grading	Volume		Pcnt	Value	
Customer metering inaccuracies:		0.000	acre-ft/yr			acre-ft/yr
Systematic data handling errors:		15.140	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: ? 32.420 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 737.180 acre-ft/yr

WATER LOSSES: 769.600 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 856.000 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:			miles
Number of active AND inactive service connections:			
Service connection density:			conn./mile main
Are customer meters typically located at the curbstop or property line?		Select...	
Average length of customer service line:			ft
Average operating pressure:			psi

(length of service line, beyond the property boundary, that is the responsibility of the utility)

COST DATA

Total annual cost of operating water system:			$/Year
Customer retail unit cost (applied to Apparent Losses):			
Variable production cost (applied to Real Losses):			$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

Add a grading value for 8 parameter(s) to enable an audit score to be calculated

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Water imported
2: Customer metering inaccuracies
3: Total annual cost of operating water system

Agenda

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: Bear Valley CSD
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:	+	?		653.940	acre-ft/yr	+	?				acre-ft/yr
Water imported:	+	?			acre-ft/yr	+	?				acre-ft/yr
Water exported:	+	?			acre-ft/yr	+	?				acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 653.940 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:		Value:
Billed metered:	+	?		592.000	acre-ft/yr		
Billed unmetered:	+	?			acre-ft/yr		
Unbilled metered:	+	?			acre-ft/yr		
Unbilled unmetered:	+	?		8.174	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: ? 600.174 acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) 53.766 acre-ft/yr

Apparent Losses

					Pcnt:		Value:
Unauthorized consumption:	+	?		1.635	acre-ft/yr	0.25%	acre-ft/yr
Customer metering inaccuracies:	+	?		0.000	acre-ft/yr		acre-ft/yr
Systematic data handling errors:	+	?		1.480	acre-ft/yr	0.25%	acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? 3.115 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 50.651 acre-ft/yr

WATER LOSSES: 53.766 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 61.940 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+	?	7	110.0	miles
Number of active AND inactive service connections:	+	?	6	2,953	
Service connection density:		?		27	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: + ? 3 110.0 psi

COST DATA

Total annual cost of operating water system:	+	?			$/Year
Customer retail unit cost (applied to Apparent Losses):	+	?			
Variable production cost (applied to Real Losses):	+	?			$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

Add a grading value for 6 parameter(s) to enable an audit score to be calculated

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: Billed metered
3: Customer metering inaccuracies

Agenda

AWWA Free Water Audit Software: Reporting Worksheet

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Water Audit Report for: City of Tehachapi (1510020)
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:	+ ?	8	1736.879	acre-ft/yr	+ ?	10	-2.50%		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: 1,781.414 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:	Value:	
Billed metered:	+ ?	8	1,352.655	acre-ft/yr			
Billed unmetered:	+ ?	n/a	0.000	acre-ft/yr			
Unbilled metered:	+ ?	9	146.586	acre-ft/yr			
Unbilled unmetered:	+ ?		22.268	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: ? 1,521.508 acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)

259.906 acre-ft/yr

Apparent Losses

					Pcnt:	Value:	
Unauthorized consumption:	+ ?		4.454	acre-ft/yr	0.25%		acre-ft/yr
Customer metering inaccuracies:	+ ?	8	38.442	acre-ft/yr	2.50%		acre-ft/yr
Systematic data handling errors:	+ ?		3.382	acre-ft/yr	0.25%		acre-ft/yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: ? 46.277 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 213.629 acre-ft/yr

WATER LOSSES: 259.906 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 428.760 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	7	50.0	miles
Number of active AND inactive service connections:	+ ?	9	3,085	
Service connection density:	?		62	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: + ? 5 80.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	10	$2,632,387	$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ?	10	$1.82	$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+ ?	9	$142.46	$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 81 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: Unauthorized consumption
3: Systematic data handling errors

Agenda

AWWA Free Water Audit Software: Reporting Worksheet

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Water Audit Report for: Golden Hills CSD (1510045)
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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

								Pcnt:	Value:	
Volume from own sources:	+ ?	5	1,032.000	acre-ft/yr	+ ?	3				acre-ft/yr
Water imported:	+ ?		0.000	acre-ft/yr	+ ?					acre-ft/yr
Water exported:	+ ?		0.000	acre-ft/yr	+ ?					acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 1,032.000 acre-ft/yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

					Pcnt:	Value:	
Billed metered:	+ ?	9	917.000	acre-ft/yr			
Billed unmetered:	+ ?			acre-ft/yr			
Unbilled metered:	+ ?			acre-ft/yr			
Unbilled unmetered:	+ ?		12.900	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: ? 929.900 acre-ft/yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption) 102.100 acre-ft/yr

Apparent Losses

					Pcnt:	Value:	
Unauthorized consumption:	+ ?		2.580	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:	+ ?	8	13.964	acre-ft/yr	1.50%		acre-ft/yr
Systematic data handling errors:	+ ?		2.293	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: ? 18.837 acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: ? 83.263 acre-ft/yr

WATER LOSSES: 102.100 acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: ? 115.000 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+ ?	5	66.0	miles
Number of active AND inactive service connections:	+ ?	8	2,819	
Service connection density:	?		43	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: + ? 8 65.0 psi

COST DATA

Total annual cost of operating water system:	+ ?	10	$2,000,000	$/Year	
Customer retail unit cost (applied to Apparent Losses):	+ ?	8	$4.57	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	+ ?	7	$600.00	$/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: Unauthorized consumption
3: Systematic data handling errors

Agenda

AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0

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Water Audit Report for: Stallion Springs CSD
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

	Grade	Volume		Master Meter Error Adjustment Pcnt	Value	
Volume from own sources:	5	421.000	acre-ft/yr			acre-ft/yr
Water imported:			acre-ft/yr			acre-ft/yr
Water exported:			acre-ft/yr			acre-ft/yr
WATER SUPPLIED:		**421.000**	acre-ft/yr			

Enter negative % or value for under-registration
Enter positive % or value for over-registration

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

	Grade	Volume		Pcnt	Value	
Billed metered:	5	310.000	acre-ft/yr			
Billed unmetered:			acre-ft/yr			
Unbilled metered:			acre-ft/yr			
Unbilled unmetered:		5.263	acre-ft/yr	1.25%		acre-ft/yr
AUTHORIZED CONSUMPTION:		**315.263**	acre-ft/yr			

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption)

105.738 acre-ft/yr

Apparent Losses

	Volume		Pcnt	Value	
Unauthorized consumption:	1.053	acre-ft/yr	0.25%		acre-ft/yr
Customer metering inaccuracies:	0.000	acre-ft/yr			acre-ft/yr
Systematic data handling errors:	0.775	acre-ft/yr	0.25%		acre-ft/yr
Apparent Losses:	**1.828**	acre-ft/yr			

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: **103.910** acre-ft/yr

WATER LOSSES: **105.738** acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: **111.000** acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:		miles
Number of active AND inactive service connections:		
Service connection density:		conn./mile main
Are customer meters typically located at the curbstop or property line?	Select...	
Average length of customer service line:		ft
Average operating pressure:		psi

(length of service line, beyond the property boundary, that is the responsibility of the utility)

COST DATA

Total annual cost of operating water system:		$/Year
Customer retail unit cost (applied to Apparent Losses):		
Variable production cost (applied to Real Losses):		$/acre-ft

☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

Add a grading value for 8 parameter(s) to enable an audit score to be calculated

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: Total annual cost of operating water system

Appendix I

Energy Intensity Calculations

Agenda

Urban Water Supplier: *TCCWD*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Wholesale Non-Potable Deliveries

Table O-1B: Voluntary Energy Intensity - Total Utility Approach			
Enter Start Date for Reporting Period 1/1/2015 End Date 12/31/2015	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	Non-Consequential Hydropower	
	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	*6744*	*0*	*6744*
Energy Consumed (kWh)	*78,817,868*	*0*	*78817868*
Energy Intensity (kWh/AF)	*11687.1*	*0.0*	*11687.1*

Quantity of Self-Generated Renewable Energy

None kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Combination of Estimates and Metered Data

Data Quality Narrative:

Narrative:

Includes metered energy for TCCWD booster pumping and groundwater pumping as follows:
Natural gas usage converted to kWh = 68,892,504 kWh (using conversion factor of 1 MMbtu = 293 kWh).
Pumping energy usage = 1,617,764 kWh
Energy for SWP water deliveries from Harvey O. Banks Pumping Plant at the south edge of the Bay-Delta to the Wind Gap Pump Station (Reach 16), estimated to be 8,307,600 kWh (5,160 AF at 1,610 kWh/AF).

Agenda

Urban Water Supplier: *Bear Valley CSD*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Voluntary Energy Intensity - Total Utility Approach			
Enter Start Date for Reporting Period 1/1/2015 End Date 12/31/2015	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	Non-Consequential Hydropower	
	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	*653.9*	*0*	*653.9*
Energy Consumed (kWh)	*2081299*	*0*	*2081299*
Energy Intensity (kWh/AF)	*3182.9*	*0.0*	*3182.9*

Quantity of Self-Generated Renewable Energy

None kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Water volume from BVCSD well production records. Energy consumed from SCE billing records.

Narrative:

Agenda

Urban Water Supplier: *City of Tehachapi*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Voluntary Energy Intensity - Total Utility Approach			
Enter Start Date for Reporting Period 1/1/2015 End Date 12/31/2015	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	Non-Consequential Hydropower	
	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	*1755*	*0*	*1755*
Energy Consumed (kWh)	*1952750*	*0*	*1952750*
Energy Intensity (kWh/AF)	*1112.7*	*0.0*	*1112.7*

Quantity of Self-Generated Renewable Energy

None kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Total water pumped from wells based on City meter readings. Total energy consumed based on SCE billing summaries.

Narrative:

Agenda

Urban Water Supplier: *Golden Hills CSD*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Voluntary Energy Intensity - Total Utility Approach			
Enter Start Date for Reporting Period 1/1/2015 End Date 12/31/2015	Urban Water Supplier Operational Control		
	Sum of All Water Management Processes	Non-Consequential Hydropower	
	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (AF)	*1032*	*0*	*1032*
Energy Consumed (kWh)	*1171898*	*0*	*1171898*
Energy Intensity (kWh/AF)	*1135.6*	*0.0*	*1135.6*

Quantity of Self-Generated Renewable Energy

kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

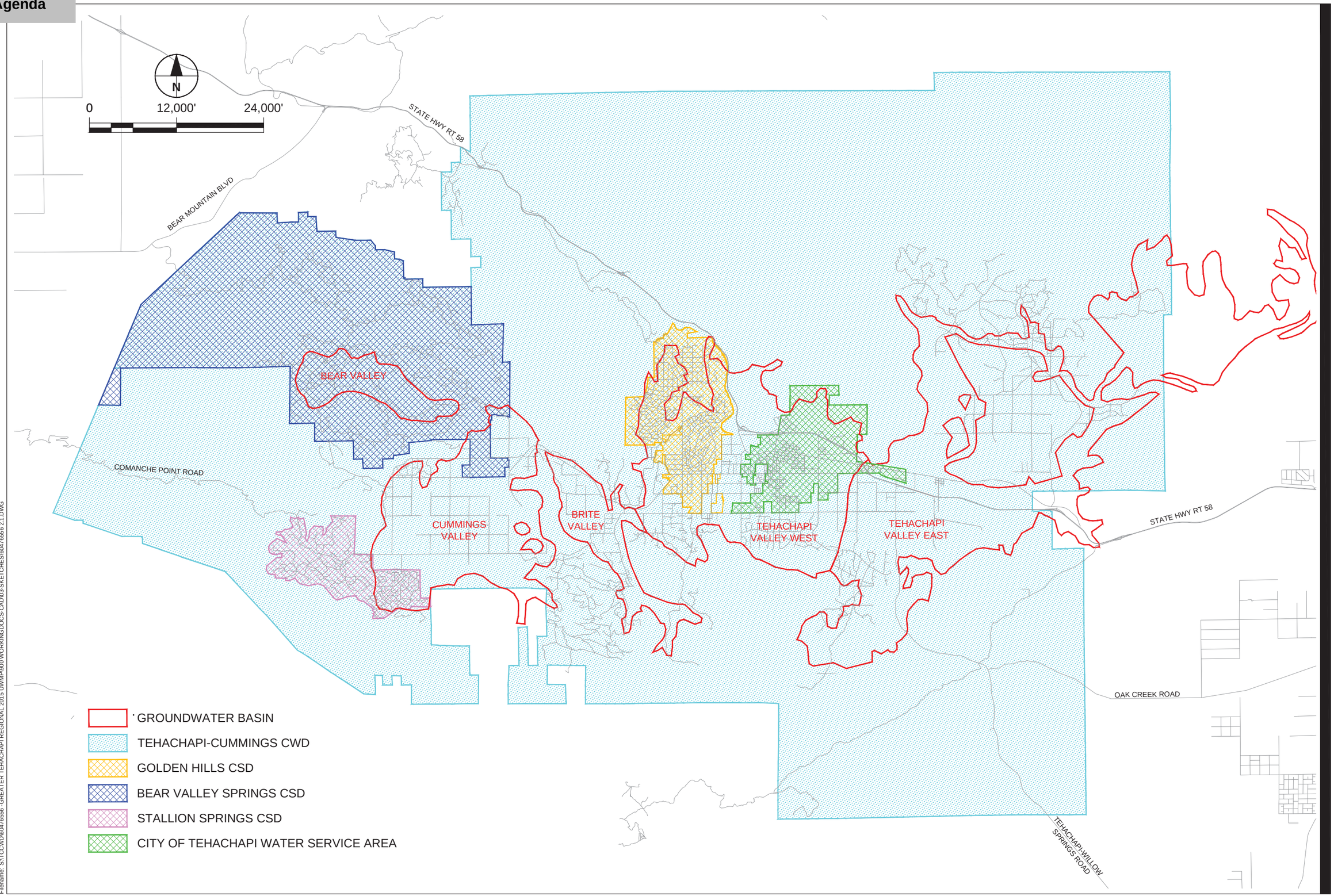
Metered Data

Data Quality Narrative:

Total water pumped from wells based on meter readings. Total energy consumed based on SCE billing summaries.

Narrative:

Agenda



AECOM

FIGURE 2-1

TEHACHAPI-CUMMINGS COUNTY WATER DISTRICT

SERVICE AREAS AND GROUNDWATER BASINS

60476556

Last saved by: CAMPBELLV (2016-02-12) Last Plotted: 2016-02-15

Filename: S:\TCCWD\60476556 -GREATER TEHACHAPI REGIONAL 2015 UWMP\900 WORKING DOCS-CAD\03-SKETCHES\60476556 2.1.DWG

Agenda

2015 Annual Water Quality Report

CITY OF TEHACHAPI CALIFORNIA

Jon Curry
Public Works Director
City of Tehachapi

Title 22 California Code of Regulations, Chapter 15

Article 20. Consumer Confidence Report

§64480. Applicability and Distribution.

(a) Except as provided in subsection (b), each community and nontransient-noncommunity (NTNC) water system shall prepare and deliver the first Consumer Confidence Report by July 1, 2001, and subsequent reports by July 1 annually thereafter. The first Consumer Confidence Report shall contain data collected during, or prior to, calendar year 2000, as prescribed by section 64481(d)(1). Each Consumer Confidence Report thereafter shall contain data collected during, or prior to, the previous calendar year.

Agenda

ANNUAL WATER QUALITY REPORT

WATER TESTING PERFORMED IN 2015

Presented By

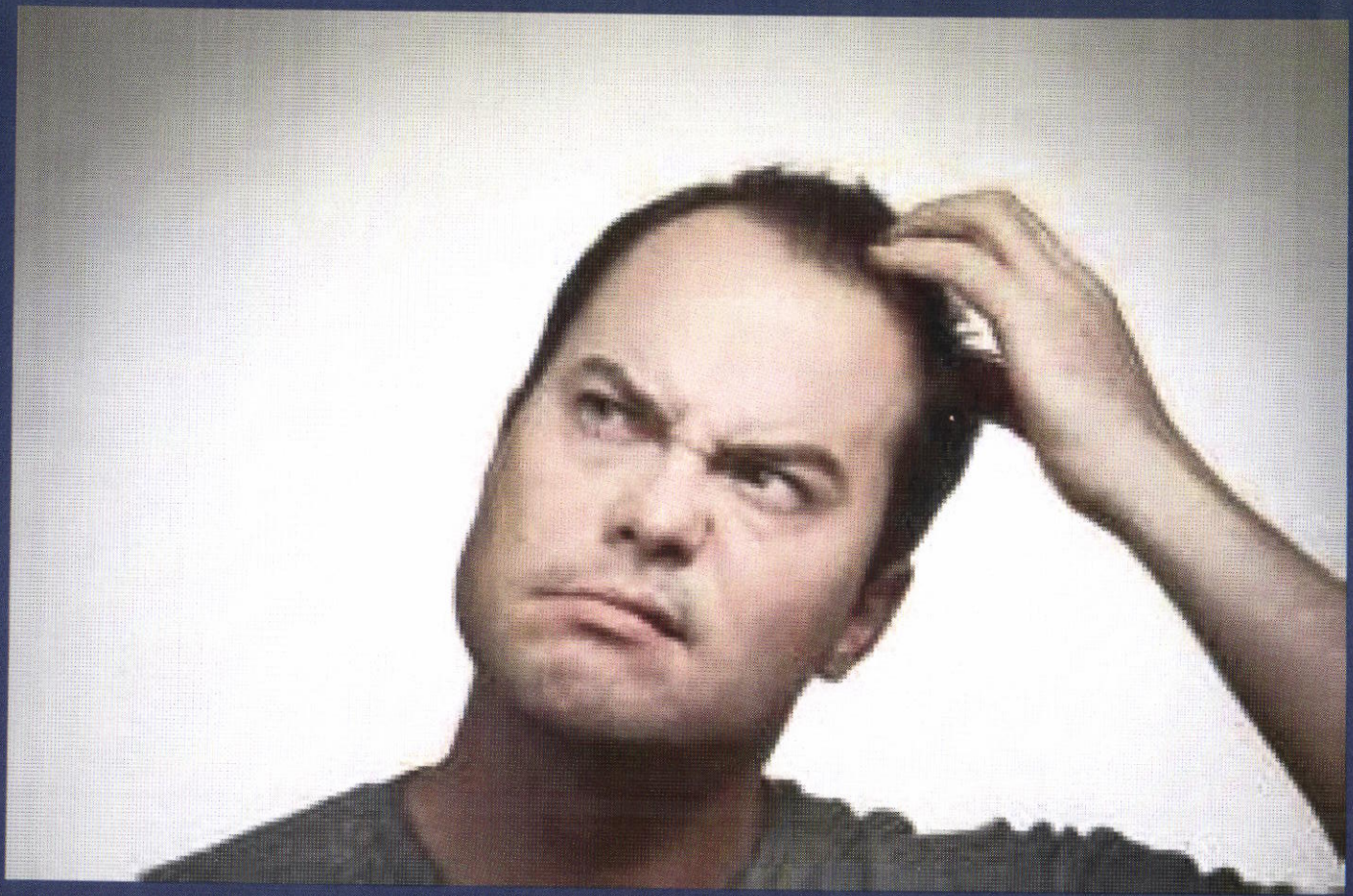
CITY OF TEHACHAPI CALIFORNIA

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

PWS ID#: 1510020

Agenda

????



Question:

What exactly is an annual water quality report?

Answer:

It is actually a snapshot of water sampling for the past sampling periods.

Question:

Then why is it called an Annual Water Quality Report?

Answer:

Sampling is performed on revolving/ staggered schedules for certain water quality constituents.

Agenda

pling Results

ring the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2015	[4.0 (as Cl2)]	[4 (as Cl2)]	1.17	0.23–2.036	No	Drinking water disinfectant added for treatment
Fluoride (ppm)	2015	2.0	1	0.29	0.079–0.59	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2015	15	(0)	1.89	0.767–4.34	No	Erosion of natural deposits
Nitrate [as nitrate][1] (ppm)	2015	45	45	36	0.44–49	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2015	80	NA	2.2	0–2.2	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	0.3	0.27	0/20	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2013	15	0.2	4.4	0/20	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Manganese (ppb)	2015	50	NS	<10	<10–<10	No	Leaching from natural deposits
Specific Conductance (µS/cm)	2015	1,600	NS	432	423–554	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2015	500	NS	39	27–58	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2015	1,000	NS	317	270–350	No	Runoff/leaching from natural deposits

OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Bicarbonate (ppm)	2015	182	160–220
Calcium (ppm)	2015	60	38–75
pH (Units)	2015	7.98	7.93–8.05
Potassium (ppm)	2015	1.2	1.0–1.6
Total Hardness (ppm)	2015	180	110–230

[1] Nitrate in drinking water at levels above 45 ppm is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

MCL (Maximum Contaminant Level): 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 (SMCLs) are set to protect the odor, taste and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): 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. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

NS: No standard

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

Water System Statistics

Miles of water mains – 50

Number of wells – 7

Number of reservoirs – 6 in service, 1 re-designated

Storage capacity - 4.8 Million Gallons

Number of pressure zones – 6

Number of service connections – 3,062

Number of fire hydrants – 415

Number of main line valves – 860

Number of Staff – 4 water operators / 3 wastewater operators. PW staff also utilized.

Questions?

Contact

Tyler Napier – Utility Supervisor
(661) 822-4078 ext. 507
tnapier@tehachapipw.com

Jon Curry – Public Works Director
(661) 822-4078 ext. 501
jcurry@tehachapipw.com

Agenda

TEHACHAPI
CALIFORNIA

COUNCIL REPORTS

APPROVED
DEPARTMENT HEAD: JS
CITY MANAGER:

MEETING DATE: JUNE 20, 2016 **AGENDA SECTION:** Development Services

TO: HONORABLE MAYOR WIGGINS AND COUNCIL MEMBERS

FROM: JOHN (JAY) SCHLOSSER, P.E., DEVELOPMENT SERVICES DIRECTOR

DATE: JUNE 15, 2016

SUBJECT: AMENDMENT #1 TO CONSULTANT AGREEMENT WITH LISA WISE CONSULTING TO PREPARE THE OAK TREE VILLAGE SPECIFIC PLAN

BACKGROUND:

As the Council will recall from January 2016, PT1 Ventures, LLC is seeking to develop senior housing on approximately 210-acres north of Highway 58 and east of the Capital Hills area. The project has initially been scoped to include a skilled nursing facility, active adult housing and small scale commercial business. The City hired Lisa Wise Consulting to prepare the Specific Plan needed to move this development venture forward.

