2015
Urban Water Management Plan

Submitted by:
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Adopted by:
Del Oro Water Company Board of Directors
July 1, 2016

Del Oro Water Company, Paradise Pines District
2015 Urban Water Management Plan

Contact Sheet

Date plan submitted to the Department of Water Resources: **July 1, 2016**

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The water supplier is an: **Investor-Owned Utility**

The water supplier is a: **Retailer**

Utility services provided by the water supplier include: **Water**

Is this agency a Bureau of Reclamation Contractor? **No**

Is this agency a State Water Project Contractor? **No**

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Chapter 1 - Introduction and Overview

The purpose of the Urban Water Management Plan is to inform the public and state agencies of Del Oro Water Company's (DOWC) water supply availability, exposure to droughts, conservation efforts, and plans for future supply. Urban Water Management Plans (UWMP) are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands.

This plan has been prepared in compliance with the Decision 90-08-055, issued on August 8, 1990 by the California Public Utilities Commission (CPUC), and with the Urban Water Management Planning Act, Assembly Bill 979 of the 1983-1984 regular session of the California Legislature (Water Code Section 10610 et. Seq.).

With Decision 09-08-055, the CPUC directed all Class B water utilities to file an application containing an in-depth Water Management Program (WMP) including, but not limited to, specifications outlined in the Decision (Appendix C). The Urban Water Management Planning Act (Appendix A) requires all urban water suppliers, publicly or privately owned, providing water service to more than 3,000 customers or supplying more than 3,000 acre feet annually, to prepare and adopt an Urban Water Management Plan (UWMP). This plan will include descriptions of water conservation and management activities that the utility currently conducts, or is planning to conduct over the next five years. The first DOWC plan was submitted to the California Department of Water Resources (DWR) in December 1990.

On September 14, 1990, the CPUC's Water Utilities Branch and the DWR Division of Local Assistance conducted a workshop to define the specific requirements of the required WMP and the DWR-required UWMP. It was decided that the program elements and the objectives were sufficiently similar to justify the development of a single document that would satisfy both requirements. The program format is as directed by the CPUC staff at the September 14, 1990 workshop and updated per the direction provided by DWR at subsequent workshops and in the DWR 2015 UWMP Guidebook.

As a supplier of over 3,000 service connections, DOWC's Paradise Pines District (DOWCPP) has been required to submit an updated plan every five years, in years ending in zero or five. This 2015 Urban Water Management Plan (UWMP) is being completed in 2016 as required by California Water Code (CWC) 10621(d). This plan constitutes an update to the 2005 and 2010 plans and will be filed no later than July 1, 2016.

The Water Conservation Act of 2009 (Appendix B) requires all urban water suppliers, publicly or privately owned, providing water service to more than 3,000 customers or supplying more than 3,000 acre feet annually, to prepare and adopt a plan with the goal of a per capita reduction in water use of 20% by 2020. This UWMP will include descriptions of water conservation and management activities that the utility currently conducts, or is planning to conduct over the next ten years, and is based on the methodologies outlined in the Methodologies Report provided by DWR.

In Chapter 5 of this UWMP, DOWC has reviewed and confirmed the calculations establishing its base gallons per capita per day (GPCD) that forms the baseline for DOWCPP's statutory 20 percent water use reduction. DOWCPP has made significant reductions in its water use in the last few years through pipeline replacement, leak detection and repair, customer leak notification, and public response to the statewide drought. It will be important for DOWCPP and its customers to remain diligent in their efforts to continue to use water wisely.

This plan document includes DOWCPP's current supply calculations, the impacts customers can expect during drought periods, and the anticipated impacts to water supply into the future.

Acronyms Used in this Plan

CCF	100 cubic feet	1 CCF = Approximately 748 gallons
CDPH	California Department of Public Health	www.cdph.ca.gov
CPUC	California Public Utilities Commission	www.cpuc.ca.gov/PUC/water
CWC	California Water Code	
DOWC	Del Oro Water Company	www.delorowater.com
DOWCPP	Del Oro Water Company's Paradise Pines District	www.delorowater.com/paradise-pines.html
DWR	(California) Department of Water Resources	www.water.ca.gov
GPCD	Gallons Per Capita per Day	See Chapter 5 for additional explanation
SB X7-7	Senate Bill X7-7	Also called the *Water Conservation Act of 2009*
SWRCB	(California) State Water Resources Control Board	www.waterboards.ca.gov
SWRCB R-GCPD	Residential GPCD, as defined by the SWRCB	See Chapter 5 for additional explanation
UWMP	Urban Water Management Plan	

Chapter 2 - Plan Preparation

2.1 Basis for Preparing a Plan

CWC *10617 "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems…*

10620(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

10621(a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero, except as provided in subdivision (d).