The project team has been working to organize the planning and environmental effort and have identified additional consultants needed to tackle elements of the both the Specific Plan and the Environmental Impact Report.

PROPOSAL:

As requested by City Staff, Lisa Wise Consulting has prepared the attached Amendment #1 to the City consultant agreement dated January 12, 2016. The Amendment includes the addition of Crabtree Civil Engineering and Stantec, Inc. to the project team. These subconsultants will provide civil and traffic engineering support to the Specific Plan and EIR.

FISCAL IMPACT:

In accordance with our agreement with PT1 Ventures, LLC, the City will be reimbursed on an ongoing basis as work is performed. As such, this effort is considered funded with developer reimbursement.

RECOMMENDATION:

CITY STAFF RECOMMENDS THAT THE CITY COUNCIL APPROVE AMENDMENT #1 TO THE AGREEMENT WITH LISA WISE CONSULTING FOR THE DEVELOPMENT OF THE OAK TREE VILLAGE SPECIFIC PLAN AND ASSOCIATED ENVIRONMENTAL IMPACT REPORT.

Agenda

lisa wise consulting, inc.
planning economics natural resources

June 14, 2016

Jay Schlosser, P.E.
Development Services Director
City of Tehachapi
115 South Robinson Street
Tehachapi, CA 93561

Regarding: LWC Additional Services Agreement (ASA)

Dear Mr. Schlosser:

Further to our Agreement entered into on January 12, 2016, and the proposed Scope of Work and Budget attached as Exhibit "A" to the Agreement by and between the City of Tehachapi (City) and Lisa Wise Consulting, Inc. (LWC), LWC is to provide additional services for the Oak Tree Village (Tehachapi Senior Housing) Specific Plan at the request of the City. The additional services consist of civil engineering and transportation/traffic work described in the attached additional scope of work (Attachment 1). The services will be conducted by Crabtree Group (civil engineering) and Stantec (transportation/traffic/geotech) in coordination with and with oversight by LWC. The budget for these services under this Additional Services Agreement (ASA) is one hundred and eighty eight thousand and nine hundred and thirty five dollars ($188,935.00), thereby increasing the total fee for services to three hundred and ninety eight thousand and six hundred and thirteen dollars ($398,613). This ASA will serve as an amendment to the Agreement, all terms of which are incorporated herein by reference.

LISA WISE CONSULTING, INC.	CITY OF TEHACHAPI
_____	_____
Lisa Wise, President 983 Osos Street San Luis Obispo, CA 93401	_____, _____ 115 South Robinson Street Tehachapi, CA 93561
Date: _____	Date: _____

lisa wise consulting, inc.
planning economics natural resources

Attachment 1
Additional Scope of Work

The Crabtree Group ($56,000[1])

Task 3.2[2] - Internal Charrette

- Attend and participate in internal charrette ($8,000).

Task 4.7 - Utility Infrastructure and Public Services

- Infrastructure design concepts for the Specific Plan - water, sewer, LID stormwater design (that could potentially double as open space), energy, etc. Conceptual drainage and utility plan using CAD file of the development plan that is prepared by others ($8,000).
    - Optional Task – Digitize the development plan ($4,000).
- Cost estimate for key required infrastructure components of the Specific Plan ($6,000).
- Stormwater/drainage study to determine what infrastructure is necessary to meet existing regulations, including an analysis of potential flooding hazards or impacts (on and off-site). Study will be incorporated into the EIR by reference or as an appendix ($7,000).
- Preliminary grading plan that identifies the approximate area of disturbance, cut/fill, quantification of soil necessary to be hauled off-site, and earthwork calculations (includes one or two adjustments of grading plan to achieve balance as feasible) ($5,000).
- Identification of off-site improvements (if any) that would need to be analyzed in EIR (road, drainage, energy, phone, water, sewer, etc.) ($3,000).
- Infrastructure capacity assessment (water, sewer, energy, etc.) including the water analysis. The water analysis will be consistent with current State regulations and guidance for such analysis, and the analysis will:
    - Describe the existing setting (water availability, source, quantity, reliability, infrastructure)
    - Quantify operational demand by use type
    - Quantify construction demand (i.e., any water use required for dust control, compaction, etc.
    - Assess demand vs. supply over next 20 years
    - Quantify conservation measures, which may be incorporated into Specific Plan

[1] Includes Optional Task budget to digitize the development plan for $4,000.
[2] Task numbers correspond to Scope of Work in Exhibit "A" of Agreement.

development standards

- Include responding to technical comments on the Draft EIR related to water supply ($15,000).

Stantec ($126,943[3])

Task 1.2 Team and Staff Meetings

- Up to five teleconferences ($3,690).

Task 3.2 - Internal Charrette

- Attend and participate in internal charrette. Provide design input on the creation of a multi-modal circulation network ($6,412).

Task 4.5 - Circulation and Street Standards

- Assist with customization of street types in the City's form-based code to create street sections for the Specific Plan ($3,796).
- Prepare text for the circulation and street standards section of the Specific Plan. Graphics will be prepared by STP. Coordinate with STP to ensure text and graphics align ($4,758).
- Respond to comments and revision requests, as needed during the Public Review Draft and Final Specific Plan tasks ($2,168).
- Provide cost estimates of transportation-related infrastructure elements of the Specific Plan ($3,796).
- Undertake a multi-modal analysis (bike, pedestrian, transit) of the proposed Specific Plan buildout - showing how people can get to other services both with and without driving a car; this analysis will serve as a reference section in the EIR ($2,620).
- CEQA Scope
  - Provide approach to analysis including LOS/congestion and vehicle miles traveled (VMT), including explanation how to determine level of significance for VMT ($2,030).
  - Provide approach to traffic model and how cumulative impacts would be analyzed ($1,338).
  - Prepare a stand-alone report addressing CEQA thresholds of significance (questions identified in the CEQA Checklist, Appendix G and the City's Initial Study Checklist) ($14,932).

[3] Includes Optional Task for Preliminary Geotechnical Report.

- Evaluate up to three alternatives ($5,584).
- Review Draft EIR comment letters and provide written responses to comments (assume up to 20 substantive, individual comments regarding transportation/circulation) ($4,004).
- Review Final EIR comment letters and provide written responses to comments (assume up to 10 substantive, individual comments regarding transportation/circulation) ($2,002).

Task 6 - Public Hearings

- Attendance at two public hearings ($6,148).

- Optional Task - Preparation for and attendance at public meetings or hearings, including a PowerPoint or similar presentation and responses to public and decision-making body questions ($2,652 per meeting).

Optional Task - Preliminary Geotechnical Report ($55,000)

- The Preliminary Geotechnical Report is proposed to include the following:
  - 30 geotechnical borings (depths from 5-50 feet)
  - 10-15 test pits
  - 2 infiltration basin tests
  - Numerous lab tests including sieves, hydro consolidation tests, corrosion testing
  - Preliminary liquefaction analysis

Stantec Reimbursables (travel and photocopies) - $2,013

Stantec Expenses (intersection counts) - $4,000

LWC ($5,992)

Task 1.1 - Framework and Timeline

- Final scopes of work with Crabtree Group and Stantec, including refinement of roles and responsibilities ($2,892).

Task 1.2 - Team and Staff Meetings

- Team meetings and coordination with Crabtree Group and Stantec ($3,100).

Agenda

CITY OF TEHACHAPI CALIFORNIA

COUNCIL REPORTS

APPROVED

DEPARTMENT HEAD: JS

CITY MANAGER:

MEETING DATE: JUNE 20, 2016 **AGENDA SECTION:** DEVELOPMENT SERVICES

TO: HONORABLE MAYOR WIGGINS AND COUNCIL MEMBERS

FROM: JOHN (JAY) SCHLOSSER, P.E., DEVELOPMENT SERVICES DIRECTOR

DATE: JUNE 14, 2016

SUBJECT: ACTIVE TRANSPORTATION PROGRAM – RAIL CORRIDOR PEDESTRIAN SAFETY PROJECT: SPECIALIZED CONSULTANT SERVICES

BACKGROUND

As the City Council will recall, the City of Tehachapi was awarded a $2.2 million dollar grant under the Active Transportation Program (ATP) for the Rail Corridor Pedestrian Safety Project. This project seeks to construct enhanced crossings at Green Street, Hayes Street, and Dennison Road. Further, we intend to construct security fencing and pedestrian facilities along the north side of the tracks through downtown with the intent to funnel pedestrians and bicyclists to safer crossing locations.

Additionally, the City received a $1.5 million dollar grant to construct a park and ride facility in downtown Tehachapi at the intersection of Tehachapi Boulevard and Mill Street on railroad property that is currently available for lease.

These projects naturally require extensive coordination with Union Pacific (UP) and the California Public Utilities Commission (CPUC). Several specialized procedures must be undertaken to prepare these projects for construction that are over and above the normal efforts associated with design.

PROPOSAL

As City staff is unfamiliar with the detailed proceedings of this type of regulation, we sought outside expertise to help guide the City through this process. MNS Engineers, Inc., located in Pasadena has offered their services for this endeavor. Specifically, Greg Jaquez, PE, an ex-Union Pacific employee, has prepared a detailed roadmap of the procedure and has demonstrated to the City Staff that he is qualified to undertake this effort.

Further, as these projects are funded with Federal dollars and managed by Caltrans Local Assistance, City Staff engaged our Caltrans contact to confirm that hiring a specialist of this nature is permissible.

FISCAL IMPACT

The City of Tehachapi received funds from BNSF in compensation for the impacts associated with their double tracking efforts under construction west of town at this time. These funds were set aside to support this project, among others. Approximately $250,000 was set aside to fund the design phase of this project and the funds for these specialized consultant services are to be drawn from this set aside.

RECOMMENDATION

An agreement with scope and fee was prepared and reviewed by the City Attorney.

APPROVE THE AGREEMENT BETWEEN THE CITY OF TEHACHAPI AND MNS ENGINEERS, INC.

AGREEMENT

THIS AGREEMENT (the "Agreement") made this _____ day of _____, 2016, by and between the CITY OF TEHACHAPI ("City") and MNS ENGINEERS, INC., (the "Consultant"),

W I T N E S S E T H:

WHEREAS, City wishes to hire Consultant to perform certain services as more particularly described in Exhibit "A" attached hereto and by this reference made a part hereof pursuant to the terms and conditions described hereinafter and Consultant is agreeable thereto.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth hereinafter, the parties agree as follows:

1. The parties incorporate the foregoing recitals as if fully set forth herein verbatim.

2. City hereby contracts with Consultant to perform the services described in Exhibit "A" attached hereto and by this reference made a part hereof (the "Services").

3. Consultant shall provide the Services for the following compensation:

(a) The fee for the services shall not exceed $59,330.00 (the "Fee") which shall be payable to Consultant upon completion of the Services to the reasonable satisfaction of City; and

(b) City shall pay Consultant the Consultant Fee pursuant to invoices (the "Invoices") submitted by Consultant. Consultant shall submit Invoices no more often than monthly. Each Invoice shall describe the Services that have been completed and the portion of the Fee payable for same and such other information as required by City Manager from time to time. City Manager or his designated representative shall have the right of reasonable review of each Invoice and, at the conclusion of the review, City Manager shall place the matter on the agenda for the next available City Council meeting for consideration by the City Council. Upon approval of each such Invoice by the City Council, same shall be paid in the regular cycle of payments made by City for other bills and claims.

4. Consultant shall complete the Services in accordance with the project schedule more particularly described in Exhibit "B" attached hereto and by this reference made a part hereof.

5. Information, data, estimates, reports, studies, and all other project documents drafted or created by Consultant or on behalf of Consultant for City shall belong to City and Consultant hereby assigns all of its copyright interests therein to City, irrevocably and forever and agrees that City shall be the owner of all such copyrights. All of the foregoing documents hereafter prepared by Consultant for City or on behalf of Consultant for City shall be retained and maintained for City by Consultant in its offices at no additional cost to City. Consultant shall release all such files and documents as instructed by City from time to time, and all such files and documents shall belong to City. Consultant shall not be liable for use of any such files or documents for purposes other than their original intended purpose.

6. Consultant hereby agrees to indemnify, defend and hold harmless City, its officers, Councilpersons, and employees from any and all claims, liabilities, expenses, and damages, including attorney's fees, for injury to or death of any person, and for damage to any property including without limitation, City's property, arising out of or in any way connected with Consultant's performance of the Services or by any act, error, or omission by Consultant related to performance of the Services, however, only to the extend caused by, and on a percentage basis of fault as ultimately determined by a court of competent jurisdiction.

7. Without limiting Consultant's obligations under Paragraph 5 of this Agreement, Consultant shall obtain and maintain during the life of this Agreement:

(a) Commercial general liability insurance coverage, including premises – operations, products/completed operations, broad form property damage and limited contractual liability, in an amount not less than $2 million per occurrence and automobile liability for owned, hired, and non-owned vehicles; and

(b) Professional/negligent acts, errors and omissions insurance satisfactory to City in an amount not less than $1 million; and

(c) Such workers compensation insurance as required by statute.

As for the insurance described in Paragraph (a) above, Consultant shall provide City with appropriate certificates of insurance and endorsements for all of the foregoing in which City, its officers, Councilpersons, and employees are named as additional insureds and specifically designating all such insurance as "primary," and providing

further that same shall not be terminated nor coverage reduced without ten days prior written notice to City.

8. Consultant shall not assign its interest herein or any part thereof and any attempted assignment shall be void.

9. City may terminate this Agreement at any time by giving Consultant ten days prior written notice, provided that in such event Consultant shall be entitled to payment for those Services rendered through the date of termination, provided satisfactory to City.

10. All reports, information, data and exhibits drafted by or utilized by Consultant shall be the property of City and shall be delivered to City upon demand without additional costs or expense to City.

11. All notices required to be given under this Agreement or by law shall be in writing and shall be deemed received by the party to whom directed if personally served or when faxed by confirmed facsimile or when sent by email or when deposited in the United States mail, postage prepaid, registered or certified, return receipt requested, with the date of signing the return receipt (or refusal to sign) as the date of delivery or on the next business day after deposit with an overnight carrier provided the carrier's records show delivery on the next business day provided sent to the following address: If to City, City Manager, 115 South Robinson Street, Tehachapi, California 93561, Fax – (661) 822-2197, Email - ; jschlosser@tehachapicityhall.com or if to Consultant, James A. Salvito, President and CEO, 201 N. Calle Cesar Chavez, Suite 300, Santa Barbara, CA, 93103, Fax – (805) 692-6931, Email – jsalvito@mnsengineers.com. Any party may change its address or fax number by giving notice to the other party in the manner herein described.

12. Time is of the essence with regard to each covenant, condition and provision of this Agreement.

13. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

14. This Agreement constitutes the entire Agreement between the parties with regard to the subject matter herein and supersedes all prior oral and written agreements and understandings between the parties with respect thereto.

15. This Agreement may not be altered, amended, or modified except by a writing executed by duly authorized representatives of all parties.

16. In the event any action or proceeding is instituted arising out of or relating to this Agreement, the prevailing party shall be entitled to its reasonable attorneys' fees and actual costs.

17. This Agreement may be executed in counterparts and the respective signature pages for each party may thereafter be attached with the body of this Agreement to constitute one integrated Agreement which is as fully effective and binding as if the entire document had been signed at one time. A facsimile or electronic copy of this fully executed Agreement shall be as effective as the original for all purposes.

18. Notwithstanding any provision to the contrary, this Agreement shall not become effective and shall not be binding as to any party until all of the parties have executed this Agreement.

19. Waiver by a party of any provision of this Agreement shall not be considered a continuing waiver or a waiver of any other provision, including the time for performance of any such provision.

20. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto, and their respective heirs, successors, and assigns.

21. If any term, provision, covenant or condition of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions shall remain in full force and effect and not be affected, impaired, or invalidated thereby.

22. City and Consultant each acknowledge that each party and their respective legal counsel have reviewed this Agreement and agree that this Agreement is the product of negotiations between the parties. This Agreement shall be interpreted without reference to the rule of interpretation of documents that uncertainties or ambiguities therein shall be determined against the party so drafting the Agreement.

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IN WITNESS WHEREOF, the parties have executed this Agreement on the date first hereinabove written.

CITY OF TEHACHAPI, "**City**"

By: _____
_____, Mayor of the
City of Tehachapi, California

MNS ENGINEERS, INC., "Consultant"

By: _____
Name: James A. Salvato
Its: President and CEO

EXHIBIT "A"
[Description of Services]

EXHIBIT "B"
[Project Schedule]

MNS Engineers Fee Proposal
Active Transportation Program (ATP) Railroad Corridor Pedestrian Safety Project
Park and Ride/Bus Turnout Project

Project Understanding

MNS Engineers (MNS) understands that the City of Tehachapi (City) is seeking consultant support to provide railroad coordination services for the Railroad Corridor Pedestrian Safety Project. Railroad coordinations services in this case will be comprised of three components as follows:

- Processing approvals of proposed grade crossing modifications and installation through the California Public Utilities Commission (CPUC) and Union Pacific Railroad (UPRR).
- Securing right of way, licenses, and agreements from UPRR for proposed grade crossing modifications and installation and the City's proposed park and ride lot.
- Coordinating design and construction activities between the City and UPRR.

Since the City is bisected by a UPRR mainline running east-west through the City, the residential area bounded on the west by Mill Street and north of the railroad corridor is cut off from reasonablly convenient pedestrian access to destinations and services south of the tracks. The UPRR right of way is unobstructed to enter and, therefore, is frequently crossed by pedestrians who are effectively trespassing and creating an unsafe condition for themselves and train operations. To address this situation, the City conceived of a Railroad Corridor Pedestrian Safety Project (Project) to protect the UPRR right of way from pedestrian trespass with fencing and channelize pedestrians to existing grade crossings at Green Street, Hayes Street, and Dennison Road which would be improved for pedestrian use and to comply with the Americans with Disabilities Act (ADA). Also conceived as part of the Project is the establishment of a new pedestrian-only grade crossing to connect the ends of Mill Street. The City submitted an ATP application to Caltrans and was awarded a grant to construct the proposed improvements. MNS understands that the ATP grant agreement requires delivery of the project by the end of calendar year 2017.

Grade Crossing Approvals

Modifications to upgrade existing railroad grade crossings is a somewhat routine effort as it enhances safety for the public and railroad operations. However, the City is also aware and understands the difficulty that ususally entails the establishment of a new grade crossing over an active railroad track combined with the constrained timeline for project delivery set forth by the grant agreement and, therefore, is prepared for the possible outcome of having to remove the proposed new grade crossing from the scope of the project and/or extend the term of the grant agreement. The City would accordingly need to obtain approval from Caltrans to modify the project scope and/or amend the grant agreement. MNS, however, will endeavor to assist the City in delivering the project by obtaining the necessary approvals of UPRR and the CPUC and through coordination with UPRR, the CPUC, and the City's design

consultant. MNS will make a diligent effort to accomplish the outcome the City desires. A final, and much less likely option, would be to eliminate the existing grade crossing at Hayes Street in order to establish he pedestrian crossing at Mill Street. This option would be considered if UPRR takes an intractable position of requiring the removal of a grade crossing to establish another and the City is also determined to create the pedestrian grade crossing at Mill Street.

Right of Way

The City has easements over UPRR right of way for the three existing grade crossings witin the City but does not have Construction and Maintenance (C&M) Agreements from UPRR. Through the development and completion of project design plans, the City will require assistance in negotiating and securing the C&M Agreements from UPRR.

The proposed new pedestrian grade crossing at Mill Street will require a right of way instrument, the preferred being and easement over UPRR right of way. UPRR, however, holds the cards and is not obliged to grant an easement for this purpose, especially as they generally oppose installation of new grade crossings. It is possible, if UPRR is agreeable to the new crossing, they may only offer a revokable License Agreement to allow the installation of the crossing.

Fencing needed to secure the UPRR right of way and channelize pedestrians to formal grade crossings will require right of way either through easements or license agreements.

The City has discussed the need for right of way for the propposed park and ride and bus turnout with UPRR. Initial indications are that the City may be able to obtain a long-term lease of UPRR right of way.

Design and Construction Coordination

Thorough design review at the earliest stage of plan development may help to lessen review time by UPRR and CPUC and avoid delays that can result from objections by UPRR. Also, various unique elements of the designs for the grade crossings and the park and ride lot will need oversight to assure quality of the design beyond minimal standards set forth by UPRR, American Railway Engineering and Maintenance-of-Way Association (AREMA), CPUC and the Americans with Disabilities Act (ADA). Such considerations especially affect the comfort, usability, maintainability, and aesthetics of these types of improvements. For example, minimal adherence to ADA requirements may be legal, but can still create awkward approach angles for the pedestrian alignment at grade crossings affecting user comfort and longer paths across the tracks. During construction, coordination between UPRR, the City, and contractors is necessary to assure timeliness of project delivery, comply with railroad operations and safety protocols and procedures, and foster goodwill with the community.

Project Approach

The MNS Project Manager (MNS PM) will work closely and efficiently with the UPRR, CPUC, the City's design consultant, and contractors to perform field reviews, process required documentation through CPUC, and obtain engineering approvals, secure right of way, and coordinate design and construction activities between the City and UPRR.

Task 1.0 – Kickoff Meetings and Ongoing Communications

The MNS PM will hold kickoff meetings with the representatives of UPRR and CPUC to review the scope and schedule for completing the required deliverables. At this time, a general understanding will be conveyed to UPRR and CPUC of the outcome the City desires to achieve through railroad right of way protection, grade crossing modification, and new pedestrian grade crossing establishment. The purpose in conveying this understanding is to establish the facts surrounding existing conditions and the goals the City wishes to achieve. The kickoff meeting should also result in UPRR and CPUC providing initial input for refinement of the project schedule. Obtaining concurrence from UPRR and CPUC on the specifics of the proposed project will occur after field diagnostic meetings are conducted at the project locations. UPRR, in particular, will be encouraged to refrain from indicating its position on the proposed new grade crossing until the field diagnostic meetings have occurred. Communications with UPRR and CPUC will be ongoing as needed to exchange information and provide the City opportunities to review draft work products, provide guidance, and make decisions. Up to three formal meetings with each of UPRR and CPUC are anticipated, in addition to the Field Diagnostic Review in Task 4, and at which the City staff and City's design consultant may be present. In addition to phone communications, MNS will utilize a GoToMeeting account to enhance verbal communications.