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

DOWCPP qualifies as an Urban Water Supplier on the basis of service to over 3,000 service connections, despite the fact that it serves less than 1,000 acre-feet of water annually.

2.1.1 Public Water Systems

CWC *10644 (a)(2) The plan, or amendments to the plan, submitted to the department … shall include any standardized forms, tables, or displays specified by the department.*

10608.52 (a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

(b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24… The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

California Health and Safety Code 116275

(h) "Public Water System" means a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year.

Standardized tables provided by DWR have been incorporated in this report and bear the numbering scheme created by DWR, that is, {chapter number}-{table number}. For example Table 2-1 below is the first table in UWMP Chapter 2. Additional tables, created by DOWC, will bear labels in the form {chapter number}-{table letter}, to distinguish them from the DWR standardized tables.

2.1.2 Agencies Serving Multiple Service Areas / Public Water Systems

DOWCPP serves one service area. This UWMP represents the water use and planning information for the *Paradise Pines District* (DOWCPP) service area only.

Table 2-1 Retail Only: Public Water Systems

Public Water System Number	Public Water System Name	Number of Municipal Connections 2015	Volume of Water Supplied 2015
CA0410011	DEL ORO WATER CO.-PARADISE PINES	4,808	406,758
	TOTAL	4,808	406,758

2.2 Regional Planning

DOWCPP continues to promote cooperation and sharing of planning information with Butte County Department of Water and Resource Conservation, Butte County Water Commission, California Water Service Company, and Paradise Irrigation District to facilitate the implementation of solutions related to regional water supply reliability.

2.3 Individual or Regional Planning and Compliance

Table 2-2: Plan Identification

Select Only One	Type of Plan		Name of RUWMP or Regional Alliance *if applicable* *drop down list*
☑	**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)**		

2.3.1 & 2.3.2 Regional UWMP / Regional Alliance

CWC *10620(d)(1) An urban water supplier may satisfy the requirements of this part by participation in area wide, regional, watershed, or basin wide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.*

CWC *10608.20(a)(1) …Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis as provided in subdivision (a) of Section 10608.28…*

10608.28(a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement by any of the following:

(1) Through an urban wholesale water supplier.

(2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).

(3) Through a regional water management group as defined in Section 10537.

(4) By an integrated regional water management funding area.

(5) By hydrologic region.

(6) Through other appropriate geographic scales for which computation methods have been developed by the department.

(b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

This UWMP reports solely on the DOWCPP service area. It has not been prepared to report on a combined regional service area. DOWCPP is not a member of a Regional UWMP or a Regional Alliance.

2.4 Fiscal or Calendar Year and Units of Measure

CWC *1608.20(a)(1) Urban retail water suppliers…may determine the targets on a fiscal year or calendar year basis.*

Table 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
If Using Fiscal Years Provide Month and Date that the Fiscal Year Begins (mm/dd)	
Units of Measure Used in UWMP (select from Drop down)	
Unit	CCF

2.4.1 Fiscal or Calendar Year

The water supply and demand figures presented in this 2015 UWMP are reported on a calendar year basis.

2.4.2 Reporting Complete 2015 Data

Water use and planning data in this UWMP is presented for the entire 2015 calendar year.

2.4.3 Units of Measure

Volumes of water reported in this UWMP are in units of 100 cubic feet, or CCF. One CCF is equal to approximately 748 gallons.

2.5 Coordination and Outreach

CWC *10631(j) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).*

2.5.1 Wholesale and Retail Coordination

There is no source of wholesale water supply available to DOWCPP. Table 2-4 is not included here because it is not applicable.