TASK 1.0 DELIVERABLES

- Meeting minutes.
- Meeting attendance record and contact information.
- Email reports.

Task 2.0 – Schedule Managment

Given the uncertainties involved in the overall project delivery as described in the Project Understanding, the project schedule may need to be adapted to potential changes in scope and timing. Such changes may be driven by unforeseeable directions given by CPUC or the potential intractability of UPRR. Potential reasons for significantly altering the schedule include deletion of the proposed pedestrian grade crossing at Mill Street from the project scope and or elimination of the Hayes Street grade crossing in order to keep ithe Mill Street crossing in the scope. The MNS PM will manage the schedules in order to come to the earliest possible decision points to effect scope changes and amend the terms of the grant agreement. The MNS PM will manage the overall project schedule so that conclusive decisions can be made in a timely manner and the appropriate decision path is followed to keep the project on schedule.

TASK 2.0 DELIVERABLES

- Updated Project schedule with updates at least monthly identifying decision-making milestones.

Task 3.0 – Collect and Prepare Background Information, Data, and Exhibits

MNS will collect and review information that will be needed to process documentation with the CPUC and UPRR for the modification to existing grade crossing and the establishment of a new pedestrian grade crossing to include, but not be limited to, vehicle and pedestrian traffic average daily traffic (ADT) counts, train ADT counts, train speed information and data, information on existing warning devices, traffic control, accident/collision history and other observations, site maps and legal descriptions, and profiles and cross-sections. If the City does not have a surveyor available, MNS will provide a licensed surveyor to produce required maps and legal descriptions.

TASK 3.0 DELIVERABLES

- Spreadsheet tabulating needed information and data for each grade crossing and proposed crossing.
- Maps and legal description.
- Profiles and cross-sections.

Task 4.0 – Conduct Field Diagnostic Reviews of Project Locations and Obtain Concurrence

MNS will coordinate with CPUC and UPRR to schedule a field diagnostic meeting at the project locations. The meeting is required by the Rail Crossings and Engineering Branch of the CPUC and will be conducted to establish an understanding of existing conditions of the grade crossings in the field, to explain the need for proposed improvements, and to obtain concurrence from UPRR and CPUC on the proposed improvements.

TASK 4.0 DELIVERABLES

- Meeting calendar appointment to include attendance by CPUC, UPRR, City, MNS, and City's design consultant (optional).
- Meeting minutes.
- Meeting attendance record and contact information.
- Concurrence letters from UPRR.

Task 5.0 – Prepare a Separate Formal CPUC Application Process for New Pedestrian Grade Crossing at Mill Street

Since proposing to establish a new grade crossing is a more complex process than for a grade crossing modification, a separate application will be made to the CPUC according to their Rules of Practice and

Procedure, Rules 1 and 3.7. This process also carries the greatest risk to achieve and spans the longest time period within the overall project delivery.

TASK 5.0 DELIVERABLES

- Application cover letter.
- Application document in conformance with Rule 1.

Task 6.0 – Prepare General Order (GO) 88-B Applications for Green Street, Hayes Street, and Davenport Road

MNS will utilize information gathered through Task 3.0 to prepare draft GO 88-B applications in accordance with CPUC Rules of Practice and Procedure, Rule 3.8.

TASK 6.0 DELIVERABLES

- General Order (GO) 88-B Applications for Green Street, Hayes Street, and Davenport Road.

Task 7.0 – Testimony at Hearing by Administrative Law Judge

After submittal of applications to CPUC, the City's requests will be placed on the docket of an Administrative Law Judge (ALJ) for hearing. MNS will determine through discussion with CPUC staff if all applications will be heard together or if the application for a new grade crossing will be heard separately. City staff who will need to be present at the hearing. The MNS PM will provide advisement to City staff in the form of pre-prepared responses to questions posed at the hearing. The MNS PM will be available to attend the hearing and support the City in answering questions brought forth by CPUC staff, UPRR, or posed directly by the ALJ.

TASK 7.0 DELIVERABLES

- Set of responses to anticipated questions by the CPUC staff, UPRR, or the ALJ.

Task 8.0 – Right of Way

As project plans are developed, the MNS PM will coordinate with the Real Estate Department of UPRR to develop right of way documentation for all project elements. As previously described, the form of right of way will be determined through negotiation with UPRR.

TASK 8.0 DELIVERABLES

- C&M Agreements for grade crossings at Green Street, Hayes Street, and Davenport Road.
- Easement or license agreement for proposed grade crossing at Mill Street with corresponding construction and maintenance terms.
- Easement or license agreement for proposed right of way fencing.
- Lease agreement for park and ride lot and bus turnout.

Task 9.0 – Construction Coordination

The MNS PM will coordinate between UPRR, the City, and contractors on various construction-related activities and requirements as needed to include, but not limited to, equipment staging on the UPRR right of way, flagging, Right of Entry Agreements, Temporary Construction Easements (TCEs), and utility coordination. The MNS PM will secure fee payments by check from the City for agreements, flagging, licenses or services provided by UPRR.

TASK 9.0 DELIVERABLES

- Right of Entry Agreements as needed.
- Temporary Construction Easements as needed.
- Flagging requests as needed.
- Utility coordination as part of any corresponding issuance or re-issuance of License Agreements as needed.

MNS Project Manager

Mr. Greg Jaquez is a Principal Project Manager with 29 years of experinece specializing in transportation and water resources project management and planning. Before joining MNS, Mr. Jaquez was for many years employed the by the Los Angeles County Department of Public Works. Mr. Jaquez's experience includes highway project management, bikeway program management, Caltrans coordination, railroad coordination, stormwater/watershed planning and management, legislative management, grant writing and management, and federal advocacy. Mr. Jaquez provided coordination between the County and railroad agencies for various at-grade crossings and a number of grade separations associated with the Alameda Corridor Transportation Authority, Alameda Corridor East Construction Authority, and BNSF Triple Track program. Mr. Jaquez has also handled numerous maintenance-of-way issues to improve the quality of life for residents near railroad rights of way.

Fee Proposal

MNS proposes to provide the aforementioned services for a total fee of $59,330.

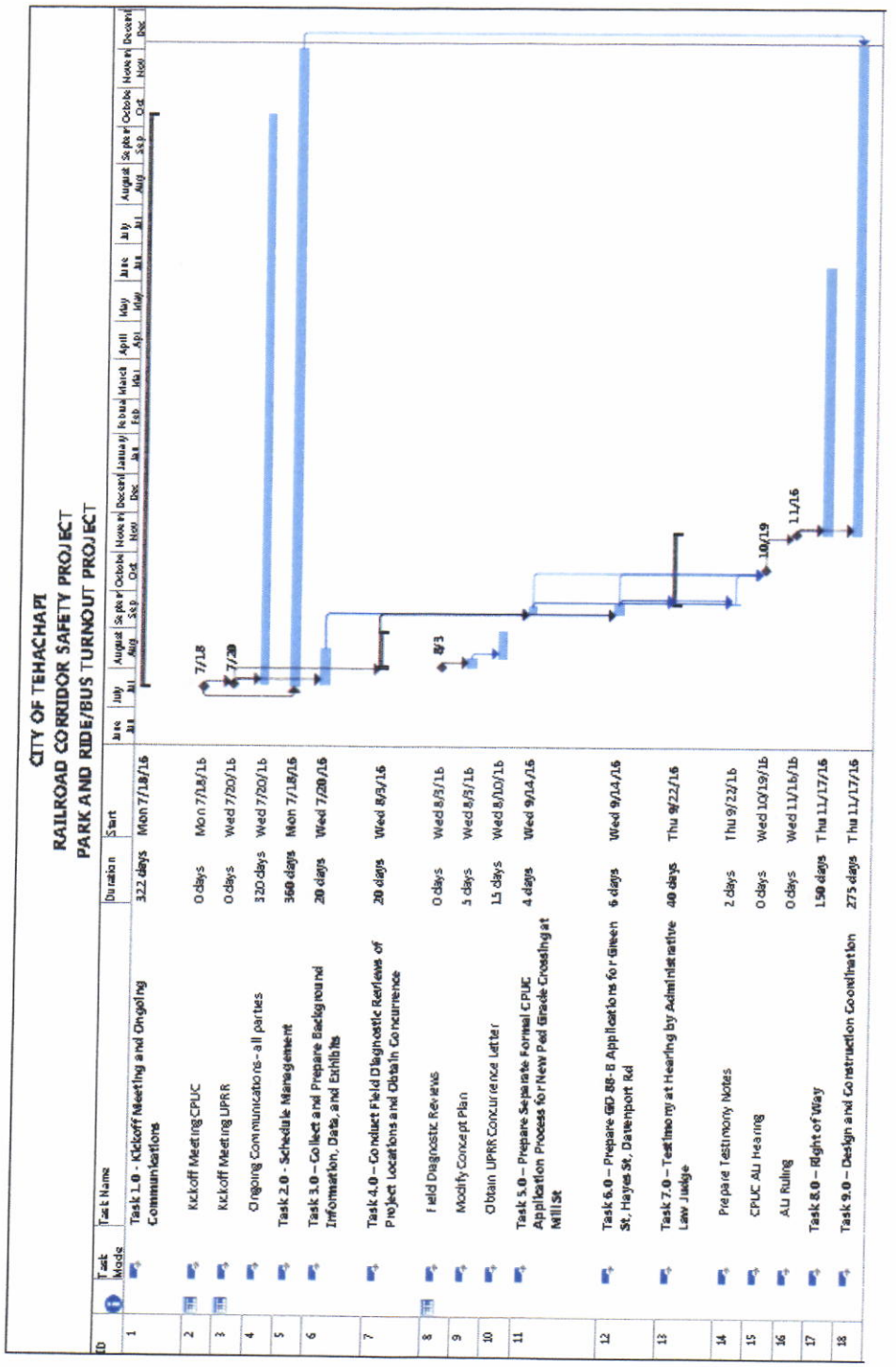
		Principal Project Manager - GJ	Assistant Engineer - RW	Principal Surveyor - MR	Administrative Assistant	Total Resource Hours	Total Resource Costs
	Hours	$200	$115	$200	$70		
Task 1.0 - Kickoff Meeting and Ongoing Communications	Task 1.0						
1.0 - Kickoff Meeting and Ongoing Communications	Task 1.0	30	100			130	$17,500
Task 1.0 Subtotal		30	100	0	0	130	$17,500
Task 2.0 - Schedule Management	Task 2.0						
2.0 - Schedule Management	Task 2.0	20	40			60	$8,600
Task 2.0 Subtotal		20	40	0	0	60	$8,600
Task 3.0 – Collect and Prepare Background Information, Data, and Exhibits	Task 3.0						
3.0 – Collect and Prepare Background Information, Data, and Exhibits	Task 3.0	5	20	20	10	55	$8,000
Task 3.0 Subtotal		5	20	20	10	55	$8,000
Task 4.0 – Conduct Field Diagnostic Reviews of Project Locations and Obtain Concurrence	Task 4.0						
4.0 – Conduct Field Diagnostic Reviews of Project Locations and Obtain Concurrence	Task 4.0	12	8			20	$3,320
Task 4.0 Subtotal		12	8	0	0	20	$3,320
Task 5.0 – Prepare Separate Formal CPUC Application Process for New Ped Grade Crossing at Mill St	Task 4.0						
5.0 – Prepare Separate Formal CPUC Application Process for New Ped Grade Crossing at Mill St	Task 4.0	2	8		2	12	$1,460
Task 5.0 Subtotal		2	8	0	2	12	$1,460
Task 6.0 – Prepare GO 88-B Applications for Green St, Hayes St, Davenport Rd	Task 4.0						
6.0 – Prepare GO 88-B Applications for Green St, Hayes St, Davenport Rd	Task 4.0	3	12		3	18	$2,190
Task 6.0 Subtotal		3	12	0	3	18	$2,190
Task 7.0 – Testimony at Hearing by Administrative Law Judge	Task 4.0						
7.0 – Testimony at Hearing by Administrative Law Judge	Task 4.0	8			1	9	$1,670
Task 7.0 Subtotal		8	0	0	1	9	$1,670
Task 8.0 – Right of Way	Task 4.0						
8.0 – Right of Way	Task 4.0	30	60		12	102	$13,740
Task 8.0 Subtotal		30	60	0	12	102	$13,740
Task 9.0 – Design and Construction Coordination	Task 4.0						
9.0 – Construction Coordination	Task 4.0	5	10		10	25	$2,850
Task 9.0 Subtotal		5	10	0	10	25	$2,850
Total	Hours	115	258	20	38	431	
	Cost	$23,000	$29,670	$4,000	$2,660		$59,330

EXHIBIT B

Project Schedule

CITY OF TEHACHAPI
RAILROAD CORRIDOR SAFETY PROJECT
PARK AND RIDE/BUS TURNOUT PROJECT

ID	Task Mode	Task Name	Duration	Start
1		Task 1.0 - Kickoff Meeting and Ongoing Communications	322 days	Mon 7/18/16
2		Kickoff Meeting CPUC	0 days	Mon 7/18/16
3		Kickoff Meeting UPRR	0 days	Wed 7/20/16
4		Ongoing Communications - all parties	320 days	Wed 7/20/16
5		Task 2.0 - Schedule Management	360 days	Mon 7/18/16
6		Task 3.0 – Collect and Prepare Background Information, Data, and Exhibits	20 days	Wed 7/20/16
7		Task 4.0 – Conduct Field Diagnostic Reviews of Project Locations and Obtain Concurrence	20 days	Wed 8/3/16
8		Field Diagnostic Reviews	0 days	Wed 8/3/16
9		Modify Concept Plan	5 days	Wed 8/3/16
10		Obtain UPRR Concurrence Letter	15 days	Wed 8/10/16
11		Task 5.0 – Prepare Separate Formal CPUC Application Process for New Ped Grade Crossing at Mill St	4 days	Wed 9/14/16
12		Task 6.0 – Prepare GO 88-B Applications for Green St, Hayes St, Davenport Rd	6 days	Wed 9/14/16
13		Task 7.0 – Testimony at Hearing by Administrative Law Judge	40 days	Thu 9/22/16
14		Prepare Testimony Notes	2 days	Thu 9/22/16
15		CPUC ALJ Hearing	0 days	Wed 10/19/16
16		ALJ Ruling	0 days	Wed 11/16/16
17		Task 8.0 – Right of Way	150 days	Thu 11/17/16
18		Task 9.0 – Design and Construction Coordination	275 days	Thu 11/17/16



Agenda

CITY OF TEHACHAPI CALIFORNIA

COUNCIL REPORTS

APPROVED
DEPARTMENT HEAD:
CITY MANAGER:

MEETING DATE: JUNE 20, 2016 **AGENDA SECTION:** DEVELOPMENT SERVICES

TO: HONORABLE MAYOR WIGGINS AND COUNCIL MEMBERS

FROM: JOHN (JAY) SCHLOSSER, P.E., DEVELOPMENT SERVICES DIRECTOR

DATE: JUNE 14, 2016

SUBJECT: ACTIVE TRANSPORTATION PROGRAM – RAIL CORRIDOR PEDESTRIAN SAFETY PROJECT: UNION PACIFIC PRELIMINARY ENGINEERING SERVICES

BACKGROUND

As the City Council will recall, the City of Tehachapi was awarded a $2.2 million dollar grant under the Active Transportation Program (ATP) for the Rail Corridor Pedestrian Safety Project. This project seeks to construct enhanced crossings at Green Street, Hayes Street, and Dennison Road. Further, we intend to construct security fencing and pedestrian facilities along the north side of the tracks through downtown with the intent to funnel pedestrians and bicyclists to safer crossing locations.

City Staff expects the coordination process with the Union Pacific to be lengthy and to require numerous Council actions including agreements with affected parties, the requirement to obtain certain insurances, and the need to compensate Union Pacific for their expenses. This is similar in nature to the types of steps we require other agencies to undertake when working in the City rights-of-way.

PROPOSED AGREEMENT

A draft version of the proposed agreement is attached to this report. The agreement has been provided to the City Attorney for review and comment. The agreement formally requests that the Union Pacific begin their review of our project and to inform us regarding anticipated issues and requirements they may impose. It further states that the City will provide an initial deposit of $25,000 to cover Union Pacific expenses. That deposit is only an initial commitment. If signed, the City will be obligated to reimburse the Union Pacific for their expenses incurred as part of this project.

FISCAL IMPACT

The City of Tehachapi received funds from BNSF in compensation for the impacts associated with their double tracking efforts under construction west of town at this time. These funds were set aside to support this

project, among others. Approximately $250,000 was set aside to fund the design phase of this project and the fees needed to compensate the Union Pacific are to be drawn from this set aside.

RECOMMENDATION

APPROVE THE DRAFT AGREEMENT BETWEEN THE CITY OF TEHACHAPI AND THE UNION PACIFIC RAILROAD SUBJECT TO REVIEW AND APPROVAL BY THE CITY ATTORNEY. AUTHORIZE THE DEVELOPMENT SERVICES DIRECTOR TO SIGN THE AGREEMENT AND TO REMIT PAYMENT TO THE UNION PACIFIC RAILROAD IN ACCORDANCE WITH THE FINAL AGREEMENT.

CITY LETTERHEAD

June 15, 2016

AGREEMENT FOR PRELIMINARY ENGINEERING SERVICES AND SUBMITTAL OF EXHIBIT "A" FOR RAILROAD APPROVAL

Proposed Crossing: Pedestrian Grade Crossing State: CA City: Tehachapi MP 360.22 Mohave Subdivision Mill Street / DOT # (N/A) Kern County	Crossing: Roadway Grade Crossing State: CA City: Tehachapi MP 360.50 Mohave Subdivision Green Street / DOT # 757436U Kern County
Crossing: Roadway Grade Crossing State: CA City: Tehachapi MP 360.90 Mohave Subdivision Hayes Street / DOT # 757246R Kern County	Crossing: Roadway Grade Crossing State: CA City: Tehachapi MP 361.40 Mohave Subdivision Dennison Road / DOT # 757247X Kern County

Daniel Z. Moreno
Manager, Industry & Public Projects
Union Pacific Railroad
2015 S. Willow
Bloomington, CA 92316

Dear Mr. Moreno:

The City of Tehachapi (City) intends to prepare plans for the Rail Corridor Pedestrian Safety Project at the locations referenced above. The proposed work includes fencing along the exterior edge of Railroad right of way in the vicinity and between the above referenced locations. In connection with the project, the City considers it necessary for the successful advancement of the project for your company to collaborate in the development of the project by performing the following:

- preliminary engineering and other related services
- development of cost estimates
- review of the project's preliminary layouts
- submit current train and switching moves

The City of Tehachapi has authorized and agrees to reimburse the Railroad for its expenses and actual costs that are incurred for collaborating in the development of the project's preliminary engineering and other preliminary activities. The Railroad has estimated that these preliminary engineering and other preliminary costs will be $25,000.00. Payment will be made within thirty (30) days from the City's receipt and approval of the Railroad's request for

reimbursement. Railroad will refer to the City's Project Number (-------) and forward Invoices to (----------).

Additionally, attached for your company's review and approval is one (1) set of half-scale prints of the concept plans marked **Exhibit A**, which are the (X)% complete plans and show the basic features of the proposed project at the locations referenced above. Please review and provide comment on the basic features of the **Exhibit A**. The City's consultant on this project is expected to meet with your shortly to discuss the project proposal, after which we wish to have your comments provided by July 21, 2016. Also enclosed is one (1) set of photos of the project area.

The project may require the Railroad to incur costs for force account activities. Please prepare the railroad force account cost estimate for work activities to be provided by your company, as identified in **Exhibit A** and submit them at your earliest convenience so that they may be attached to the railroad generated Construction & Maintenance (C&M) agreement.

Please verify the number of current regular train (8) and switching movements (8) with a Maximum Speed of (79 MPH) at this location. This information will be used by the City's Contractor to obtain Railroad Protective Liability Insurance.

This agreement is intended to address Preliminary Engineering. It is understood by both parties that Railroad may withhold its approval for any reason directly or indirectly related to safety or its operations, property issues or effect to its facilities. If the Project is approved, Union Pacific will continue to work with the City to develop Final Plans, Specifications and prepare Material and Cost Estimates for Railroad Construction Work associated with the project. The City understands that, if the project is constructed, it will be at no cost to the Railroad.

The City and the Railroad will enter into separate License, Right of Entry, Construction and Maintenance Agreements associated with the actual construction of the project if the project is accepted and approved by the railroad. The Agreements will be drafted by Union Pacific and forwarded to the City after the **Exhibit A** and cost estimates have been approved.

Please know that the City is implementing this project with funding from an Active Transportation Program grant from Caltrans. The grant agreement requires the City's delivery of project completion by _____ ___, 2017. We look forward to all possible cooperation and coordination with the Railroad in accordance with our project schedule.

If you have any questions, please contact Ryan Montgomery at (661) 822-2200 or rmontgomery@tehachapicityhall.com. Your assistance and cooperation in this matter is greatly appreciated.

Sincerely,

Jay Schlosser, P.E.
City Engineer
City of Tehachapi

UNION PACIFIC RAILROAD COMPANY

By _____ Date _____

Daniel Z. Moreno, Manager Industry & Public Projects

Attachment(s)
cc:

Agenda

CITY OF TEHACHAPI CALIFORNIA

COUNCIL REPORTS

APPROVED

DEPARTMENT HEAD: ____

CITY MANAGER: ____

MEETING DATE: JUNE 20, 2016 **AGENDA SECTION:** CITY MANAGER

TO: **HONORABLE MAYOR WIGGINS AND COUNCIL MEMBERS**

FROM: **GREG GARRETT, CITY MANAGER**

DATE: **JUNE 15, 2016**

SUBJECT: **CITY OF TEHACHAPI LANDSCAPING AND LIGHTING ASSESSMENT DISTRICT NO. 1**

BACKGROUND

This action by the City Council orders the levy of assessments within the Landscaping and Lighting Assessment District No. 1 for fiscal year 2016/2017.

At the June 6, 2016 City Council meeting, City Council adopted Resolution No. 19-16, 20-16, and 21-16 Initiating proceedings, approving the preliminary Engineer's Report, approving declaring its intent to levy assessments for the Landscaping and Lighting Assessment District No. 1 for fiscal year 2016/2017.

The total annual maintenance cost to the District is $262, 608.21. Annual maintenance costs are funded through the assessments placed on the property tax bills.

OPTIONS

There are no alternate options for this item.

RECOMMENDATION

It is recommended that the City Council adopt one resolution: (1) Amending and/or approving the Final Engineer's Report; the City ordering the levy and collection of assessments within the City of Tehachapi Landscaping and Lighting Assessment District No. 1 for Fiscal Year 2016/2017.

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEHACHAPI, CALIFORNIA, AMENDING AND/OR APPROVING THE FINAL ENGINEER'S REPORT REGARDING THE LANDSCAPING AND LIGHTING ASSESSMENT DISTRICT NO.1, AND THE LEVY AND COLLECTION OF ANNUAL ASSESSMENTS RELATED THERETO FOR FISCAL YEAR 2016/2017

WHEREAS, The City Council, pursuant to the provisions of *Part 2 of Division 15 of the California Streets and Highways Code*, did by previous Resolution order the Engineer, Willdan Financial Services, to prepare and file a report in accordance with *Article 4 of Chapter 1 of Part 2 of Division 15 of the California Streets and Highways Code, commencing with Section 22565,* in connection with the proposed levy and collection of assessments for the Landscaping and Lighting District No.1, (hereafter referred to as the "District") for the fiscal year commencing July 1, 2016, and ending June 30, 2017; and

WHEREAS, The Engineer has prepared and filed with the City Clerk of the City of Tehachapi and the City Clerk has presented to the City Council such report entitled "Engineer's Annual Levy Report, Landscaping and Lighting District No.1, Fiscal Year 2016/2017" (hereafter referred to as the "Report"); and

WHEREAS, The City Council has carefully examined and reviewed the Report as presented, and is satisfied with the items and documents as set forth therein, and finds that the levy has been spread in accordance with the special benefits received from the improvements, operation, maintenance and services to be performed, as set forth in said Report.

NOW, THEREFORE BE IT RESOLVED, DETERMINED, AND ORDERED BY THE CITY COUNCIL FOR THE DISTRICT, AS FOLLOWS:

Section 1: The above recitals are true and correct.

Section 2: The Report as presented, consists of the following:

a) A Description of the District and Improvements.

b) The Annual Budget (Costs and Expenses of Services, Operations and Maintenance)

c) A Description of the Method of Apportionment resulting in an Assessment Rate per Equivalent Benefit Unit (EBU) within said District for fiscal year 2016/2017. Said Assessment Rate for fiscal year 2016/2017 is not above maximum assessment rate per Equivalent Benefit Unit. The maximum assessment rate is subject to the application of an assessment range formula that includes the annual inflationary adjustment of (3%) for Tract 6062 and based on the CPI for Fiscal Year 2016/2017, (3.10%) for the other Tracts within the District except tract Parcel Map 11353 which is (2.41%). This inflation factor is applied to the maximum assessment rate each fiscal year.

Section 3: The Report as presented or as amended is hereby approved, and is ordered to be filed in the Office of the City Clerk as a permanent record and to remain open to public inspection.

Section 4: The City Clerk shall certify to the passage and adoption of this Resolution, and the minutes of this meeting shall so reflect the presentation and final approval of the Report.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Tehachapi at a regular meeting this 20th day of June, 2016.

AYES: _____

NOES: _____

ABSENT: _____

ABSTAIN: _____

_____
Susan Wiggins, Mayor
City of Tehachapi, California

ATTEST:

_____
Tori Marsh
City Clerk, City of Tehachapi, California

I hereby certify that the foregoing resolution was duly and regularly adopted by the City Council of the City of Tehachapi at a regular meeting thereof held on June 20, 2016.

_____
Tori Marsh
City Clerk, City of Tehachapi, California

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEHACHAPI, CALIFORNIA ORDERING THE LEVY AND COLLECTION OF ASSESSMENTS WITHIN THE LANDSCAPING AND LIGHTING DISTRICT NO.1, FOR FISCAL YEAR 2016/2017

The City Council of the City of Tehachapi, California (hereafter referred to as "City Council") hereby finds, determines, resolves and orders as follows:

WHEREAS, The City Council has by previous Resolutions initiated proceedings and declared its intention to levy special benefit assessments against parcels of land within the Landscaping and Lighting District No.1, (hereafter referred to as the "District") for the fiscal year commencing July 1, 2016, and ending June 30, 2017; pursuant to the provisions of the *Landscaping and Lighting Act of 1972, Part 2 of Division 15 of the California Streets and Highways Code, commencing with Section 22500* (hereinafter referred to as the "Act") to pay the costs and expenses of operating, maintaining and servicing of the improvements located within the District; and,

WHEREAS, The Engineer selected by the City Council has prepared and filed with the City Clerk, and the City Clerk has presented to the City Council the Engineer's Annual Levy Report (hereafter referred to as the "Report") in connection with the proposed levy and collection of special benefit assessments upon eligible parcels of land within the District, and the City Council did by previous Resolution approve such Report; and,

WHEREAS, The City Council desires to levy and collect assessments against parcels of land within the District for the fiscal year commencing July 1, 2016, and ending June 30, 2017, to pay the costs and expenses of operating, maintaining and servicing the improvements and appurtenant facilities located within the District; and,

WHEREAS, The City Council has previously conducted a property owner protest ballot proceeding for the District assessments proposed to be levied for Fiscal Year 2016/2017, and said assessments are described in the approved Report, and the assessments as described comply with the applicable provisions of the California State Constitution Article XIIID.

NOW, THEREFORE BE IT RESOLVED, DETERMINED, AND ORDERED BY THE CITY

COUNCIL FOR THE DISTRICT, AS FOLLOWS:

Section 1 The above recitals are true and correct.

Section 2 Following notice duly given, the City Council has held a full and fair Public Hearing regarding its Resolution approving or amending the Report prepared in connection with the levy and collection of assessments, and has considered the oral and written statements, protests and communications made or filed by interested persons. The City Council has determined that the property owners in accordance with the requirements of the California State Constitution, Article XIIID have approved the assessments so presented.

Section 3 Based upon its review (and amendments, as applicable) of the Engineer's Annual Levy Report, a copy of which has been presented to the City Council and which has been filed with the City Clerk, the City Council hereby finds and determines that:

a) The land within the District will receive special benefit by the operation, maintenance and servicing of the improvements within the boundaries of the District.

b) District includes the lands receiving such special benefit.

c) The net amount to be assessed upon the lands within the District is in accordance and apportioned by a formula and method which fairly distributes the net amount among the eligible parcels in proportion to the special benefit to be received by each parcel from the improvements and services for the fiscal year commencing July 1, 2016, and ending June 30, 2017.

Section 4 The Report and assessment as presented to the City Council and on file in the office of the City Clerk are hereby confirmed as filed.

Section 5 The City Council hereby orders the proposed improvements to be made, which improvements are briefly described as the maintenance and operation of and the furnishing of services and materials for landscape maintenance areas, street lighting and other appurtenant facilities.

Section 6 The maintenance, operation and servicing of the improvements shall be performed pursuant to the Act and the County Auditor of Kern County shall enter on the County Assessment Roll opposite each parcel of land the amount of levy, and such levies shall be collected at the same time and in the same manner as the County taxes are collected. After collection by the County, the net amount of the levy shall be paid to the City Treasurer.

Section 7 The City Treasurer shall deposit the money representing assessments collected by the County for the District to the credit of a fund for the Landscaping and Lighting District No.1, and such money shall be expended for the maintenance, operation and servicing of the improvements as described in the Engineer's Report.

Section 8 The adoption of this Resolution constitutes the District levy for the Fiscal Year commencing July 1, 2016, and ending June 30, 2017.

Section 9 The City Clerk or its designee is hereby authorized and directed to file the levy with the County Auditor upon adoption of this Resolution.

PASSED, APPROVED, AND ADOPTED by the City Council of the City of Tehachapi at a regular meeting this 20th day of June 2016.

AYES: _____

NOES: _____

ABSENT: _____

ABSTAIN: _____

_____
Susan Wiggins, Mayor
City of Tehachapi

ATTEST:

_____
Tori Marsh, City Clerk
City of Tehachapi

I hereby certify that the foregoing resolution was duly and regularly adopted by the City Council of the City of Tehachapi at a regular meeting thereof held on June 20, 2016.

_____
Tori Marsh, City Clerk
City of Tehachapi, California

Agenda

TEHACHAPI
CALIFORNIA
Live Up.

City of Tehachapi

Tehachapi Landscaping and Lighting District No. 1

2016/2017 Engineer's Annual Levy Report

Intent Meeting: June 6, 2016
Public Hearing: June 20, 2016

27368 Via Industria
Suite 200
Temecula, CA 92590
T 951.587.3500 | 800.755.6864
F 951.587.3510

www.willdan.com/financial

WILLDAN
Financial Services

Agenda

ENGINEER'S REPORT AFFIDAVIT

TEHACHAPI LANDSCAPING & LIGHTING DISTRICT NO. 1

City of Tehachapi,
County of Kern, State of California

This Report describes the District and the relevant zones therein including the improvements, budgets, parcels and assessments to be levied for fiscal year 2016/2017, as they existed at the time of the passage of the Resolution of Intention. Reference is hereby made to the Kern County Assessor's maps for a detailed description of the lines and dimensions of parcels within the District. The undersigned respectfully submits the enclosed Report as directed by the City Council.

Dated this 6th day of June, 2016.

Willdan Financial Services
Assessment Engineer
On Behalf of the City of Tehachapi

By: Josephine P. Moses

Josephine Perez-Moses, Senior Project Manager
District Administration Services

By: Richard Kopecky

Richard Kopecky
R.C.E. # 16742

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. KOPECKY
C 16742
EXP 6-30-17
CIVIL
STATE OF CALIFORNIA

Agenda

WILLDAN Financial Services

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I. OVERVIEW

A. Introduction

The City of Tehachapi ("City") annually levies and collects special assessments in order to provide annual maintenance for parks, landscaping and lighting improvements within the Landscaping and Lighting District No. 1 ("District"), pursuant to the *Landscaping and Lighting Act of 1972, Part 2 of Division 15 of the Streets and Highways Code* ("Act") and in compliance with the substantive and procedural requirements of the *California State Constitution Article XIIID* ("Constitution"). The District was formed in 2004, and provides funding for services required to maintain landscaping and lighting improvements and associated appurtenances located within the District boundaries.

This Engineer's Annual Levy Report ("Report") describes the District, any changes to the District and the proposed assessments for Fiscal Year 2016/2017. The proposed assessments are based on the estimated cost to maintain the improvements that provide a special benefit to properties within the District. The District budget identifies the estimated expenditures, deficits, surpluses, revenues and fund balances used to calculate the annual assessment for properties within the District. Each parcel within the District is assessed proportionately for those improvements provided by the District from which the parcel receives special benefit.

For the purposes of this Report, the word "parcel" refers to an individual property assigned its own Assessor's Parcel Number ("APN") by the Kern County Assessor's Office. The Kern County Auditor/Controller uses APN's and specific Fund Numbers to identify, on the tax roll, properties assessed for special district benefit assessments.

Following consideration of public comments and written protests at a public hearing, the City Council ("Council") will review the Engineer's Annual Levy Report and may order amendments to the Report or confirm the Report as submitted. Following final approval of the Report, and confirmation of the assessments, the Council may order the levy and collection of assessments for Fiscal Year 2016/2017 pursuant to the Act and as outlined in the approved Report. In such case, the assessment information will be submitted to the County Auditor/Controller, and included on the property tax roll for each parcel in Fiscal Year 2016/2017.

B. Historical Background

The District was originally formed in Fiscal Year 2003/2004 after the City initiated and conducted property owner protest ballot proceedings for the District in compliance with the substantive and procedural requirements of the Constitution.

At the conclusion of the Public Hearing on December 15, 2003, the property owner ballots returned were tabulated. The tabulation of the ballots indicated that the property owners approved the maximum assessment rate and the assessment range formula. The District originally consisted of the lots, parcels and tracts of land located in the subdivision area known as Heritage Oaks, which contains the single-family residential tract, Tract 6062 "Original District".

In subsequent years, the City initiated and conducted property owner protest ballot proceedings for the annexation of additional subdivisions to the District in compliance with the substantive and procedural requirements of the Constitution. In 2004, Tracts 6212, 6215, 6216 and 6248, respectively were annexed as Zones 1 through 4. In 2006, Tracts 5812 and 4927, respectively, were annexed to the District as Zones 5 and 6. Tract Numbers 6360, 6507, 6723-A and 6497 were annexed in 2007, as Zones 7, 8, 9, and 11, respectively. Parcel Map 11353 was annexed in 2008, as Zone 14C, and Parcel Map 10997 was annexed in 2014, as Zone 13C.

At the conclusion of each of the annexation public hearings, the property owner ballots returned were tabulated. The tabulation of the ballots indicated that the property owners of each of the twelve subdivisions approved the special benefit maximum assessment rate ("Maximum Assessment") for maintaining the improvements within the zones of the District. Although the actual assessment amount approved by each property owner varied with their proportionate benefits, the Maximum Assessments approved by the property owners established an initial maximum assessment rate for each zone and included the Assessment Range Formula, as further described in this Report, currently applied to each zone in the District. The Maximum Assessments are subject to the application of an assessment range formula that includes an annual inflationary adjustment of three percent (3%) for the Original District and an annual inflationary adjustment based upon the Consumer Price Index, for all Urban Consumers, for the Los Angeles-Orange-Riverside County Area as determined by the United States Bureau of Labor Statistics, or its successor ("CPI") for Zones 1 – 9, 11, 13C and 14C.

C. General Description of the District

The District consists of the lots, parcels and subdivisions of land located within the single-family residential subdivisions known as Tract 6062, 6212, 6215, 6216, 6248, 5812, 4927, 6360, 6507, 6723-A and 6497, and commercial property known as Parcel Map 11353 and Parcel Map 10997 (individually referred to as "Tract" and collectively as "Tracts"). Each Tract represents a zone of benefit within the District. The properties within the District include single-family residential parcels, non-residential parcels, a proposed church site, landscape easements and an open space area to be used as a proposed drainage sump.

The purpose of the District is to ensure the ongoing maintenance, operation and servicing of a proposed drainage sump, local perimeter landscaping and street lighting improvements installed in connection with development of properties within the District. Park improvements located adjacent to the District are also included within the list of proposed improvements. This District will provide the financial mechanism (annual assessments) by which the ongoing operation and maintenance of these improvements will be funded.

The District structure, proposed improvements, method of apportionment and assessments described in this Report are based on current development and improvement plans including the estimated direct expenditures, incidental expenses and reserves associated with the maintenance and servicing of the improvements.

D. Improvements Authorized by the 1972 Act

As applicable or may be applicable to this proposed District, the 1972 Act defines improvements to mean one or any combination of the following:

- The installation or planting of landscaping.
- The installation or construction of statuary, fountains, and other ornamental structures and facilities.
- The installation or construction of public lighting facilities.
- The installation or construction of any facilities which are appurtenant to any of the foregoing or which are necessary or convenient for the maintenance or servicing thereof, including, but not limited to, grading, clearing, removal of debris, the installation or construction of curbs, gutters, walls, sidewalks, or paving, or water, irrigation, drainage, or electrical facilities.
- The maintenance or servicing, or both, of any of the foregoing.
- The acquisition of any existing improvement otherwise authorized pursuant to this section.

Incidental expenses associated with the improvements including, but not limited to:

- The cost of preparation of the report, including plans, specifications, estimates, diagram, and assessment;
- The costs of printing, advertising, and the publishing, posting and mailing of notices;
- Compensation payable to the County for collection of assessments;
- Compensation of any engineer or attorney employed to render services;
- Any other expenses incidental to the construction, installation, or maintenance and servicing of the improvements;
- Any expenses incidental to the issuance of bonds or notes pursuant to Section 22662.5.

- Costs associated with any elections held for the approval of a new or increased assessment.

The 1972 Act defines "Maintain" or "maintenance" to mean furnishing of services and materials for the ordinary and usual maintenance, operation, and servicing of any improvement, including:

- Repair, removal, or replacement of all or any part of any improvement.
- Providing for the life, growth, health, and beauty of landscaping, including cultivation, irrigation, trimming, spraying, fertilizing, or treating for disease or injury.
- The removal of trimmings, rubbish, debris, and other solid waste.
- The cleaning, sandblasting, and painting of walls and other improvements to remove or cover graffiti.

Borrow an amount necessary to finance the estimated cost of the proposed improvements. The amount borrowed, including amounts for bonds issued to finance the estimated cost of the proposed improvements.

E. District Boundaries

The District consists of non-contiguous areas located within the boundaries of the City of Tehachapi, including Tracts 6062, 6212, 6215, 6216, 6248, 5812, 4927, 6360, 6507, 6723-A and 6497 as well as Parcel Map 11353 and Parcel Map 10997 and their respective boundaries.

Original District – Tract 6062 is generally situated south of Pinon Street, north of Sutter Street and east of Ponderosa Drive.

Zone 1 – Tract 6212 is generally situated south and contiguous to the Valley Boulevard extension, north of Pinon Road, east of Curry Street and west of Dennison Road.

Zone 2 – Tract 6215 is generally situated north of Highline Road and south of Pinon Street and east of Ponderosa Drive.

Zone 3 – Tract 6216 is generally situated on the west side of Curry Street between Highline Road and Pinon Street.

Zone 4 – Tract 6248 is generally situated on the northeast corner of South Robinson Street and Holly Drive.

Zone 5 – Tract 5812 is generally situated on the southeast corner of Georgia Street and south of Dennison Road.

Zone 6 – Tract 4927 is generally situated on Mulberry Street, south of Valley Boulevard.

Zone 7 – Tract 6360 is generally situated north of "D" Street, and east of Mill Street.

Zone 8 – Tract 6507 is generally situated North of Pinion Street and West of Applewood Drive.

Zone 9 – Tract 6723-A is generally situated south of Cummings Valley Boulevard, north of Pinon Street.

Zone 11 – Tract 6497 is generally situated north of Highline Road, west of Dennison Road.

Zone 14C – Parcel Map 11353 is generally situated on Tehachapi Boulevard east of Dennison Road.

Zone 13C – Parcel Map 10997 is generally situated on Industrial Parkway and North Curry Street.

F. Description of District Improvements and Services

The District provides the ongoing maintenance, operation and servicing of proposed drainage sumps, local perimeter landscaping and street lighting improvements installed in connection with development of properties within the District boundaries. These improvements may include, but are not limited to, materials, equipment, utilities, labor and appurtenant facilities related to those improvements. These improvements include the necessary service, operation, administration, and maintenance required to keep the improvements in satisfactory condition. The improvements generally include the following:

Landscape and Public Street Lighting Improvements:

The landscaping improvements may include, but are not limited to, the landscaping material and facilities within the District. These improvements include ground cover, shrubs, trees, plants, irrigation and drainage systems, ornamental lighting structures, masonry walls or other fencing, entryway monuments and associated appurtenant facilities located within the individual zones. The street lighting improvements may include, but are not limited to, electrical energy, lighting fixtures, poles, meters, conduits, electrical cable and associated appurtenant facilities located within the individual zones.

Original District

- Landscape maintenance for entry medians located at Wyman Road and Brandon Lane.
- Perimeter landscape maintenance along Ponderosa Drive, Pinon Street and Sutter Street, immediately adjacent to the District, totaling approximately 61,740 square feet.
- The street lighting (twenty-seven 9,500 lumen lights) on the residential streets within the Original District.
- Public street lighting and other public lighting facilities (five, 16,000 lumen lights) on the streets surrounding or adjacent to the development and other public areas associated or necessary for development of properties within the Original District.

Zone 1

- Perimeter landscape maintenance totaling approximately 10,000 square feet along Valley Boulevard and landscaping located adjacent to the proposed drainage sump including periodic weed removal.
- Drainage sump totaling approximately 19,350 square feet.
- The street lighting (seventeen, 9,500 lumen lights) on residential streets within the Zone.
- Public street lighting and other public lighting facilities (five, 16,000 lumen lights) on Valley Boulevard surrounding or adjacent to the development and other public areas associated or necessary for development of properties within the Zone.

Zone 2

- Perimeter landscape maintenance totaling approximately 48,696 square feet along Highline Road, Sutter Street and Manzanita Lane.
- The street lighting (nineteen, 9,500 lumen lights) on residential streets within the Zone.

Zone 3

- Landscaping totaling approximately 11,572 adjacent to the rear of lots 1, 2 and 3. Also landscaping located adjacent to the proposed drainage sump on Pinon Street and drainage swale on the western side of the development including periodic weed removal.
- Perimeter landscaping totaling approximately 52,000 square feet along Highline Road, Curry Street, Pinon Street and adjacent to the rear of lots 1, 2, and 3.
- Entrance landscaping at Stetson Shadow Drive and East Orchard Parkway totaling approximately 23,000 square feet.
- Landscaping on Alder and South Alder Avenues totaling approximately 24,000 square feet.
- Landscaping of proposed drainage sump totaling approximately 3,000 square feet.

- The street lighting (sixty-seven, 9,500 lumen lights) on residential streets within the Zone.
- Public street lighting and other public lighting facilities (nine, 16,000 lumen lights) on Curry Street and Pinon street surrounding or adjacent to the development and other public areas associated or necessary for development of properties within the Zone.

Zone 4

- Perimeter landscape maintenance along "D" and South Robinson Streets and a drainage basin on the southeastern corner of "D" Street and South Robinson Street including periodic weed removal, totaling approximately 14,000 square feet.
- Drainage sump totaling approximately 7,400 square feet.
- The street lighting (three, 9,500 lumen lights) on residential streets within the Zone.
- Public street lighting and other public lighting facilities (three, 16,000 lumen lights) on South Robinson Street adjacent to the development and other public areas associated or necessary for development of properties within the Zone.

Zone 5

- Perimeter landscaping along Georgia Street, S. Dennison Road, and Pinon Street totaling approximately 64,000 square feet.
- Drainage retention basin totaling approximately 55,000 square feet.
- The street lighting (seventy-two, 9,500 lumen lights) on residential streets within the Zone.
- Public street lighting and other public lighting facilities (twenty-three, 16,000 lumen lights) on Georgia Street, S. Dennison Road, and Pinon Street surrounding or adjacent to the development and other public areas associated or necessary for development of properties within the Zone.

Zone 6

- The street lighting on residential streets within the Zone.
- Public street lighting and other public lighting facilities (six, 9,500 lumen lights) on Mulberry Street surrounding or adjacent to the development and other public areas associated or necessary for development of properties within the Zone.