DOWC notes that Del Oro Water Company's Stirling Bluffs District sells approximately 200 acre feet of water to DOWCPP each year, however Stirling Bluffs District is not a wholesaler as defined by California Water Code 10608.12 because it does not provide more than 3,000 acre feet of water annually at wholesale for potable municipal purposes. That said, as a District that is also owned and operated by DOWC, Stirling Bluffs District's cooperation with DOWCPP is automatic.

2.5.2 Coordination with Other Agencies and the Community
2.5.3 Notice to Cities and Counties

CWC *10620 (d)(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable*.

> *10621 (b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*
>
> *10642 Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan...*

DOWCPP is located in Butte County, CA, and serves a large portion of the unincorporated area known as Magalia, CA, which has no established official or unofficial township. Paradise, CA is a nearby township which may have an interest in DOWCPP's UWMP, but the Town of Paradise does not overlap with DOWCPP's service area.

On November 30, 2015, DOWCPP notified the County of Butte and the Town of Paradise that it was updating its UWMP. DOWCPP also notified Paradise Irrigation District (PID), a neighboring retail water company, of its UWMP revision on the same date. (PID wheels and treats water from DOWC's Stirling Bluffs District for DOWCPP.) These letters of notification are included as Appendix M-1 and reported in Table 10-1 (see Chapter 10).

DWR, citing the authority of the California Water Code Section 1064R, required DOWC, prior to adopting the 2015 UWMP, to make the document available for public inspection and hold a public hearing thereupon. Notice of the time and place of the hearing was accomplished in a manner equivalent to Section 6066 of the government code. For DOWCPP, this equated to publication of a notice in the Paradise Post newspaper two weeks prior to the public hearing. By publishing this notice in the newspaper, notice was provided to diverse social, cultural, and economic elements of the population in the service area. A copy of the published notice is included in Appendix M-3.

The hearing was held on Thursday, June 30th, 2016 in Magalia, CA at the Paradise Pines Property Owner's Association Racine Room, which is a handicap accessible facility.

DOWCPP actively encourages community participation in its urban water management planning efforts. Public meetings were held for the 2010 and 2015 plans and the UWMP was discussed at these public participation meetings. DOWCPP seeks input from the public including the diverse social, cultural, and economic elements of the population.

Chapter 3 - System Description

CWC *10631 Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.*

3.1 General Description

Del Oro Water Company (DOWC), a CPUC designated Class B water utility, was established in 1963 and currently provides service to eighteen (18) water districts located in nine counties throughout California. It is also one of the fourteen largest utilities under the jurisdiction of the CPUC. This report is applicable to the Paradise Pines District (DOWCPP) water system.

Readers interested in a discussion of Butte County water resources as a whole, are recommended to review the *Butte County General Plan 2030* ("Butte Plan"), *Chapter 8 - Water Resources Element*, available at: http://www.buttegeneralplan.net/products/2012-11-06_GPA_ZO_Adopted/General_Plan_Seperate_Chapters/8_Water_Resources_PRR.pdf. This UWMP focuses on the DOWCPP service area.

DOWCPP covers an area of approximately 4,587 acres. The description of DOWCPP, as shown in the CPUC-approved tariffs, is as follows:

> *Paradise Pines District serves the areas known as Fir Haven Subdivision, Sierra Del Oro Subdivisions, Paradise Pines Subdivisions, and vicinity, located in the Magalia area approximately 6 miles north of the Town of Paradise in Butte County, California.*