Zone 7

- Streetscape located adjacent to the north side of "D" Street, as well as adjacent to the east side of Mill Street, totaling 1,705 square feet.
- Street lighting on residential streets located on the east side of Mill Street (two, 9,500 lumen lights on decorative poles) and on the north side of "D" Street (two, 9,500 lumen lights on decorative poles) within the Zone.

Zone 8

- Streetscape located and improvements located adjacent to the west side of Applewood Drive and to the north side of Pinon Street totaling approximately 16,665 square feet.
- The street lighting (seven, 16,000 lumens (150 watt) High Pressure Sodium Vapor Lamps on concrete poles) on residential streets within the Zone.

Zone 9

- Landscape Maintenance for park site generally beginning at the north property line of Lot No.1, southerly, adjacent to the west tract boundary, to the south property line of Lot No. 74, approximately 11,121 square feet.
- Landscape Maintenance for park site beginning at the north property line of Lot No.1, northerly, adjacent to the west tract boundary, to Cummings Valley Boulevard approximately 8,023 square feet.
- The street lighting (Nine, 9,500 lumen lights (100 watt) High Pressure Sodium Vapor Lamps on concrete poles); (Six, 16,000 lumen lights (150 watt) High Pressure Sodium Vapor Lamps on concrete poles) on residential streets within the Zone.

Zone 11

- Streetscape located adjacent to west side of Dennision Road, and adjacent to the north side of the Grand Teton Lane totaling approximately 12,457 square feet.
- Streetscape located adjacent to the southwest corner of Conagree Drive and Bryce Court (Lot No. 59 and 60), located adjacent to the north side of Bryce Court (Lot No. 50), located adjacent to the southwest corner of Conagree Drive and Yellowstone Lane, (Lot No. 48), located adjacent to the east side of Biscayne Drive (Lot No.27), located adjacent to the north side of Sutter Street (Lot No. 26), totaling approximately 5,048.5 square feet.
- Streetscape located between Conagree Drive and Dennison Road (Parcel A) approximately 3,080 square feet.
- Median Landscaping located at Grand Teton Lane 1,785 square feet.
- Landscaping multi-purpose path through center of project site connecting with Morris Park (between Lot Nos. 13 and14; 43 and 44; 33 and 54; 32 and 55 totaling 8,522 square feet.
- The street lighting (Nine, 9,500 lumen lights (100 watt) High Pressure Sodium Vapor on concrete poles), adjacent to Biscayne Drive, Yellowstone Lance, & Katmai Court. As well as the street lighting (Four, 16,000 lumen lights (150 watt) High Pressure Sodium Vapor Lamps on concrete poles) adjacent to Dennison Road.

Zone 13C

- The street lighting (Six - 5,800 lumen High Pressure Sodium Vapor Lamps on concrete poles) located throughout the development.

Zone 14C

- Streetscape located adjacent to Tehachapi Boulevard totaling approximately 2,600 square feet.
- The street lighting (Seven - 5,800 lumen High Pressure Sodium Vapor Lamps on concrete poles) located throughout the development.

Park Improvements:

The park improvements may include, but are not limited to, the maintenance of the park landscaping including, but not limited to, ground cover, shrubs, trees, plants, irrigation and drainage systems, ornamental lighting structures, masonry walls or other fencing and associated appurtenant facilities located with the:

Zones 1, 2 4, 7, 8, 9, and 11

- Neighborhood Park adjacent to the District boundaries totaling approximately 4.1 acres or 178,596 square feet.

Zone 3

- Paseo Park totaling approximately 2.7 acres or 121,000 square feet.
- Proposed linear and pocket parks totaling approximately 82,000 square feet.

The parcels within the District are assessed proportionately for the costs associated with the improvements and services provided through the District that provides a special benefit to each parcel assessed, utilizing the method of apportionment described in Section II of this Report.

II. METHOD OF APPORTIONMENT

A. Methodology

The Act permits the establishment of assessment districts by agencies for the purpose of providing certain public improvements, which include the construction, maintenance, and servicing of public lights, landscaping, parks, open space areas and appurtenant facilities. The Act further requires that the cost of these improvements be levied according to benefit rather than assessed value:

"The net amount to be assessed upon lands within an assessment district may be apportioned by any formula or method which fairly distributes the net amount among all assessable lots or parcels in proportion to the estimated benefits to be received by each such lot or parcel from the improvements."

Furthermore, Article XIIID Section 4 of the Constitution states that:

"The proportionate special benefit derived by each identified parcel shall be determined in relationship to the entirety of the capital cost of the public improvement, the maintenance and operation expenses of the public improvement, or the cost of the property related service being provided."

The formula used for calculating assessments reflects the composition of the parcels and the improvements and services provided within the District to fairly apportion the costs based on estimated special benefit to each parcel.

B. Benefit Analysis

Each of the improvements, the associated costs and assessments of the District have been reviewed, identified and allocated based on special benefit pursuant to the provisions of the Act and the Constitution. The improvements associated with this District have been identified as necessary, required and/or desired for the orderly development of the properties within the District to their full potential, consistent with the proposed development plans. As such, these improvements would be necessary and required of individual property owners for the development of such properties, and the ongoing operation, servicing and maintenance of these improvements would be the financial obligation of those properties. Therefore, the improvements and the annual costs of maintenance and operation of the improvements are of special benefit to the properties in the District.

The method of apportionment (method of assessment) is based on the premise that each assessed parcel within the District receives special benefit from the improvements within the Zone where the parcel is located as well as from adjacent landscaping, park and public street lighting improvements. The desirability and security of properties is enhanced by the presence of street lighting, well maintained landscaping and open space areas in close proximity to those properties.

The special benefits of landscaping, park improvements and open space improvements within the District are specifically:

1. Enhanced desirability of properties through association with the improvements;
2. Improved aesthetic appeal of properties providing a positive representation of the area;
3. Enhanced adaptation of the urban environment within the natural environment from adequate green space, open space areas and landscaping;
4. Environmental enhancement through improved erosion resistance, dust and debris control, and fire prevention;

5. Increased sense of pride in ownership of property within the District resulting from well-maintained improvements associated with the properties;
6. Reduced criminal activity and property-related crimes (especially vandalism) against properties in the District through well-maintained surroundings and amenities including abatement of graffiti; and,
7. Enhanced environmental quality of the parcels by moderating temperatures, providing oxygenation and attenuating noise.

The special benefits of street lighting are the convenience, safety, and security of property, improvements, and goods. Specifically:

1. Enhanced deterrence of crime and the aid to police protection;
2. Increased nighttime safety on roads and streets;
3. Improved ability of pedestrians and motorists to see;
4. Improved ingress and egress to property;
5. Reduced vandalism and other criminal act and damage to improvements or property;
6. Improved traffic circulation and reduced nighttime accidents and personal property loss; and,
7. Increased promotion of business during nighttime hours in the case of commercial properties.

The preceding special benefits contribute to a special enhancement and desirability of each of the assessed parcels within the District. Although the improvements may include landscaping and lighting improvements and other amenities available or visible to the public at large, the construction and installation of these improvements are only necessary for the development of properties within the District and are not required nor necessarily desired by any properties or developments outside the District boundary. Therefore, any public access or use of the improvements by others is incidental and there is no measurable general benefit to properties outside the District or to the public at large.

Park Improvement Benefit

For the 4.1-acre neighborhood park improvements, the special benefit to the District is determined based on the potential use each Zone within the District will receive from park improvements. The neighborhood park is proposed to be a public park with special benefit to Zones 1, 2, 4, 7, 8, 9, and 11 based on the ratio of the parcels within those Zones to the proposed parcels located in the adjacent Zones as follows:

- Zone 1, 19%
- Zone 2, 8%
- Zone 4, 5%
- Zone 7, 1%
- Zone 8, 1%
- Zone 9, 1%
- Zone 11, 1%

Each Tract's percentages represent the portion of the park maintenance that is considered special benefit and will be assessed to the parcels within the respective tracts.

Due to the size and location of the 2.7-acre Paseo Park improvement located in Zone 3, it is estimated that there will be some use of the park by neighboring property owners not in the District. Therefore, the special benefit to the parcels in Zone 3 for the Paseo Park improvements is limited to 75% with the remaining 25% as general benefit.

For Zones 5 and 6, the special benefit from park improvements is determined based on the potential use the property owners within the Tracts will receive from the park improvements. Based on a Park and Recreation Study prepared in 2005, the City of Tehachapi and the local community have a standard of approximately 3 acres per 1,000 residents. Using this projection, the total number of acres and future population, 1% and 9% of the maintenance costs of new and future park improvements will be considered special benefit to Zones 5 and 6, respectively.

C. Assessment Methodology

The method of apportionment for each Zone within the District calculates the receipt of special benefit from the respective improvements based on the actual or proposed land use of the parcels within the District. The special benefit received by each lot or parcel is equated to the overall land use of the parcel based on the parcel's actual land use or proposed planned development, and is reliant upon the special benefit received from the improvements planned for each Zone within the District.

To identify and determine the special benefit to be received by each parcel, it is necessary to consider the entire scope of the District improvements as well as individual property development within each Zone of the District. The costs associated with the improvements shall be fairly distributed among the parcels based upon the special benefit received by each parcel within each Zone. Additionally, in compliance with the Constitution, each parcel's assessment may not exceed the reasonable cost of the proportional special benefit conferred to that parcel. The benefit formula used to determine the assessment obligation is therefore based upon both the improvements that benefit the parcels within each Zone of the District as well as the proposed land use of each property as compared to other parcels that benefit from those specific improvements.

Equivalent Benefit Units

To assess benefits equitably, it is necessary to relate the different type of parcel improvements to each other. The Equivalent Benefit Unit (EBU) method of assessment apportionment uses the single-family home site as the basic unit of assessment. A single-family home site equals one Equivalent Benefit Unit (EBU). Every other land use is converted to EBUs based on an assessment formula that equates the property's specific development status, type of development (land use), and size of property, as compared to a single-family home site.

The EBU method of apportioning benefit is typically seen as the most appropriate and equitable assessment methodology for districts formed under the Act, as the benefit to each parcel from the improvements are apportioned as a function of land use type, size and development.

EBU Application by Land Use:

Single-Family Residential – This land use is defined as fully subdivided residential home site with or without a structure or planned single-family residential lot as identified by a submitted or approved tentative tract map of final tract map. This land use is assessed 1.0 EBU per lot or parcel. This is the base value that other land use types are compared and weighted against (i.e. Equivalent Benefit Unit or EBU).

Multi-Family Residential – This land use is defined as a fully subdivided residential parcel that has more than one residential unit developed on the property or planned residential lot as identified by a submitted or approved tentative tract map or final tract map. This land use is assessed 1.0 EBU per dwelling unit.

Developed Commercial – This land use is defined as property developed for either commercial or industrial use. This type of property receives greater benefit than Single Family or Multi-Family property due to typically larger lot size in relation to residential properties. With typical Single-Family Residential lot sizes at .25 acre,

Developed Commercial land use type is assessed at 4.0 EBU per gross acre. Parcels less than .25 acre are assigned a minimum of 1.0 EBU and there is no maximum acreage cap, as is the case with Vacant Non-Residential Property.

Non-Profit Parcels – This land use is defined as property developed for non-profit activities, such as Churches or Lodges. This type of property does receive benefit from the District improvements but at a rate that coincides with the sporadic intensity of people use for the parcel. Non-Profit land use type is assessed at 0.25 EBU per gross acre. Parcels less than 1.0 gross acre area assigned a minimum of 0.25 EBU.

Vacant Residential – This land use is defined as property currently zoned for residential development, but a tentative or final tract map has not been submitted and/or approved. This land use is assessed at 0.5 EBU per parcel.

Vacant Non-Residential – This land use is defined as property currently zoned for any non-residential use, but a tentative or final tract map has not been submitted and/or approved. This land use is assessed at 1.0 EBU per gross acre. Parcels less than 1.0 gross acre are assigned a minimum of 1.0 EBU. Parcels over 50 gross acres are assigned a maximum of 50 EBU.

Exempt Parcels – This land use identified properties that are not assessed and are assigned 0.0 EBU. This land use classification may include, but is not limited, to lots or parcels identified as public streets and other roadways (typically not assigned an APN by the County); dedicated public easements, open space area and right-of-ways; common areas, sliver parcels and bifurcated lots or any other property that cannot be developed; park properties and other publicly owned properties that are part of the District improvements and are therefore exempted from assessment.

The following table provides a listing of land use types, land use code designations, the Equivalent Benefit Unit factor applied to that land use type, and the multiplying factor used to calculate each parcel's individual EBU.

Land Use Codes and Equivalent Benefit Units

Property Type	Land Use Code	Equivalent Benefit Units	Multiplier
Single Family Residential	SFR	1.00	Lot/Parcel
Multi-Family Residential	MFR	1.00	Unit
Developed Commercial	COM	4.00	Gross Acre
Non-Profit Parcel	NP	0.25	Gross Acre
Vacant Residential	RV	0.50	Lot/Parcel
Vacant Non-Residential	NRV	1.00	Gross Acre
Exempt Parcel	XMT	0.00	Parcel

The benefit formula applied to parcels within each Zone of the District is based on the preceding Equivalent Benefit Unit (EBU) table. Each parcel's EBU correlates the parcel's special benefit received as compared to the other parcels benefiting from the improvements of the Zone.

The following formula is used to calculate each parcel's EBU (proportional benefit).

Parcel Type EBU x Acreage/Dwelling Units/Parcel/Lot = Parcel EBU

For each Zone, the total number of Equivalent Benefit Units ("EBU"s) is the sum of the individual EBUs applied to the parcels that receive a special benefit from the improvements. An assessment amount per EBU ("Rate") is established by taking the total cost of the improvements (including administration costs) and dividing that amount by the total number of EBUs of the parcels benefiting from the improvements. This Rate is then applied back to each parcel's individual EBU to determine the parcel's proportionate benefit and assessment obligation.

Total Balance to Levy / Total EBU = Rate per EBU

Rate per EBU x Parcel EBU = Parcel Levy Amount

D. ASSESSMENT RANGE FORMULA

Any new or increased assessment requires certain noticing and meeting requirements by law. Prior to the passage of Proposition 218 (*California Constitution Articles XIIIC and XIIID*), legislative changes in the Brown Act defined a "new or increased assessment" to exclude certain conditions. These conditions included "any assessment that does not exceed an assessment formula or range of assessments previously adopted by the agency or approved by the voters in the area where the assessment is imposed." This definition and conditions were later confirmed through Senate Bill 919 (Proposition 218 implementing legislation).

The purpose of establishing an Assessment Range Formula is to provide for reasonable increases and annual inflationary adjustment to the Assessments without requiring costly noticing and mailing procedures, which could add to the District costs and Assessments. For the Original District, the approved annual adjustment to the Assessment per EBU is three percent (3%). For Zones 1 – 9 and 11, the approved annual adjustment to the Assessment per EBU is proposed to increase each year based upon the CPI. The Engineer shall compute the percentage difference between the CPI for January of each year and the CPI for the previous January. For Zone 13C, the Engineer shall compute the percentage difference between the CPI for February of each year and the CPI for the previous February or CPUC rates for the previous February, and shall then adjust the existing assessment by an amount not to exceed such percentage for the following fiscal year. For Zone 14C, the Engineer shall compute the percentage difference between the CPI for February of each year and the CPI for the previous February and shall then adjust the existing Assessment by an amount not to exceed such percentage for the following fiscal year. Should the Bureau of Labor Statistics revise such index or discontinue the preparation of such index, the Engineer shall use the revised index or a comparable system as approved by the City Council for determining fluctuations in the cost of living. The CPI for January increase is 3.10% based on January 2015 and January 2016 indices. The CPI increase for February is 2.41% which is based on February 2015 and February 2016 Indices.

The Assessment Range Formula shall be applied to the future Assessments within the District. Generally, if the proposed annual assessment (levy per EBU) for the current fiscal year is less than or equal to the calculated Maximum Assessment, then the proposed annual assessment is not considered an increased assessment. The Maximum Assessment Rate for each Zone is equal to the initial Assessment (approved by property owners within each Zone of the District) adjusted annually by the approved inflation index.

Each fiscal year the Maximum Assessment will be recalculated and a new Maximum Assessment established for each Zone in the District.

The Maximum Assessment is adjusted annually and is calculated independent of the District's annual budget and proposed annual assessment. Any proposed annual Rate per EBU that is less than or equal to this Maximum Assessment is not considered an increased assessment, even if the proposed assessment is greater than the assessment applied in the prior fiscal year.

Although the Maximum Assessment will increase each year, the actual applied assessment rate per EBU may remain unchanged. The Maximum Assessment adjustment is designed to establish a reasonable limit on annual assessment increases. The Maximum Assessment calculated each year does not require or facilitate an increase to the annual assessment and neither does it restrict assessments to the Maximum Assessment. For each Zone, if the budget and applied assessment rate calculated for any fiscal year do not require an increase, or the increase is less than the adjusted Maximum Assessment, then the required budget and assessment rate may be applied without additional property owner balloting. If the budget and assessment rate calculated require an increase greater than the current Maximum Assessment, then the assessment is considered an increased assessment and would be subject to property owner protest balloting in compliance with the Constitution.

WILLDAN Financial Services

III. DISTRICT BUDGET

City of Tehachapi
L&L DISTRICT #1

Levy Components	Total Budget	Original District	Zone 1	Zone 2	Zone 3	Zone 4
DIRECT COSTS		Tract 6062	Tract 6212	Tract 6215	Tract 6216	Tract 6248
Landscape Maintenance Contract	$ 134,487.56	$ 17,000.00	$ 4,250.00	$ 13,615.88	$ 66,701.25	$ -
Landscape Utilities	61,700.33	9,580.63	1,803.53	9,229.83	17,550.47	-
Sprinkler Repair & Replacement	11,186.91	1,000.00	250.00	1,047.38	6,063.75	-
Tree and Plant Replacement	17,899.05	1,600.00	400.00	1,675.80	9,702.00	-
Miscellaneous Parts, Equipment and Replacements	4,474.77	400.00	100.00	418.95	2,425.50	-
Park Maintenance (Neighborhood Park and Paseo Park)	55,689.83	-	-	4,189.50	36,382.50	-
Drainage Sump Maintenance	12,300.00	1,500.00	2,800.00	5,000.00	2,000.00	-
Street Lights	39,497.64	11,000.00	5,000.00	2,440.07	3,819.24	-
Total Direct Costs	**$ 337,236.09**	**$ 42,080.63**	**$ 14,603.53**	**$ 37,617.41**	**$ 144,644.71**	**$ -**
ADMINISTRATION COSTS						
Levy Administration and Professional Services	$ 6,378.11	$ 788.31	$ 716.64	$ 873.00	$ 2,443.10	$ -
County Collection Fee	216.03	26.62	24.85	29.48	82.50	-
City Overhead and Administration	23,066.52	2,878.46	998.93	2,573.16	9,894.20	-
Total Administration Costs	**$ 29,660.66**	**$ 3,693.39**	**$ 1,740.42**	**$ 3,475.64**	**$ 12,419.80**	**$ -**
COLLECTIONS/(CREDITS) APPLIED TO LEVY						
TOTAL DIRECT AND ADMIN COSTS	**$ 366,896.75**	**$ 45,774.02**	**$ 16,343.95**	**$ 41,093.05**	**$ 157,064.51**	**$ -**
Reserve Collection/(Transfer)	(96,679.05)	(18,786.19)	-	(11,804.67)	(55,281.26)	-
Capital Improvement Fund Collection/(Transfer)	-	-	-	-	-	-
General Fund Loans Repayment/(Advances)	-	-	-	-	-	-
Other Revenues/General Fund (Contributions)	(7,609.50)	-	-	-	(7,609.50)	-
Total Collections/(Credits)	$ (104,288.55)	$ (18,786.19)	$ -	$ (11,804.67)	$ (62,890.76)	$ -
Balance to Levy (Budgeted)	**$ 262,608.20**	**$ 26,987.83**	**$ 16,343.95**	**$ 29,288.38**	**$ 94,173.75**	**$ -**
Applied to Levy (Rounded)	**$ 262,608.21**	**$ 26,987.84**	**$ 16,343.95**	**$ 29,288.38**	**$ 94,173.75**	**$ -**
DISTRICT STATISTICS						
Total Parcels	1,040	124	110	136	388	1
Total Parcels Levied	1,007	121	110	134	375	-
Total Equivalent Benefit Units	1,393.19	121.25	110.00	134.00	375.00	29.00
Applied Levy per Benefit Unit		**$ 222.580**	**$ 148.581**	**$ 218.570**	**$ 251.130**	**$ -**
Prior Year Levy per Benefit Unit		$ 209.80	$ 146.05	$ 211.98	$ 243.58	$ -
Maximum Levy per Benefit Unit (Prior Fiscal Year)		$ 216.11	$ 275.94	$ 212.00	$ 243.58	$ 453.90
Maximum Levy per Benefit Unit (Current Fiscal Year)		**$ 222.589**	**$ 284.490**	**$ 218.571**	**$ 251.135**	**$ 467.970**
Inflationary Factor Applied to Maximum Rate		3.00%	3.10%	3.10%	3.10%	3.10%
		$ (0.009)	$ (135.909)	$ (0.001)	$ (0.005)	$ (467.970)
FUND BALANCE INFORMATION						
Estimated Beginning Reserve Fund Balance	$ (14,729.00)	$ (52,077.00)	$ 147,373.00	$ (89,900.00)	$ (47,743.00)	$ 36,227.00
Reserve Fund Adjustments	(96,679.05)	(18,786.19)	-	(11,804.67)	(55,281.26)	-
Estimated Ending Reserve Balance	**$ (111,408.05)**	**$ (70,863.19)**	**$ 147,373.00**	**$ (101,704.67)**	**$ (103,024.26)**	**$ 36,227.00**

WILLDAN Financial Services

City of Tehachapi
L&L DISTRICT #1

Levy Components	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9	Zone 11	Zone 14C	Zone 13C
DIRECT COSTS	Tract 5812	Tract 4927	Tract 6360	Tract 6507	Tract 6723-A	Tract 6497	Parcel Map 11353	Parcel Map 10997
Landscape Maintenance Contract	$ 27,716.01	$ -	$ 1,275.00	$ -	$ -	$ -	$ 2,229.42	$ 1,700.00
Landscape Utilities	21,687.89	-	547.98	-	-	-	1,300.00	-
Sprinkler Repair & Replacement	2,519.64	-	75.00	-	-	-	131.14	100.00
Tree and Plant Replacement	4,031.42	-	120.00	-	-	-	209.83	160.00
Miscellaneous Parts, Equipment and Replacements	1,007.86	-	30.00	-	-	-	52.46	40.00
Park Maintenance (Neighborhood Park and Paseo Park)	15,117.83	-	-	-	-	-	-	-
Drainage Sump Maintenance	1,000.00	-	-	-	-	-	-	-
Street Lights	13,112.72	-	2,200.00	-	-	-	1,125.61	800.00
Total Direct Costs	**$ 86,193.37**	**$ -**	**$ 4,247.98**	**$ -**	**$ -**	**$ -**	**$ 5,048.46**	**$ 2,800.00**
ADMINISTRATION COSTS								
Levy Administration and Professional Services	$ 1,348.59	$ -	$ 71.66	$ -	$ -	$ -	$ 84.69	$ 52.12
County Collection Fee	45.54	-	2.42	-	-	-	2.86	1.76
City Overhead and Administration	5,895.92	-	290.58	-	-	-	345.33	189.94
Total Administration Costs	**$ 7,290.05**	**$ -**	**$ 364.66**	**$ -**	**$ -**	**$ -**	**$ 432.88**	**$ 243.82**
COLLECTIONS/(CREDITS) APPLIED TO LEVY								
TOTAL DIRECT AND ADMIN COSTS	**$ 93,483.42**	**$ -**	**$ 4,612.64**	**$ -**	**$ -**	**$ -**	**$ 5,481.34**	**$ 3,043.82**
Reserve Collection/(Transfer)	(8,116.62)	-	206.68	-	-	-	(1,752.08)	(1,144.91)
Capital Improvement Fund Collection/(Transfer)	-	-	-	-	-	-	-	-
General Fund Loans Repayment/(Advances)	-	-	-	-	-	-	-	-
Other Revenues/General Fund (Contributions)	-	-	-	-	-	-	-	-
Total Collections/(Credits)	$ (8,116.62)	-	206.68	-	-	-	(1,752.08)	(1,144.91)
Balance to Levy (Budgeted)	**$ 85,366.80**	**$ -**	**$ 4,819.32**	**$ -**	**$ -**	**$ -**	**$ 3,729.26**	**$ 1,898.91**
Applied to Levy (Rounded)	**$ 85,366.80**	**$ -**	**$ 4,819.32**	**$ -**	**$ -**	**$ -**	**$ 3,729.26**	**$ 1,898.91**
DISTRICT STATISTICS								
Total Parcels	210	28	12	1	4	1	15	10
Total Parcels Levied	207	28	11	-	-	-	13	8
Total Equivalent Benefit Units	207.00	28.00	11.00	96.00	74.00	60.00	92.40	55.54
Applied Levy per Benefit Unit	**$ 412.400**	**$ -**	**$ 438.120**	**$ -**	**$ -**	**$ -**	**$ 40.360**	**$ 34.190**
Prior Year Levy per Benefit Unit	$ 399.98	$ 129.46	$ 424.94	$ -	$ -	$ -	$ 39.36	$ 33.36
Maximum Levy per Benefit Unit (Prior Fiscal Year)	$ 400.003	$ 129.47	$ 424.95	$ 278.28	$ 317.20	$ 467.87	$ 39.41	$ 33.39
Maximum Levy per Benefit Unit (Current Fiscal Year)	**$ 412.402**	**$ 133.483**	**$ 438.120**	**$ 286.910**	**$ 327.033**	**$ 482.375**	**$ 40.363**	**$ 34.198**
Inflationary Factor Applied to Maximum Rate	3.10%	3.10%	3.10%	3.10%	3.10%	3.10%	2.41%	2.41%
	$ (0.002)	$ (133.483)	$ 0.000	$ (286.910)	$ (327.033)	$ (482.375)	$ (0.003)	$ (0.008)
FUND BALANCE INFORMATION								
Estimated Beginning Reserve Fund Balance	$ (35,760.00)	$ 20,127.00	$ (27,758.00)	$ (11,274.00)	$ 24,859.00	$ 24,308.00	$ (3,490.00)	$ 379.00
Reserve Fund Adjustments	(8,116.62)	-	206.68	-	-	-	(1,752.08)	(1,144.91)
Estimated Ending Reserve Balance	**$ (43,876.62)**	**$ 20,127.00**	**$ (27,551.32)**	**$ (11,274.00)**	**$ 24,859.00**	**$ 24,308.00**	**$ (5,242.08)**	**$ (765.91)**

Appendix A — DISTRICT ASSESSMENT DIAGRAM

Boundary Diagrams are on file with the City and by reference are made part of this Report. The details of the lots or parcels within the District shall be defined by the Kern County Assessor's Maps established by the County for Fiscal Year 2016/2017. These maps, in connection with the Assessment Roll in Appendix B, constitute the District Assessment Diagram for Fiscal Year 2016/2017.

APPENDIX B -ASSESSMENT ROLL

Parcel identification, for each lot or parcel within the District, shall be the parcel as shown on the Kern County Assessor's map for the year in which this Report is prepared.

Non-assessable lots or parcels may include areas of public streets and other roadways (typically not assigned an APN by the County); dedicated public easements, open space areas and rights-of-ways including public greenbelts and parkways; utility rights-of-ways; common areas; landlocked parcels, small parcels vacated by the County, bifurcated lots, and any other property that cannot be developed. These types of parcels are considered to receive little or no benefit from the improvements and are therefore exempted from assessment. Properties outside the District boundary receive no direct or special benefits from the improvements provided by the District and are not assessed.

Parcel identification, for each lot or parcel within the District, shall be the parcel as shown on the Kern County Assessor's map for the year in which this Report is prepared. The land use classification for each parcel is based on the Kern County Assessor's Roll. A listing of parcels assessed within this District, along with the proposed assessment amounts, shall be submitted to the City Clerk, under a separate cover, and by reference is made part of this Report.

Approval of this Report (as submitted or as modified) confirms the method of apportionment and the maximum assessment rate to be levied against each eligible parcel and thereby constitutes the approved levy and collection of assessments for the fiscal year. The parcels and the amount of assessment to be levied shall be submitted to the County Auditor/Controller and included on the property tax roll for the fiscal year.

If any parcel submitted for collection is identified by the County Auditor/Controller to be an invalid parcel number for the current fiscal year, a corrected parcel number and/or new parcel numbers will be identified and resubmitted to the County Auditor/Controller. The assessment amount to be levied and collected for the resubmitted parcel or parcels shall be based on the method of apportionment and assessment rate approved in this Report. Therefore, if a single parcel has changed to multiple parcels, the assessment amount applied to each of the new parcels shall be recalculated and applied according to the approved method of apportionment and assessment rate rather than a proportionate share of the original assessment.

Agenda

CITY OF TEHACHAPI CALIFORNIA

COUNCIL REPORTS

APPROVED

DEPARTMENT HEAD:

CITY MANAGER:

MEETING DATE: JUNE 20, 2016 **AGENDA SECTION:** CITY MANAGER

TO: **HONORABLE MAYOR WIGGINS AND COUNCIL MEMBERS**

FROM: **GREG GARRETT, CITY MANAGER**

DATE: **JUNE 15, 2016**

SUBJECT: **CITY OF TEHACHAPI DRAINAGE BENEFIT ASSESSMENT DISTRICT NO. 2014-1**

BACKGROUND

This action by the City Council orders the levy of assessments within the Drainage Benefit Assessment District No. 2014-1 for fiscal year 2016/2017.

At the June 6, 2016 City Council meeting, City Council adopted Resolution No. 22-16, 23-16, and 24-16 Initiating proceedings, approving the preliminary Engineer's Report, approving declaring its intent to levy assessments for the Drainage Benefit Assessment District No. 2014-1 (Parcel Map 10997) for fiscal year 2016/2017.

The total annual maintenance cost to the District is $12,175.88. Annual maintenance costs are funded through the assessments placed on the property tax bills.

OPTIONS

There are no alternate options for this item.

RECOMMENDATION

It is recommended that the City Council adopt one resolution: (1) Amending and/or approving the Final Engineer's Report; the City ordering the levy and collection of assessments within the City of Tehachapi Drainage Benefit Assessment District No. 2014-1 for Fiscal Year 2016/2017.

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEHACHAPI APPROVING THE ANNUAL ENGINEER'S REPORT AND ORDERING THE LEVY AND COLLECTION OF ASSESSMENTS WITHIN THE CITY OF TEHACHAPI DRAINAGE BENEFIT ASSESSMENT DISTRICT NO. 2014-1 (PARCEL MAP 10997), FOR FISCAL YEAR 2016/2017, PURSUANT TO THE PROVISIONS OF THE BENEFIT ASSESSMENT ACT OF 1982

WHEREAS, The City Council of the City of Tehachapi (hereafter referred to as the "City Council") has, by previous Resolutions declared its intention to levy assessments for the City of Tehachapi Drainage Benefit Assessment District No. 2014-1 (hereinafter referred to as the "District"); and

WHEREAS, The Engineer selected by the City Council has prepared and filed with the City Clerk, and the City Clerk has presented to the City Council an Engineer's Annual Levy Report (hereafter referred to as the "Engineer's Report") that describes the assessments against the parcels of land within the Assessment District for the fiscal year commencing July 1, 2016 and ending June 30, 2017 to pay for the maintenance, operation and servicing of improvements and facilities related thereto; and

WHEREAS, the City Council has carefully examined and reviewed the Engineer's Report as presented, and is satisfied with the items and documents as set forth therein, and finds that the levy of assessments has been spread in accordance with the special benefits received from the improvements, operation, maintenance and services to be performed, as set forth in said the Engineer's Report;

WHEREAS, The City Council and its legal counsel have reviewed Proposition 218 and found that these assessments comply with applicable provisions of Article XIIID of the California State Constitution; and

WHEREAS, The City Council desires to levy and collect assessments against parcels of land within Assessment District for the Fiscal Year commencing July 1, 2016 and ending June 30, 2017, to pay the costs and expenses of operating, maintaining and servicing the improvements and appurtenant facilities located within the District..

NOW, THEREFORE BE IT RESOLVED, DETERMINED, AND ORDERED BY THE CITY COUNCIL FOR THE DISTRICT, AS FOLLOWS:

Section 1 Following notice duly given, the City Council has held a full and fair Public Hearing regarding the District, the levy and collection of assessments, the Engineer's Report prepared in connection therewith, and considered any oral and written statements, protests and communications made or filed by interested persons regarding these matters.

Section 2 The City Council finds the record owners of property within the District previously approved the continued levy and collections of assessments through property owner balloting proceedings, and that the proposed assessment for Fiscal Year 2016/2017 is consistent with the assessment so approved.

Section 3 Based upon the Engineer's Report, which is here by approved and is ordered to be filed in the Office of the City Clerk as a permanent record and to remain open to public inspection, the City Council hereby finds and determines that:

a) The land and eligible parcels within the boundaries of the District will receive a particular and distinct benefit over and above general benefits conferred on real property located in the District or to the public at large form the operation, maintenance and servicing of the improvements and appurtenant facilities identified in the Engineer's Report (hereinafter referred to as "Special benefit"); and,

b) The District includes the lands and parcels receiving such Special Benefit; and

c) The net amount to be assessed upon the lands within the District is in accordance and apportioned by a formula and method which fairly distributes the net amount among eligible parcels in proportion to the special benefit to be received by each parcel from the improvements and services for the fiscal year commencing July 1, 2016 and ending June 30, 2017.

Section 4 The Engineer's Report and assessment as presented to the City Council and on file in the office of the City Clerk comply with the applicable provisions of the California State Constitution Article XIIID and are hereby confirmed as filed.

Section 5 The maintenance, operation and servicing of the improvements shall be performed pursuant to the provisions of the *Benefit Assessment Act of 1982, Title 5, Division 2, Part 1, Chapter 6.4 of the Government Code of the State of California Commencing with section 54703* (hereafter referred to as the "Act"). The City Council hereby orders the proposed improvements to be made, which improvements are briefly described as the operation, maintenance, servicing and administration of the improvements, and incidental expenses related thereto for the District located within the boundary of the City of Tehachapi, and the jurisdiction of the City Council. A more detailed description of the improvements is contained within the Report, but the improvements and facilities can be classified within the following general categories:

- Installation, construction or maintenance of any authorized improvements under Act, including, but not limited to, drainage improvements and any facilities which are appurtenant to any of the aforementioned or which are necessary or convenient for the maintenance or servicing thereof.

Section 6 The County Auditor of Kern County shall enter on the County Assessment Roll opposite each eligible parcel of land the amount of levy, and such levies shall be collected at the same time and in the same manner as the County taxes are collected, pursuant to the provisions provided in the Act. After collection by the County, the net amount of the levy shall be paid to the Treasurer of the City of Tehachapi.

Section 7 The City Treasurer shall deposit all money representing assessments collected by the County for the District to the credit of a fund for the City of Tehachapi Drainage Benefit Assessment District No. 2014-

1 (Parcel Map 10997) and such money shall be expended only for the maintenance, operation and servicing of the improvements as described in section 5.

Section 8 The adoption of this Resolution constitutes the District levy for the fiscal year commencing July 1, 2016 and ending June 30, 2017.

Section 9 The City Clerk, or their designate, is hereby authorized and directed to file the levy with the County Auditor upon adoption of this Resolution.

Section 10 A copy of the levy shall be filed in the office of the City Clerk and open for public inspection.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Tehachapi at a regular meeting this 20th day of June, 2016.

AYES: _____

NOES: _____

ABSENT: _____

ABSTAIN: _____

_____
Susan Wiggins, Mayor
City of Tehachapi, California

ATTEST:

_____
Tori Marsh
City Clerk, City of Tehachapi, California

I hereby certify that the foregoing resolution was duly and regularly adopted by the City Council of the City of Tehachapi at a regular meeting thereof held on June 20, 2016.

_____
Tori Marsh
City Clerk, City of Tehachapi, California

Agenda

TEHACHAPI
CALIFORNIA
Live Up.

City of Tehachapi

Drainage Benefit Assessment District No. 2014-1

(Parcel Map 10997)

2016/2017 ENGINEER'S ANNUAL LEVY REPORT

Intent Meeting: June 6, 2016
Public Hearing: June 20, 2016

27368 Via Industria
Suite 200
Temecula, CA 92590
T 951.587.3500 | 800.755.6864
F 951.587.3510

www.willdan.com/financial

WILLDAN
Financial Services

Agenda

ASSESSMENT ENGINEER'S AFFIDAVIT

TEHACHAPI DRAINAGE BENEFIT ASSESSMENT DISTRICT NO. 2014-1 (Parcel Map 10997)

City of Tehachapi
Kern County, State of California

This Report describes the improvements, budgets, parcels and assessments to be levied for fiscal year 2016/2017, as they existed at the time of the passage of the Resolution of Intention. Reference is hereby made to the Kern County Assessor's maps for a detailed description of the lines and dimensions of parcels within the District. The undersigned respectfully submits the enclosed Report as directed by the City Council.

Dated this 6th day of June, 2016.

Willdan Financial Services
Assessment Engineer
On Behalf of the City of Tehachapi

By: Josephine P. Moses
Josephine Perez-Moses, Senior Project Manager
District Administration Services

By: Richard Kopecky
Richard Kopecky
R. C. E. # 16742

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. KOPECKY
C 16742
EXP 6·30·17
CIVIL
STATE OF CALIFORNIA

Agenda

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WILLDAN Financial Services

INTRODUCTION

Pursuant to the provisions of the *Benefit Assessment Act of 1982, being Chapter 6.4 of the California Government Code, commencing with Section 54703* (hereafter referred to as the "1982 Act"), and in compliance with the substantive and procedural requirements of the *California State Constitution Article XIIID* (hereafter referred to as the "California Constitution"), the City Council of the City of Tehachapi, County of Kern, State of California (hereafter referred to as "City"), propose to levy special benefit assessments for the district to be designated as:

Drainage Benefit Assessment District No. 2014-1
(Parcel Map 10997)

(hereafter referred to as "District"), which includes all lots and parcels of land within Parcel Map 10997 that will receive special benefit from the drainage improvements installed and maintenance in connection with the development of this non-residential subdivision within the City limits of Tehachapi. This Engineer's Report (hereafter referred to as "Report") describes the District and the proposed assessments for fiscal year 2016/2017. The annual budget for the maintenance and operation of the improvements is based on estimated expenses for the upcoming fiscal year. Parcels within the District are assessed proportionately for only those improvements and services that are a direct and special benefit to each property in the District.

The City Council proposes to levy and collect annual assessments on the County tax roll to provide ongoing funding for the costs and expenses required to service and maintain drainage improvements and appurtenant facilities that are necessary and essential requirements for the development of the properties within the District to cause the protection of those properties and the surrounding ecological environment from flooding. The improvements to be provided by the District and the assessments described herein are made pursuant to the 1982 Act and the substantive and procedural provisions of the California Constitution.

The District and the assessments described herein for fiscal year 2016/2017 provides a funding source for the continued operation and maintenance of the drainage improvements that are directly associated with the development of properties within the District and for the special benefit of those properties.

The budgets and assessments described in this Report are based on the improvements and development requirements associated with Parcel Map 10997. The budgets described herein, represent an estimate of the direct expenditures, incidental expenses, and fund balances that will be necessary to ensure proper maintenance, servicing and funding needs to support the drainage improvements that provide special benefit to properties within the District.

The word "parcel," for the purposes of this Report, refers to an individual property assigned its own Assessor's Parcel Number (APN) by the Kern County Assessor's Office. The Kern County Auditor-Controller uses Assessor's Parcel Numbers and specific Fund Numbers to identify properties to be assessed on the tax roll for the special benefit assessments.

Pursuant to the 1982 Act, the City Council conducted the required public hearings necessary to accept property owner protests, public comments and testimony regarding the formation of the District and the proposed annual levy of assessments. In conjunction with the required 1982 Act formation proceedings (public hearing), the City conducted property owner protest ballot proceedings for the annual assessments and assessment range formula described in the Original Report in compliance with the substantive and procedural requirements of the California Constitution Article XIIID. The proposed formations and annual assessments for each District were approved and established at the public hearing for the District, and pursuant to the 1982 Act.

Each subsequent fiscal year, a Report shall be prepared and presented to the City Council describing any changes to the improvements, the proposed services, the annual budget and assessments for that fiscal year, and the City Council shall hold a noticed public hearing regarding these matters prior to approving and ordering the proposed levy of assessments.

This Report consists of five (5) parts:

Part I

Plans and Specifications: A description of the District boundaries and the improvements associated with the District. The District is a single benefit zone encompassing all properties within the territory identified as Tehachapi Drainage Benefit Assessment District No.2014-1 (Parcel Map 10997).

Part II

The Method of Apportionment: A discussion of benefits the improvements and services provide to properties within the District and the method of calculating each property's proportional special benefit and annual assessment. This section also identifies and outlines an Assessment Range Formula that provides for an annual adjustment to the maximum assessment rate that establishes limits on future assessments, but also provides for reasonable cost adjustments due to inflation without the added expense of additional property owner protest ballot proceedings.

Part III

The District Budget: An estimate of the annual costs to operate, maintain and service drainage improvements related to the properties within the District. This budget includes an estimate of anticipated direct maintenance costs and incidental expenses including, but not limited to administration expenses and the collection of appropriate fund balances. The assessments are based on the estimated net annual cost of operating, maintaining and servicing the District improvements for fiscal year 2016/2017. The maximum assessment (Rate per Equivalent Benefit Unit) identified in the budget of this Report shall be adjusted annually by the Assessment Range Formula described in the method of apportionment.

Part IV

District Diagram: A Diagram showing the exterior boundaries of the District is provided in this Report and includes all parcels that will receive special benefits from the

improvements. Parcel identification, the lines and dimensions of each lot, parcel and subdivision of land within the District, are inclusive of all parcels as shown on the Kern County Assessor's Parcel Maps as they existed at the time this report was prepared and includes all subsequent subdivisions, lot line adjustments or parcel changes therein. Reference is hereby made to the Kern County Assessor's maps for a detailed description of the lines and dimensions of each lot and parcel of land within the District.

Part V

Assessment Roll: A listing of the proposed assessment amount for each parcel based on the parcel's proportional special benefit as outlined in the method of apportionment and the maximum assessment rate.

WILLDAN Financial Services

PART I — PLANS AND SPECIFICATIONS

PROPERTIES WITHIN THE DISTRICT

Drainage Benefit Assessment District No. 2014-1, (Parcel Map 10997), consists of 8 parcels designated for non-residential purposes and 1 parcel which incorporates most of the improvements to be maintained

The purpose of the District is to ensure the ongoing maintenance, operation, and servicing of drainage improvements installed in connection with development of properties within the District. This District will provide the financial mechanism (annual assessments) by which the ongoing operation and maintenance of these improvements will be funded.

The District structure, improvements, method of apportionment and assessments described in this Report are based on current development and improvement plans including all estimated direct expenditures, incidental expenses, and reserves associated with the maintenance and servicing of the improvements.

The District is located within the boundaries of the City of Tehachapi, generally situated on Industrial Parkway and North Curry Street.

FUNDING AUTHORIZED BY THE 1982 ACT

As generally defined by the Benefit Assessment Act of 1982 and applicable to this District, the City may impose a benefit assessment to finance the maintenance and operation costs of the following services:

1) Drainage; and,
2) Flood Control

In addition to imposing a benefit assessment for the annual maintenance and operation of the District improvements, the City may also authorize an assessment or utilize existing assessment revenues to finance the installation, construction or replacement of drainage and flood control facilities. While such activities are permitted under the 1982 Act, the budget and assessments for this District only provide for normal maintenance and operation of the improvements. Since most major rehabilitation/construction projects result from unforeseen damages, the extent and cost of such projects are not easily predicted and to accumulate funds as part of the normal annual assessments is not practical. If such funding becomes necessary, the City may present a new or increased assessment to the property owners to support such projects.

IMPROVEMENTS AND SERVICES

The purpose of this District is to fund the activities necessary to maintain and service the corresponding drainage improvements required of properties within the District. The maintenance and operation of these improvements may include but are not limited to all materials, equipment, labor, and incidental expenses deemed necessary to keep these

improvements in satisfactory condition as well as the collection of assessment installments for the periodic service activities, repair or rehabilitation of various improvements and facilities (not capital improvements expenditures or replacement of the drainage infrastructure).