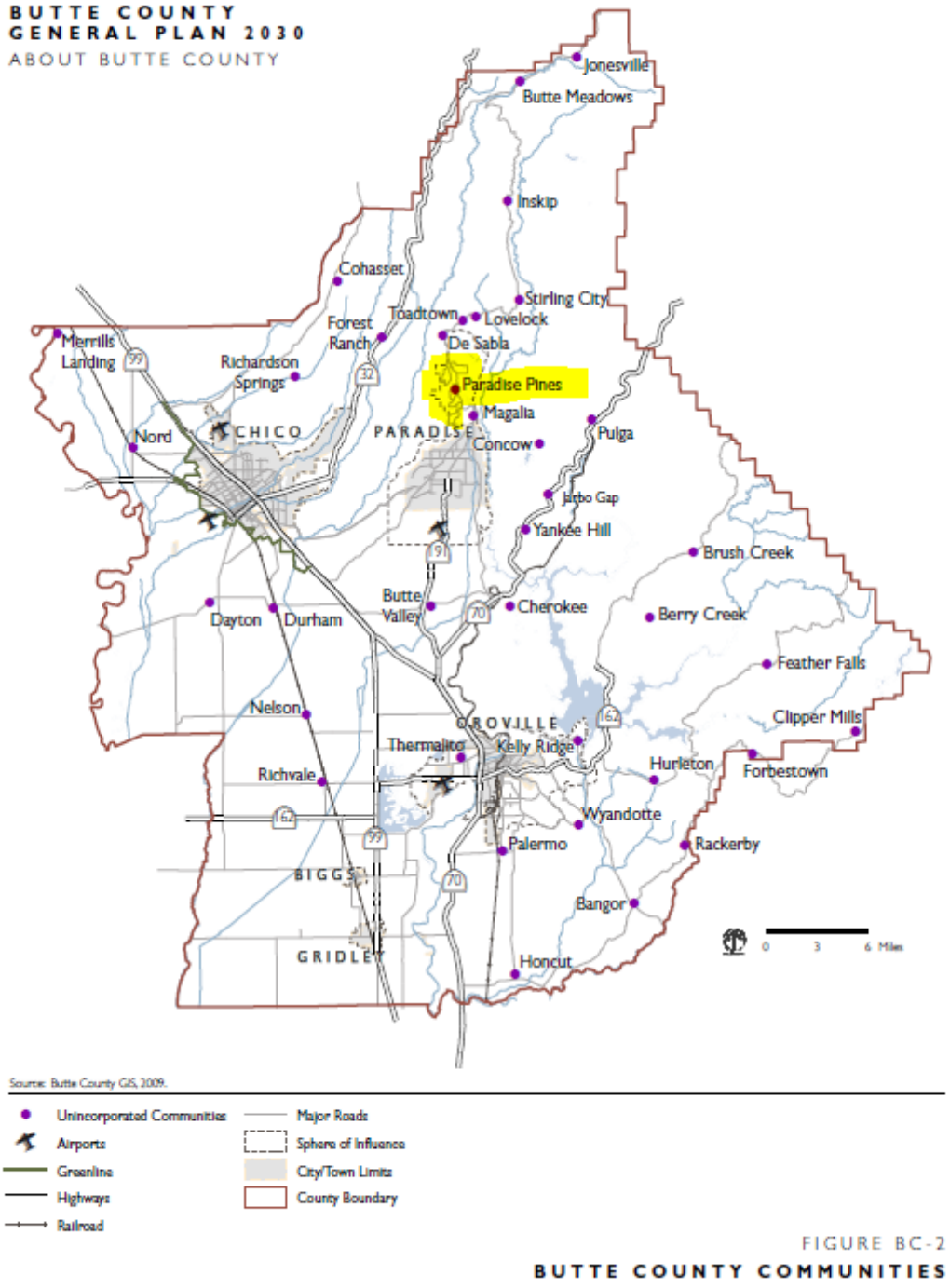
Magalia is a census-designated place (CDP) in Butte County, CA. The population was 11,310 at the 2010 census. DOWCPP serves the majority, but not all, of the Magalia area. The service area boundaries do not match exactly to the CDP boundaries. In the Butte Plan, DOWCPP is a designated "sphere of influence" (see Figure 3-1 on next page).

DOWCPP uses groundwater as its main source of supply. This is not an adjudicated water source. Six wells are present in DOWCPP, of which two are inactive and four are in use. Water from these wells is of excellent quality and currently requires no treatment, although chlorine disinfection takes place at each of the well sites as a precaution.

Wells pump water from major water-bearing formations of tertiary channels of the Magalia Channel, which is filled with large boulders and coarse sand and is probably not more than 20 to 75 feet deep. These ancient streambeds are covered with multiple layers of hardened volcanic mud (volcanics). The volcanics are porous and surface water must percolate down hundreds of feet to the ancient streambeds. The ancient streambeds (tertiary channels) are much different than acquiring water from an aquifer available in the valleys of California. Groundwater is discussed in detail in Chapter 6.