Detailed maps and descriptions of the location and extent of the improvements to be maintained by the District are on file in the Office of Public Works and by reference are made part of this Report. These plans and specifications may be amended or modified from time to time to reflect future property development within the District or necessary changes to the planned developments currently approved by the City. The net annual cost to provide and maintain the improvements determined to be of special benefit shall be allocated to each property in proportion to the special benefits received from those various improvements. The District improvements and services are generally described as:

Drainage Maintenance
For Parcel Map 10997, the drainage improvements are as follows:

- Basin Maintenance (Parcel Map 10997)
- All appurtenant facilities, equipment, materials and utilities related to the aforementioned improvements.

PART II — METHOD OF APPORTIONMENT

The 1982 Act permits the establishment of assessment districts by agencies for the purpose of providing for the maintenance, operation and servicing of drainage and flood control improvements as well as streets, roads and appurtenant facilities. The 1982 Act further requires that the cost of these improvements be levied according to benefit rather than assessed value:

> *"The amount of the assessment imposed on any parcel of property shall be related to the benefit to the parcel which will be derived from the provision of the service".*

Furthermore:

> *"The annual aggregate amount of the assessment shall not exceed the estimated annual cost of providing the service, except that the legislative body may, by resolution, determine that the estimated cost of work authorized … is greater than can be conveniently raised from a single annual assessment and order that the estimated cost shall be raised by an assessment levied and collected in installments…. The revenue derived from the assessment shall not be used to pay the cost of any service other than the service for which the assessment was levied.*

The method of apportionment described in this Report for allocation of special benefit assessments reflects the composition of parcels within the District and the improvements and services provided, to fairly apportion the costs based on the special benefits to each parcel.

BENEFIT ANALYSIS

The ongoing maintenance and servicing of the District improvements is an integral part of the use and preservation of the properties within the District and as such confer a particular and distinct special benefit to those parcels. The proper maintenance of the improvements and appurtenant facilities allows individual parcels to be developed and used to their fullest extent by ensuring adequate drainage and proper control of excess water during periods of rain, which is essential to preservation and protection of private property. In reviewing the drainage analysis prepared in connection with the development of properties in Parcel Map 10997 (which contains all parcels within the District) it was determined that improvements to be maintained through this District are only necessary to provide drainage and control of excess water during periods of rain for properties within the District only. That analysis indicated that the drainage and flow of excess water during periods of rain from surrounding properties will not be addressed by the District improvements and these improvements are only necessary to mitigate water run-off from the properties in the District. Therefore, it has been determined that these drainage improvements and the maintenance and servicing of such improvements is entirely a special benefit to properties in the District and there is no quantifiable general benefit to properties or the public at large.

ASSESSMENT METHODOLOGY

All costs associated with the improvements and services shall be fairly distributed among the parcels based upon the special benefit received by each parcel. Additionally, in compliance with the California Constitution Article XIIID Section 4, each parcel's assessment may not exceed the reasonable cost of the proportional special benefit conferred to that parcel. The method of apportionment established for this District and described herein, reflects the proportional special benefit each property receives from the improvements and services based on the actual or proposed land use of that parcel as compared to other properties within the District. The benefit formula used to determine the assessment obligation for each parcel is based upon both the type of improvements that benefit that particular parcel as well as the proposed land use of each property as compared to other parcels that benefit from those specific improvements.

Upon review of the improvements and the development of properties within the District it has been determined that all properties receive similar special benefits from each of the improvements and services to be funded by annual assessments and a single zone of benefit is appropriate for the allocation of the assessments and proportional special benefit.

Equivalent Benefit Units:

To assess benefits equitably it is necessary to relate each property's proportional special benefits to the special benefits of all other properties within the District. The method of apportionment established for most districts formed under the 1982 Benefit Act utilizes a weighted method of apportionment known as an Equivalent Benefit Unit (EBU) methodology that uses a weighted EBU based on an assessment formula that equates the property's specific development characteristics such as land use and size to that of other properties in the District.

Because this District is comprised of only properties that will be developed for non-residential use (excluding the drainage basin which is part of the improvements being maintained) the Equivalent Benefit Unit (EBU) methodology for this District is based entirely on the acreage of the benefiting parcels which provides a reasonable reflection of the anticipated water run-off from each parcel and their proportional special benefit. Therefore, each non-residential parcel is assigned 1.0 EBU per acre and parcels less than .25 acres are assigned a minimum of 0.25 EBUs. Exempt from assessment is the acreage (parcels or future parcels) that encompass the drainage basin for the District.

Assessment Calculations:

The following formula is used to calculate each parcel's EBU (proportional benefit).

Parcel Acreage = Parcel EBU

The total number of Equivalent Benefit Units (EBU's) is the sum of all individual EBU's applied to parcels that receive special benefit from the improvements. An assessment amount per EBU (Assessment Rate) for the improvements is established by taking the total cost of the improvements and dividing that amount by the total number of EBU's of all parcels benefiting from the improvements. This Rate is then applied back to each parcel's individual EBU to determine the parcel's proportionate benefit and assessment obligation for the improvements.

Total Balance to Levy / Total EBU = Levy per EBU

Levy per EBU x Parcel EBU = Parcel Levy Amount

ASSESSMENT RANGE FORMULA

Any new or increased assessment requires certain noticing and meeting requirements by law. Prior to the passage of Proposition 218 (California Constitution Articles XIII C and XIII D), legislative changes in the Brown Act defined a "new or increased assessment" to exclude certain conditions. These conditions included "any assessment that does not exceed an assessment formula or range of assessments previously adopted by the agency or approved by the voters in the area where the assessment is imposed." This definition and conditions were later confirmed through Senate Bill 919 (Proposition 218 implementing legislation).

The purpose of establishing an Assessment Range Formula is to provide for reasonable increases and inflationary adjustment to annual assessments without requiring costly noticing and mailing procedures, which could add to the District costs and assessments. Commencing with fiscal year 2016/2017, the amount of the assessment for the District may be increased to adjust for increases in labor and material costs. This increase will be based upon the greater of the latest composite percentage change in California Public Utilities Commission ("CPUC") approved rates for each light fixture used in the City's streetlight Maintenance Districts or the Consumer Price Index, All Urban Consumers, for the Los Angeles-Orange-Riverside County Area, as determined by the United States Department of Labor, or its successor, without conducting another mailed ballot election. The Engineer shall compute the percentage difference between the CPI and/or CPUC rates for February of each year and the CPI and/or CPUC rates for the previous February, and shall then adjust the existing assessment by an amount not to exceed such percentage for the following fiscal year. Should the Bureau of Labor Statistics revise such index or discontinue the preparation of such index, the Engineer shall use the revised index or a comparable system as approved by the City Council for determining fluctuations in the cost of living.

The Assessment Range Formula shall be applied to all future assessments within the District. Generally, if the proposed annual assessment (levy per EBU) for the current fiscal year is less than or equal to the calculated Maximum Assessment, then the proposed annual assessment is not considered an increased assessment. The Maximum Assessment is equal to the initial Assessment (approved by property owners within the District) adjusted annually by the CPI.

The Maximum Assessment is adjusted annually and is calculated independent of the District's annual budget and proposed annual assessment. Any proposed annual assessment (rate per EBU less than or equal to this Maximum Assessment) is not considered an increased assessment, even if the proposed assessment is greater than the assessment applied in the prior fiscal year.

Although the Maximum Assessment will increase each year, the actual assessment may remain unchanged. The Maximum Assessment adjustment is designed to establish a reasonable limit on assessments. The Maximum Assessment calculated each year does not require or facilitate an increase to the annual assessment and neither does it restrict assessments to the adjusted maximum amount. If the budget and assessment for the fiscal year do not require an increase, or the increase is less than the adjusted Maximum Assessment, then the required budget and assessment may be applied without additional property owner balloting. If the budget and assessments calculated requires an increase greater than the adjusted Maximum Assessment, then the assessment is considered an increased assessment and would be subject to balloting.

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PART III — DISTRICT BUDGETS

The following budget outlines the estimated annual costs to be collected and deemed necessary for the operation, maintenance and servicing of the improvements for the District. The maximum assessment (Rate per Equivalent Benefit Unit) identified by this budget establishes the initial maximum assessment for the District in fiscal year 2016/2017. This assessment rate shall be adjusted annually by the Assessment Range Formula described in the method of apportionment and collectively this assessment rate and inflationary adjustment will be presented to the property owners of record for approval as part of the balloting process for new or increased assessments in accordance with the provisions of the California Constitution, Article XIII D.

BAD District No. 2014-1, (Parcel Map 10997)

Fund Number 20636

Levy Components		Budget
MAINTENANCE & OPERATION EXPENSES		
Drain Sump Maintenance	$	6,000.00
Drainage Basin Maintenance	$	3,670.00
Total Direct Costs	**$**	**9,670.00**
INCIDENTAL/ADMINISTRATION EXPENSES		
Levy Administration and Professional Services	$	1,033.32
County Collection Fee		1.50
City Overhead and Administration		967.00
Total Incidental Costs	**$**	**2,001.82**
Total Maintenance, Operation & Incidental Expenses	**$**	**11,671.82**
COLLECTIONS/(CREDITS) APPLIED TO LEVY		
General Benefit Contribution	$	-
Reserve Collection/(Transfer)		504.06
Additional City Contribution		-
Total Contribution/Credit	**$**	**504.06**
Balance to Levy (Budgeted)	**$**	**12,175.88**
DISTRICT STATISTICS		
Total Parcels		8
Total Parcels Levied		6
Total Equivalent Benefit Units		12.65
Proposed Levy per Benefit Unit		**166.35**
Calculated Levy per Benefit Unit	$	962.520
Maximum Levy per Benefit Unit (FY 2015/2016)	**$**	**939.867**
Maximum Levy per Benefit Unit (FY 2016/2017)	**$**	**962.521**

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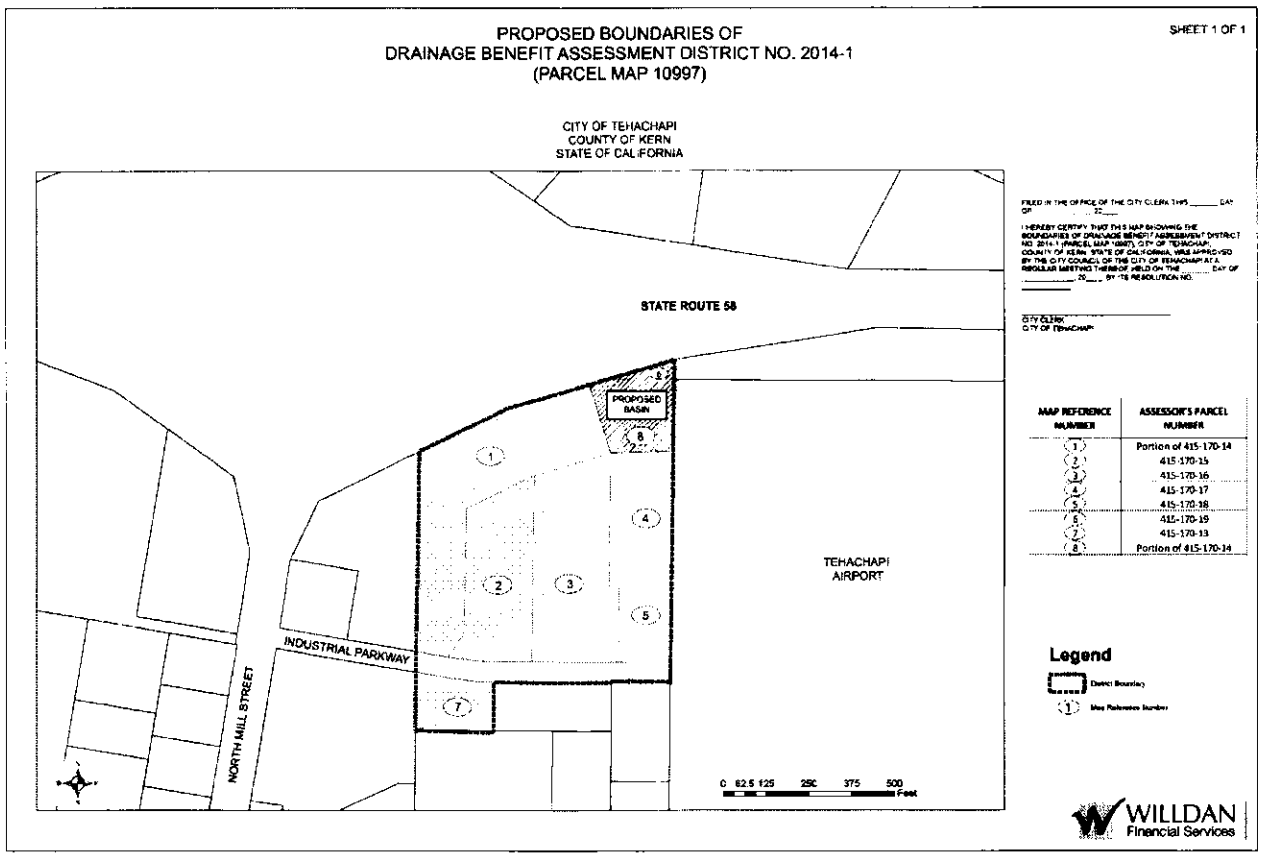
PART IV — DISTRICT DIAGRAM

The following District Diagram identifies the area of land within the District to be designated as "Drainage Benefit Assessment District No. 2014-1 (Parcel Map 10997)", based on the development and improvement plans for the District, Kern County Assessor's Maps, and Kern County Assessor's property information as the same existed at the time this Report was prepared. The District includes Kern County Assessor's Parcel Map Book 415, Page 170, Parcels 13, 14, 15, 16, 17, 18, and 19. The combination of this map and the Assessment Roll contained in Part V of this Report constitute the Assessment Diagram for the District. The maximum assessment rate, assessment range formula and the proposed assessment amount for each of the lots and parcels of land within the District, as described herein, shall be presented to the property owners of record for approval or protest in accordance with the provisions of the California Constitution.

A copy of the District Diagram follows:

ASSESSMENT DIAGRAM FOR
DRAINAGE BENEFIT ASSESSMENT DISTRICT NO. 2014-1
CITY OF TEHACHAPI, COUNTY OF KERN, STATE OF CALIFORNIA

WILLDAN Financial Services



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PART V — ASSESSMENT ROLL

Parcel identification for each lot or parcel within the District is outlined in the preceding Assessment Diagram and is based on available parcel maps and property data from the Kern County Assessor's Office at the time this Engineer's Report was prepared. A listing of the lots and parcels to be assessed within this District commencing in Fiscal Year 2016/2017, along with the assessment amount for each such lot or parcel is provided below.

If any parcel submitted for collection is identified by the County Auditor-Controller to be an invalid parcel number for the fiscal year, a corrected parcel number and/or new parcel numbers will be identified and resubmitted to the County Auditor-Controller. The assessment amount to be levied and collected for the resubmitted parcel or parcels shall be based on the method of apportionment and assessment rates described in this Report as approved by the City Council. Therefore, if a single parcel is subdivided to multiple parcels, the assessment amount applied to each of the new parcels shall be recalculated and applied according to the approved method of apportionment and assessment rate rather than a proportionate share of the original assessment amount.

The following is a list of the lots and parcels of land (parcels) within the District and the corresponding assessment amounts to be levied for Fiscal Year 2016/2017 as determined by the assessment rate and method of apportionment described herein:

Map Reference Number	APN	Acreage	Designated Land Use	Equivalent Benefit Unites	Balloted Amount Assessment (FY 2016/2017)
1	415-170-14 (Portion of)	3.96	Non-Residential Development	3.96	$3,811.58
2	415-170-15	2.25	Non-Residential Development	2.25	$2,165.67
3	415-170-16	2.93	Non-Residential Development	2.93	$2,820.19
4	415-170-17	1.71	Non-Residential Development	1.71	$1,645.91
5	415-170-18	1.02	Non-Residential Development	1.02	$981.77
6	415-170-19	0.13	Exempt Parcel	-	$0.00
7	415-170-13	0.78	Vacant Non-Residential	0.78	$750.77
8	415-170-14 (Portion of)	1.05	Exempt Parcel	-	$0.00
	TOTAL	**13.83**		**12.65**	**$12,175.89**

Agenda

CITY OF TEHACHAPI CALIFORNIA

COUNCIL REPORTS

APPROVED

DEPARTMENT HEAD:

CITY MANAGER:

MEETING DATE: JUNE 20, 2016 **AGENDA SECTION:** CITY MANAGER

TO: **HONORABLE MAYOR WIGGINS AND COUNCIL MEMBERS**

FROM: **GREG GARRETT, CITY MANAGER**

DATE: **JUNE 15, 2016**

SUBJECT: **CITY OF TEHACHAPI DRAINAGE BENEFIT ASSESSMENT DISTRICT NO. 1**

BACKGROUND

This action by the City Council orders the levy of assessments within the Drainage Benefit Assessment District No. 1 for fiscal year 2016/2017.

At the June 6, 2016 City Council meeting, City Council adopted Resolution No. 16-16, 17-16, and 18-16 Initiating proceedings, approving the preliminary Engineer's Report, approving declaring its intent to levy assessments for the Drainage Benefit Assessment District No. 1 for fiscal year 2016/2017.

The total annual maintenance cost to the District is $5,154.35. Annual maintenance costs are funded through the assessments placed on the property tax bills.

OPTIONS

There are no alternate options for this item.

RECOMMENDATION

It is recommended that the City Council adopt one resolution: (1) Amending and/or approving the Final Engineer's Report; the City ordering the levy and collection of assessments within the City of Tehachapi Drainage Benefit Assessment District No.1 for Fiscal Year 2016/2017.

RESOLUTION NO.

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF TEHACHAPI APPROVING THE ANNUAL ENGINEER'S REPORT AND ORDERING THE LEVY AND COLLECTION OF ASSESSMENTS WITHIN THE CITY OF TEHACHAPI DRAINAGE BENEFIT ASSESSMENT DISTRICT NO. 1, FOR FISCAL YEAR 2016/2017, PURSUANT TO THE PROVISIONS OF THE BENEFIT ASSESSMENT ACT OF 1982

WHEREAS, The City Council of the City of Tehachapi (hereafter referred to as the "City Council") has, by previous Resolutions declared its intention to levy assessments for the City of Tehachapi Drainage Benefit Assessment District No.1 (hereinafter referred to as the "District"); and

WHEREAS, The Engineer selected by the City Council has prepared and filed with the City Clerk, and the City Clerk has presented to the City Council an Engineer's Annual Levy Report (hereafter referred to as the "Engineer's Report") that describes the assessments against the parcels of land within the Assessment District for the fiscal year commencing July 1, 2016 and ending June 30, 2017 to pay for the maintenance, operation and servicing of improvements and facilities related thereto; and

WHEREAS, the City Council has carefully examined and reviewed the Engineer's Report as presented, and is satisfied with the items and documents as set forth therein, and finds that the levy of assessments has been spread in accordance with the special benefits received from the improvements, operation, maintenance and services to be performed, as set forth in said the Engineer's Report;

WHEREAS, The City Council and its legal counsel have reviewed Proposition 218 and found that these assessments comply with applicable provisions of Article XIIID of the California State Constitution; and

WHEREAS, The City Council desires to levy and collect assessments against parcels of land within Assessment District for the Fiscal Year commencing July 1, 2016 and ending June 30, 2017, to pay the costs and expenses of operating, maintaining and servicing the improvements and appurtenant facilities located within the District..

NOW, THEREFORE BE IT RESOLVED, DETERMINED, AND ORDERED BY THE CITY COUNCIL FOR THE DISTRICT, AS FOLLOWS:

Section 1 Following notice duly given, the City Council has held a full and fair Public Hearing regarding the District, the levy and collection of assessments, the Engineer's Report prepared in connection therewith, and considered any oral and written statements, protests and communications made or filed by interested persons regarding these matters.

Section 2 The City Council finds the record owners of property within the District previously approved the continued levy and collections of assessments through property owner balloting proceedings, and that the proposed assessment for Fiscal Year 2016/2017 is consistent with the assessment so approved.

Section 3 Based upon the Engineer's Report, which is here by approved and is ordered to be filed in the Office of the City Clerk as a permanent record and to remain open to public inspection, the City Council hereby finds and determines that:

a) The land and eligible parcels within the boundaries of the District will receive a particular and distinct benefit over and above general benefits conferred on real property located in the District or to the public at large form the operation, maintenance and servicing of the improvements and appurtenant facilities identified in the Engineer's Report (hereinafter referred to as "Special benefit"); and,

b) The District includes the lands and parcels receiving such Special Benefit; and

c) The net amount to be assessed upon the lands within the District is in accordance and apportioned by a formula and method which fairly distributes the net amount among eligible parcels in proportion to the special benefit to be received by each parcel from the improvements and services for the fiscal year commencing July 1, 2016 and ending June 30, 2017.

Section 4 The Engineer's Report and assessment as presented to the City Council and on file in the office of the City Clerk comply with the applicable provisions of the California State Constitution Article XIIID and are hereby confirmed as filed.

Section 5 The maintenance, operation and servicing of the improvements shall be performed pursuant to the provisions of the *Benefit Assessment Act of 1982, Title 5, Division 2, Part 1, Chapter 6.4 of the Government Code of the State of California Commencing with section 54703* (hereafter referred to as the "Act"). The City Council hereby orders the proposed improvements to be made, which improvements are briefly described as the operation, maintenance, servicing and administration of the improvements, and incidental expenses related thereto for the District located within the boundary of the City of Tehachapi, and the jurisdiction of the City Council. A more detailed description of the improvements is contained within the Report, but the improvements and facilities can be classified within the following general categories:

- Installation, construction or maintenance of any authorized improvements under Act, including, but not limited to, drainage improvements and any facilities which are appurtenant to any of the aforementioned or which are necessary or convenient for the maintenance or servicing thereof.

Section 6 The County Auditor of Kern County shall enter on the County Assessment Roll opposite each eligible parcel of land the amount of levy, and such levies shall be collected at the same time and in the same manner as the County taxes are collected, pursuant to the provisions provided in the Act. After collection by the County, the net amount of the levy shall be paid to the Treasurer of the City of Tehachapi.

Section 7 The City Treasurer shall deposit all money representing assessments collected by the County for the District to the credit of a fund for the City of Tehachapi Drainage Benefit Assessment District No.1, and such money shall be expended only for the maintenance, operation and servicing of the improvements as described in section 5.

Section 8 The adoption of this Resolution constitutes the District levy for the fiscal year commencing July 1, 2016 and ending June 30, 2017.