Surplus surface water is also purchased from DOWC's Stirling Bluffs District. This surplus water is carried via Pacific Gas and Electric's (PG&E) Hendricks Canal into Little Butte Creek, which flows into the Paradise Irrigation District (PID) Reservoirs. PID treats this water at its filtration plant and delivers it to DOWCPP through an intertie. This process was described in detail in Del Oro Water Company's 2000 Water Management Program. This water transfer is also discussed in greater detail in Chapter 6.

Figure 3-1



Water for DOWCPP is held in three welded steel tanks. Tank #1, located on Torey Pine Road, was installed in 2002 and has a storage capacity of 1,000,000 gallons. Tank #2, located on Imperial Way, was installed in 1959 and has a storage capacity of 400,000 gallons. Tank #3, located on Lakeridge Court, was installed in 1992 and has a storage capacity of 1,500,000 gallons. The combined storage capacity of all three tanks totals 2,900,000 gallons.

The life expectancy of each of the tanks is estimated at fifty (50) years and, although Tank #2 has reached its life expectancy, it shows no signs of leaking or damage to the structural integrity. If any one of the tanks shows signs of failure, it will be rehabilitated or replaced as needed.

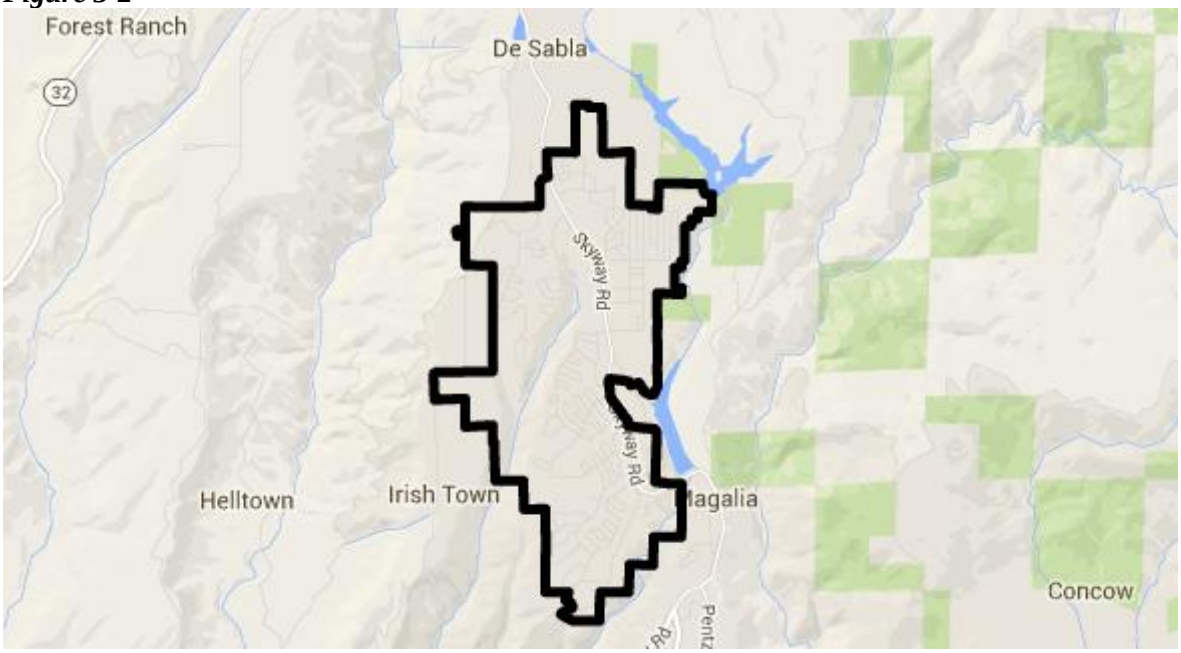
Water is delivered to Paradise Pines customers via a network of 341,338 LF of welded steel, cement-asbestos/transite, and plastic (PVC) distribution pipes ranging in size from 2 ¼" to 14" in diameter. DOWC is currently in the process of replacing a number of the older segments of the mainline with C900 PVC mainline. The expected service life of the new mainlines is 50 years.

Records of water use are available from 1970 to present. Customers are billed monthly, and meters are read every month. The entire system is metered; only fire hydrants are not metered. Hence, 100% of our customers receive an accurate record of their water use.

3.2 Service Area Boundary Map

Figures 3-2, 3-3, and 3-4 are multiple map views of the boundary for the DOWCPP service area. All water served to customers is potable and there have been no changes in the boundaries between 1990 and 2016. The GIS digital kml file is also included with the digital submission of this UWMP to DWR. This kml file was used with the DWR Population Tool to determine the population of the DOWCPP service area, which is discussed further in 3.4, below, and Chapter 5.

Figure 3-2



Source: Google Maps, Butte County LAFCO

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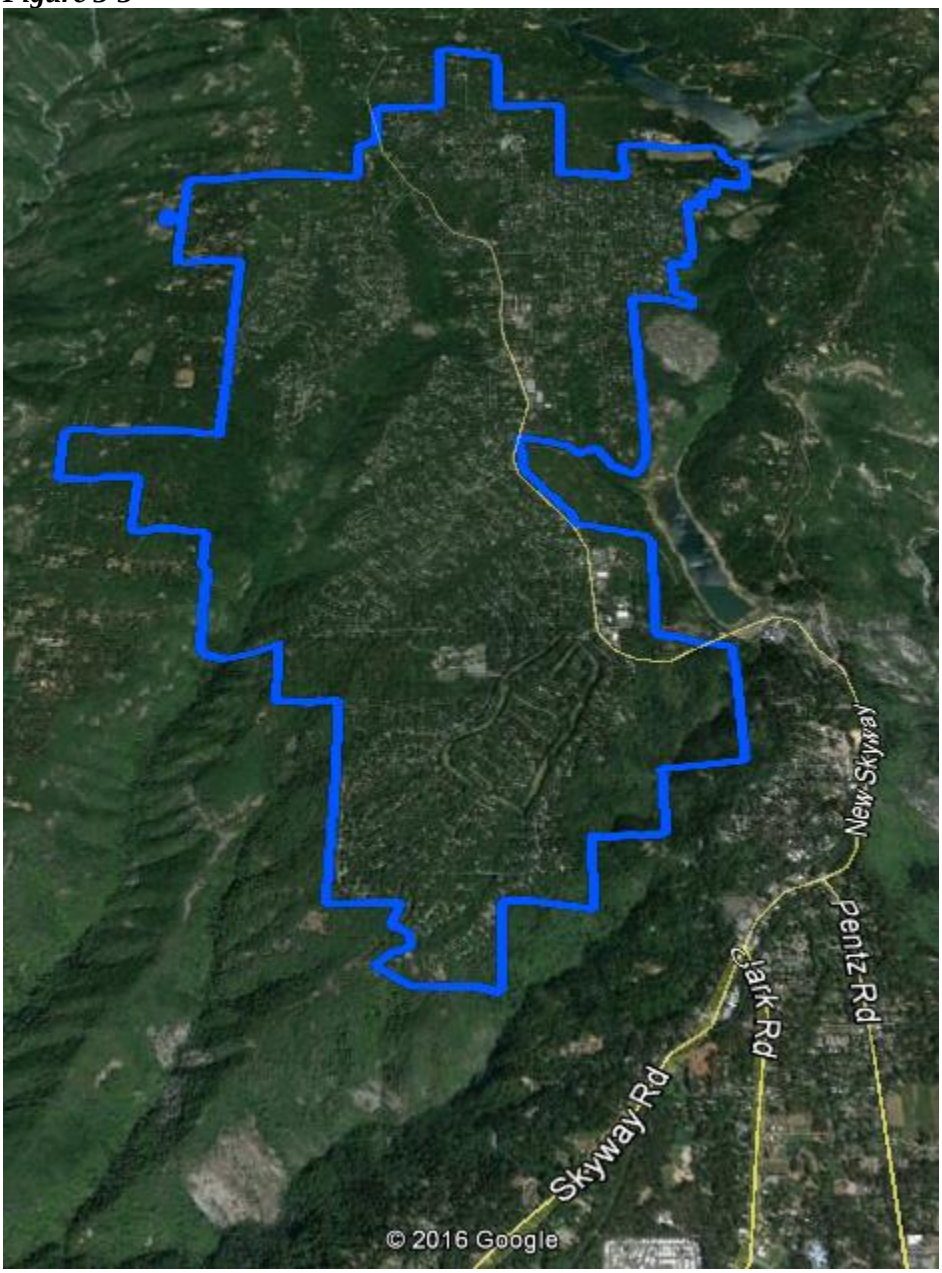
Figure 3-3