Section 9 The City Clerk, or their designate, is hereby authorized and directed to file the levy with the County Auditor upon adoption of this Resolution.

Section 10 A copy of the levy shall be filed in the office of the City Clerk and open for public inspection.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Tehachapi at a regular meeting this 20th day of June, 2016.

AYES: _____

NOES: _____

ABSENT: _____

ABSTAIN: _____

_____
Susan Wiggins, Mayor
City of Tehachapi, California

ATTEST:

_____
Tori Marsh
City Clerk, City of Tehachapi, California

I hereby certify that the foregoing resolution was duly and regularly adopted by the City Council of the City of Tehachapi at a regular meeting thereof held on June 20, 2016.

_____
Tori Marsh
City Clerk, City of Tehachapi, California

Agenda

TEHACHAPI
CALIFORNIA
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City of Tehachapi

Tehachapi Drainage Benefit Assessment District No. 1

2016/2017 Engineer's Annual Levy Report

Intent Meeting: June 6, 2016
Public Hearing: June 20, 2016

27368 Via Industria
Suite 200
Temecula, CA 92590
T 951.587.3500 | 800.755.6864
F 951.587.3510

www.willdan.com/financial

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Agenda

ENGINEER'S REPORT AFFIDAVIT

DRAINAGE BENEFIT ASSESSMENT DISTRICT NO. 1,

(PARCEL MAP 11353)

City of Tehachapi,
County of Kern, State of California

This Report describes the improvements, budgets, parcels and assessments to be levied for fiscal year 2016/2017, as they existed at the time of the passage of the Resolution of Intention. Reference is hereby made to the Kern County Assessor's maps for a detailed description of the lines and dimensions of parcels within the District. The undersigned respectfully submits the enclosed Report as directed by the City Council.

Dated this 6th day of June, 2016.

Willdan Financial Services
Assessment Engineer
On Behalf of the City of Tehachapi

By: Josephine P. Moses

Josephine Perez-Moses, Senior Project Manager
District Administration Services

By: Richard Kopecky

Richard Kopecky
R. C. E. # 16742

REGISTERED PROFESSIONAL ENGINEER
RICHARD L. KOPECKY
C 16742
EXP 6·30·17
CIVIL
STATE OF CALIFORNIA

Agenda

WILLDAN Financial Services

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I. INTRODUCTION

The special assessment district described in this report contains parcels of land within a non-residential development (Parcel Map 11353) (hereinafter referred to as the "Development"). The City of Tehachapi ("City") has established the City of Tehachapi Drainage Benefit Assessment District No. 1 (Parcel Map 11353), (hereinafter referred to as the "District") in order to provide annual maintenance for drainage improvements in the development.

The City annually levies and collects special assessments to continue the maintenance of the improvements within the District. The assessments levied annually on the territory in the District are pursuant to the provisions of the *Benefit Assessment Act of 1982 being Chapter 6.4 of Part 1 of division 2, commencing with Section 54703, of the Government Code of the State of California (hereinafter referred to as the "Act"), and as provided by Proposition 218, "The Right to Vote on Taxes Act", Article XIII D, Section 4, of the 1982 California Constitution.*

This Engineer's Report (hereinafter referred to as the "Report") describes the District and the proposed assessments for fiscal year 2016/2017. The annual budget for the maintenance and operation of the improvements is based on estimated expenses for the upcoming fiscal year. Parcels within the District are assessed proportionately for only those improvements and services that are a direct and special benefit to each property in the District.

The word "parcel," for the purposes of this Report, refers to an individual property assigned its own Assessment Parcel Number by the Kern County ("County") Assessor's Office. The Kern County Auditor/Controller uses Assessment Parcel Numbers and specific Fund Numbers to identify on the tax roll properties assessed for special district benefit assessments.

Pursuant to the 1982 Act, the City Council conducted the required public hearings necessary to accept property owner protests, public comments and testimony regarding the formation of the District and the proposed annual levy of assessments. In conjunction with the required 1982 Act formation proceedings (public hearing), the City conducted property owner protest ballot proceedings for the annual assessments and assessment range formula described in the Original Report in compliance with the substantive and procedural requirements of the California Constitution Article XIIID. The proposed formations and annual assessments for each District were approved and established at the public hearing for the District, and pursuant to the 1982 Act.

The City Council may annually determine the cost of the services that are financed by the assessments and by ordinance or resolution order the levy of the annual assessments. However, in accordance with the provisions of the California Constitution Article XIIID, no annual assessment shall exceed the maximum assessment amount

established in the Original Report without additional approval of the affected property owners. The assessment information approved would be submitted to the County Auditor/Controller and included on the property tax roll for each benefiting parcel.

II. DESCRIPTION OF THE DISTRICT

A. General Description of the District

The District consists of a subdivision for non-residential purposes known as Parcel Map 11353.

The purpose of the District is to ensure the ongoing maintenance, operation, and servicing of drainage improvements installed in connection with development of properties within the District. This District provides the financial mechanism (annual assessments) by which the ongoing operation and maintenance of these improvements are funded.

The District structure, improvements, method of apportionment and assessments described in this Report are based on current development and improvement plans including all estimated direct expenditures, incidental expenses, and reserves associated with the maintenance and servicing of the improvements.

The District is located within the boundaries of the City of Tehachapi, generally situated north of the Southern Pacific Railroad, and easterly of Dennison Road.

B. Improvements and Services within the District

The purpose of the District is to ensure the ongoing maintenance, operation, and servicing of drainage improvements installed in connection with the development of parcels within the District. These improvements may include, but are not limited to, all materials, equipment, utilities, labor and appurtenant facilities related to those improvements. The improvements installed as part of the development will be maintained and partially or entirely funded through the District assessments.

For Parcel Map 11353, the drainage improvements and services as permitted pursuant to the 1982 Act are as follows:

- Basin Maintenance (Parcel 8 or Parcel Map 11353)
- All appurtenant facilities, equipment, materials and utilities related to the aforementioned improvements.
- Maintenance and operations of drainage facilities.

The estimated annual cost to provide and maintain the improvements within the District shall be allocated to each property in proportion to the special benefits received. The Method of Apportionment described in this Report utilizes commonly accepted assessment engineering practices and has been established pursuant to the 1982 Act and the provisions of Proposition 218.

III. METHOD OF APPORTIONMENT

A. Methodology

The 1982 Act permits the establishment of a maintenance assessment district by agencies for the purpose of providing certain public improvements, which include the construction, maintenance, and servicing of public drainage improvements and appurtenant facilities. The 1982 Act further requires that the cost of these improvements be levied according to benefit rather than assessed value:

"The net amount to be assessed upon lands within an assessment district may be apportioned by any formula or method which fairly distributes the net amount among all assessable lots or parcels in proportion to the estimated benefits to be received by each such lot or parcel from the improvements."

The formula used for calculating assessments reflects the composition of the parcels and the improvements and services provided within the District to fairly apportion the costs based on estimated benefit to each parcel.

B. Benefit Analysis

Each of the improvements, the associated costs and assessments within the District have been reviewed, identified and allocated based on special benefit pursuant to the provisions of the California Constitution and 1982 Act. All improvements associated with this District have been identified as necessary, required and/or desired for the orderly development of the property within the District to its full potential, consistent with the development plans. As such, these improvements would be necessary and required of any property owner for the development of such property, and the ongoing operation, servicing, and maintenance of these improvements would be the financial obligation of those properties. Therefore, the improvements and the annual costs of maintenance and operation of the improvements are of direct and special benefit to the property.

The method of apportionment (method of assessment) is based on the premise that the assessed parcel within the District receives benefit from the improvements. The desirability and security of properties is enhanced by the presence of drainage facilities to handle storm water runoff.

The special benefits associated with the drainage improvements are specifically:

- Enhanced desirability of the property through association with the improvements;
- Environmental enhancement through improved erosion resistance, dust and debris control;
- Increased sense of pride in ownership of property within the District resulting from well-maintained improvements associated with the properties;
- Enhanced environmental quality of the parcels by eliminating standing water.

For the drainage improvements the special benefits contribute to a specific enhancement and desirability of the assessed parcel within the District. Although the improvements may include drainage improvements and other amenities available or visible to the public at large, the construction and installation of these improvements are only necessary for the development of the property within the District and are not required nor necessarily desired by any properties or developments outside the District boundary. Therefore, any public access or use of the improvements by others is incidental and there is no measurable general benefit to properties outside the District or to the public at large.

C. Assessment Methodology

The method of apportionment for the District calculates the receipt of special benefit from the respective improvements based on the actual or proposed land use of the parcels within the District. The special benefit received by each lot or parcel is equated to the overall land use of the parcel based on the parcel's actual land use or proposed planned development, and is reliant upon the special benefit received from the improvements planned within the District.

To identify and determine the special benefit to be received by each parcel, it is necessary to consider the entire scope of the District improvements as well as individual property development within the District. The costs associated with the improvements shall be fairly distributed among the parcels based upon the special benefit received by each parcel. Additionally, in compliance with Article XIII D Section 4 of the California Constitution, the parcel's assessment may not exceed the reasonable cost of the proportional special benefit conferred to that parcel. The benefit formula used to determine the assessment obligation is therefore based upon both the improvements that benefit the parcels within the District as well as the land use of each property as compared to other parcels that benefit from those specific improvements.

Equivalent Benefit Units

To assess benefits equitably, it is necessary to relate the different type of parcel improvements to each other. The Equivalent Benefit Unit (EBU) method of assessment apportionment uses the single-family home site as the basic unit of assessment. A single-family home site equals one Equivalent Benefit Unit (EBU). Every other land use is converted to EBUs based on an assessment formula that equates the property's specific development status, type of development (land use), and size of the property, as compared to a single-family home site.

The EBU method of apportioning benefit is typically seen as the most appropriate and equitable assessment methodology for districts formed under the 1982 Act, as the benefit to each parcel from the improvements are apportioned as a function of land use type, size and development.

EBU Application by Land Use:

Single-Family Residential — This land use is defined as a fully subdivided residential home site with or without a structure or planned single-family residential lot as identified by a submitted or approved tentative tract map or final tract map. This land use is assessed 1.0 EBU per lot or parcel. This is the base value that all other land use types are compared and weighted against (i.e. Equivalent Benefit Unit or EBU).

Multi-Family Residential — This land use is defined as a fully subdivided residential parcel that has more than one residential unit developed on the property or planned residential lot as identified by a submitted or approved tentative tract map or final tract map. This land use is assessed 1.0 EBU per dwelling unit.

Developed Commercial — This land use is defined as property developed for either commercial or industrial use. This type of property receives greater benefit than Single Family or Multi-family property due to typically larger lot sizes in relation to residential properties. With typical SFR lot sizes at .25 acres, Developed Commercial land use type is assessed at 4.0 EBU per gross acre. Parcels less than .25 acres are assigned a minimum of 1.0 EBU and there is no maximum acreage cap, as is the case with Vacant Non-Residential Property.

Non-Profit Parcels — This land use is defined as property developed for non-profit activities such as Churches or Lodges. This type of property does receive benefit from the District improvements but at a rate that coincides with the sporadic intensity of people use for the parcel. Non-Profit land use type is assessed at 0.25 EBU per gross acre. Parcels less than 1.00 gross acres are assigned a minimum of 0.25 EBU.

Vacant Residential — This land use is defined as property currently zoned for residential development, but a tentative or final tract map has not been submitted and/or approved. This land use is assessed at 0.5 EBU per parcel.

Vacant Non-Residential — This land use is defined as property currently zoned for any non-residential use, but a tentative or final tract map has not been submitted and/or approved. This land use is assessed at 1.0 EBU per gross acre. Parcels less

than 1 gross acre are assigned a minimum of 1.0 EBU. Parcels over 50 gross acres are assigned a maximum of 50 EBU.

Exempt Parcels — This land use identifies properties that are not assessed and are assigned 0.0 EBU. This land use classification may include, but is not limited to, lots or parcels identified as public streets and other roadways (typically not assigned an APN by the County); dedicated public easements, open space areas and right-of-ways including greenbelts and parkways; utility right-of-ways; common areas, sliver parcels and bifurcated lots or any other property that cannot be developed; publicly owned properties that are part of the District improvements or that have little or no improvement value. These types of parcels are considered to receive little or no benefit from the improvements and are therefore exempted from assessment.

The following table provides a listing of land use types, land use code designations, the Equivalent Benefit Unit factor applied to that land use type, and the multiplying factor used to calculate each parcel's individual EBU.

Land Use Codes and Equivalent Benefit Units

Property Type	Land Use Code	Equivalent Benefit Units	Multiplier
Single Family Residential	SFR	1.00	Lot/Parcel
Multi Family Residential	MFR	1.00	Unit
Developed Commercial	COM	4.00	Gross Acre
Non-Profit Parcel	NP	0.25	Gross Acre
Vacant Residential	RV	0.50	Lot/Parcel
Vacant Non-Residential	NRV	1.00	Gross Acre
Exempt Parcel	XMT	0.00	Parcel

The benefit formula applied to parcels within the District is based on the preceding Equivalent Benefit Unit (EBU) table. Each parcel's EBU correlates the parcel's special benefit received as compared to all other parcels benefiting from the improvements.

The following formula is used to calculate each parcel's EBU (proportional benefit).

Parcel Type EBU x Acreage/Dwelling Units/Parcel/Lot = Parcel EBU

The total number of Equivalent Benefit Units (EBUs) is the sum of all individual EBUs applied to parcels that receive a special benefit from the improvement. An

assessment amount per EBU (Rate) for each improvement is established by taking the total cost of the improvement and dividing that amount by the total number of EBUs of all parcels benefiting from the improvement. This Rate is then applied back to each parcel's individual EBU to determine the parcel's proportionate benefit and assessment obligation for that improvement.

Total Balance to Levy / Total EBU = Levy per EBU

Levy per EBU x Parcel EBU = Parcel Levy Amount

D. Assessment Range Formula

Any new or increased assessment requires certain noticing and meeting requirements by law. Prior to the passage of Proposition 218 (*California Constitution Articles XIII C and XIII D*), legislative changes in the Brown Act defined a "new or increased assessment" to exclude certain conditions. These conditions included "any assessment that does not exceed an assessment formula or range of assessments previously adopted by the agency or approved by the voters in the area where the assessment is imposed." This definition and conditions were later confirmed through Senate Bill 919 (Proposition 218 implementing legislation).

The purpose of establishing an Assessment Range Formula is to provide for reasonable increases and inflationary adjustment to annual assessments without requiring costly noticing and mailing procedures, which could add to the District costs and assessments. Commencing with fiscal year 2016/2017, the amount of the assessment for the District is proposed to increase each year, based upon the Consumer Price Index, All Urban Consumers, for the Los Angeles-Orange-Riverside County Area ("CPI"), as determined by the United States Department of Labor, Bureau of Labor Statistics, or its successor. The Engineer shall compute the percentage difference between the CPI for February of each year and the CPI for the previous February, and shall then adjust the existing assessment by an amount not to exceed such percentage for the following fiscal year. There was no increase in CPI this year. Should the Bureau of Labor Statistics revise such index or discontinue the preparation of such index, the Engineer shall use the revised index or a comparable system as approved by the City Council for determining fluctuations in the cost of living.

The Assessment Range Formula shall be applied to all future assessments within the District. Generally, if the proposed annual assessment (levy per EBU) for the current fiscal year is less than or equal to the calculated Maximum Assessment, then the proposed annual assessment is not considered an increased assessment. The Maximum Assessment is equal to the initial Assessment (approved by property owners within the District) adjusted annually by the CPI.

The Maximum Assessment is adjusted annually and is calculated independent of the District's annual budget and proposed annual assessment. Any proposed annual

assessment (rate per EBU less than or equal to this Maximum Assessment) is not considered an increased assessment, even if the proposed assessment is greater than the assessment applied in the prior fiscal year.

Although the Maximum Assessment will increase each year, the actual assessment may remain unchanged. The Maximum Assessment adjustment is designed to establish a reasonable limit on assessments. The Maximum Assessment calculated each year does not require or facilitate an increase to the annual assessment and neither does it restrict assessments to the adjusted maximum amount. If the budget and assessment for the fiscal year do not require an increase, or the increase is less than the adjusted Maximum Assessment, then the required budget and assessment may be applied without additional property owner balloting. If the budget and assessments calculated requires an increase greater than the adjusted Maximum Assessment, then the assessment is considered an increased assessment and would be subject to balloting.

WILLDAN Financial Services

IV. DISTRICT BUDGET

City of Tehachapi

2016/2017 Budget Worksheet

DRAINAGE BENEFIT ASSESSMENT DISTRICT No. 1 (PARCEL MAP 11353)

Fund Number 20634

Levy Components	Budget
DIRECT COSTS (Basin Maintenance)	
Basin prep for rainy season	$500.00
Weekly maintenance during rainy season	500.00
Weekly maintenance during non-rainy season	500.00
Pump station service visits (2/year)	0.00
Misc. equipment fees	500.00
Total Maintenance Costs	**$2,000.00**
DIRECT COSTS (Power Costs)	
Power Consumption	$1,100.00
Pumps	0.00
Total Power Costs	**$1,100.00**
DIRECT COSTS (Pump Replacement)	
Pump and Motors ($30,000 every 15 years)	$0.00
Electrical Equipment ($10,000 every 30 years)	0.00
Total Replacement Cost per year	**$0.00**
ADMINISTRATION COSTS	
Levy Administration and Professional Services	$1,038.44
County Collection Fee	15.91
City Overhead and Administration	1,000.00
Reserve Collection/(Transfer)	0.00
Total Administration Costs	**$2,054.35**
COLLECTIONS/(CREDITS) APPLIED TO LEVY	
TOTAL DIRECT AND ADMIN COSTS	**$5,154.35**
Balance to Levy (Budgeted)	**$5,154.35**
DISTRICT STATISTICS	
Total Parcels	15
Total Parcels Levied	14
Total EBU's	92.40
Proposed Levy per Benefit Unit	**$55.78**
Applied Levy per Benefit Unit	**$55.78**
Maximum Levy per Benefit Unit (Prior Fiscal Year)	**$195.25**
Maximum Levy per Benefit Unit (FY 2016/2017)	**$199.95**

APPENDIX A – DISTRICT DIAGRAM

The parcels within the City of Tehachapi Drainage Benefit Assessment District No. 1 (Parcel Map 11353), consist of all lots, parcels and subdivisions of land located in Parcel Map 11353. The District includes Kern County Assessor's Parcel Map Book 223, Page 190, Parcel 15. This County Assessor's Parcel Map, the Assessment Roll, and Exhibit 1 constitute the District Assessment Diagram. A copy of the County Assessor's Parcel Map is shown on the following page.

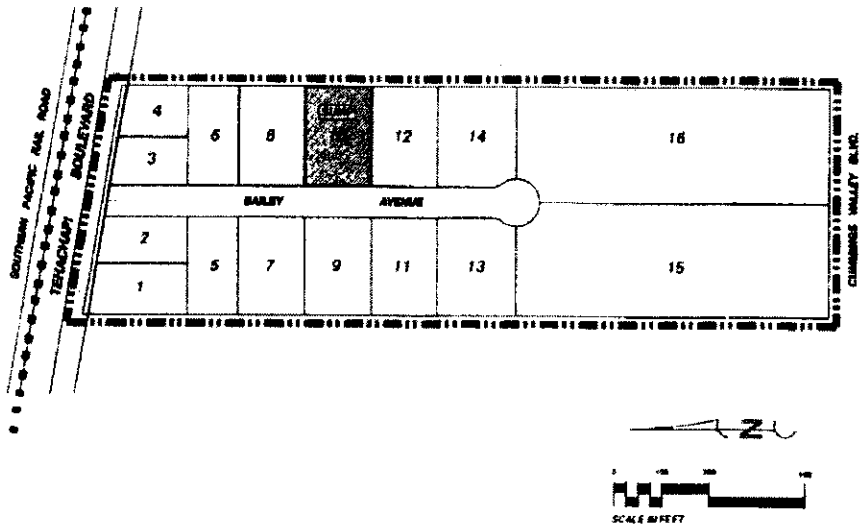
WILLDAN Financial Services

Tehachapi

Respecting Our Past . Planning Our Future

Tehachapi Drainage Benefit Assessment District No. 1

(Parcel Map 11353)



APN: 223-190-16
PROPOSED NO. OF ASSESSABLE PARCELS: 16
ASSESSABLE ACREAGE: 23.95

LEGEND

DISTRICT BOUNDARY

SUMP

NOTE: The parcels identified on this map are subject to change. For details, refer to the approved Developer Charge Map in the Chino Hills City Engineer. For parcel-specific information, refer to the latest Kern County Assessor Map.

DATE: DECEMBER 1, 2008

APPENDIX B - ASSESSMENT ROLL

Parcel identification, for each lot or parcel within the District, shall be the parcel as shown on the Kern County Assessor's map for the year in which this Report is prepared.

Non-assessable lots or parcels may include areas of public streets and other roadways (typically not assigned an APN by the County); dedicated public easements, open space areas and rights-of-ways including public greenbelts and parkways; utility rights-of-ways; common areas; landlocked parcels, small parcels vacated by the County, bifurcated lots, and any other property that cannot be developed. These types of parcels are considered to receive little or no benefit from the improvements and are therefore exempted from assessment. Properties outside the District boundary receive no direct or special benefits from the improvements provided by the District and are not assessed.

Parcel identification, for each lot or parcel within the District, shall be the parcel as shown on the Kern County Assessor's map for the year in which this Report is prepared. The land use classification for each parcel is based on the Kern County Assessor's Roll. A listing of parcels assessed within this District, along with the proposed assessment amounts, shall be submitted to the City Clerk, under a separate cover, and by reference is made part of this Report.

Approval of this Report (as submitted or as modified) confirms the method of apportionment and the maximum assessment rate to be levied against each eligible parcel and thereby constitutes the approved levy and collection of assessments for the fiscal year. The parcels and the amount of assessment to be levied shall be submitted to the County Auditor/Controller and included on the property tax roll for the fiscal year.

If any parcel submitted for collection is identified by the County Auditor/Controller to be an invalid parcel number for the current fiscal year, a corrected parcel number and/or new parcel numbers will be identified and resubmitted to the County Auditor/Controller. The assessment amount to be levied and collected for the resubmitted parcel or parcels shall be based on the method of apportionment and assessment rate approved in this Report. Therefore, if a single parcel has changed to multiple parcels, the assessment amount applied to each of the new parcels shall be recalculated and applied according to the approved method of apportionment and assessment rate rather than a proportionate share of the original assessment.