Source: Google Maps, Butte County LAFCO

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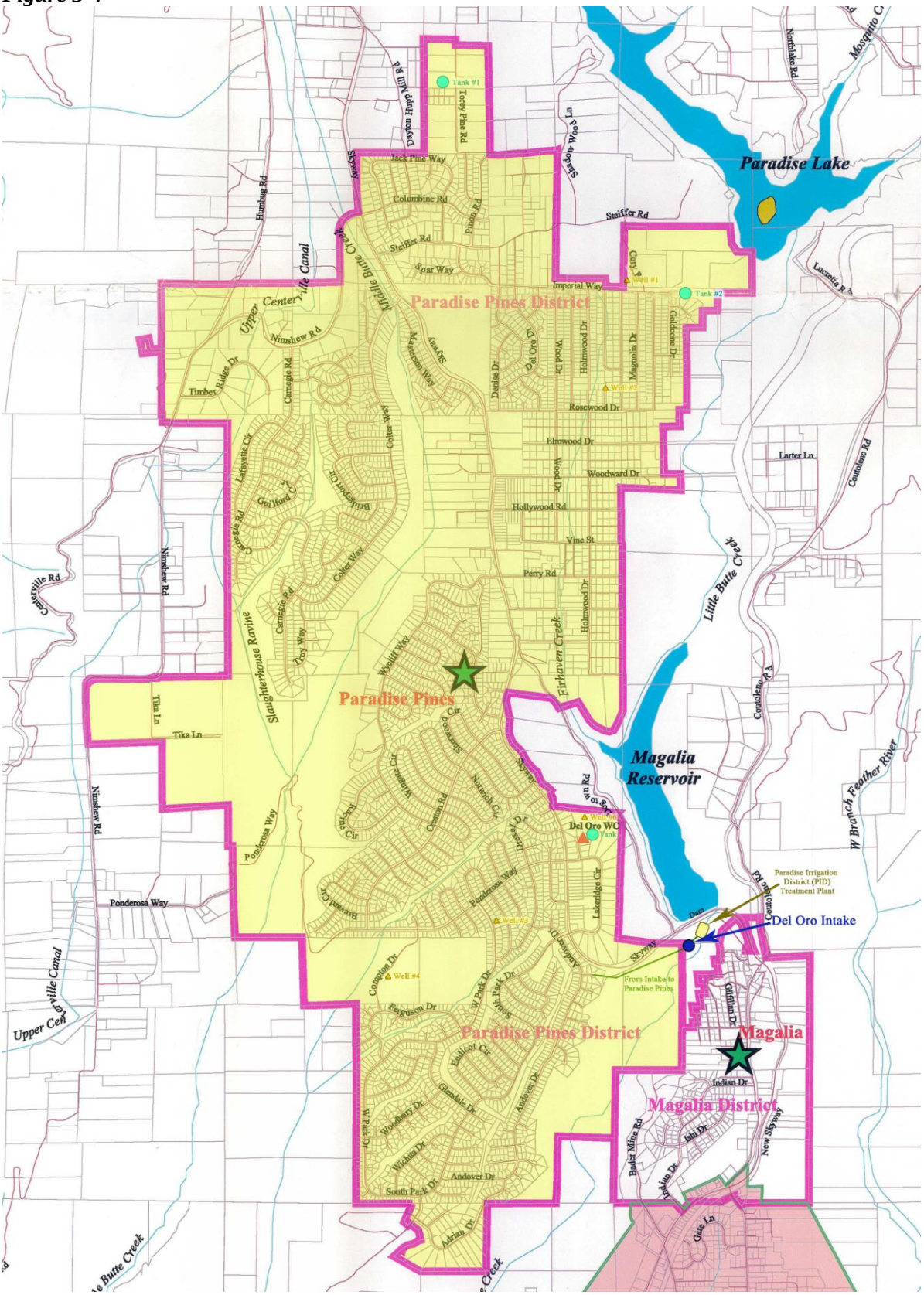
Figure 3-4

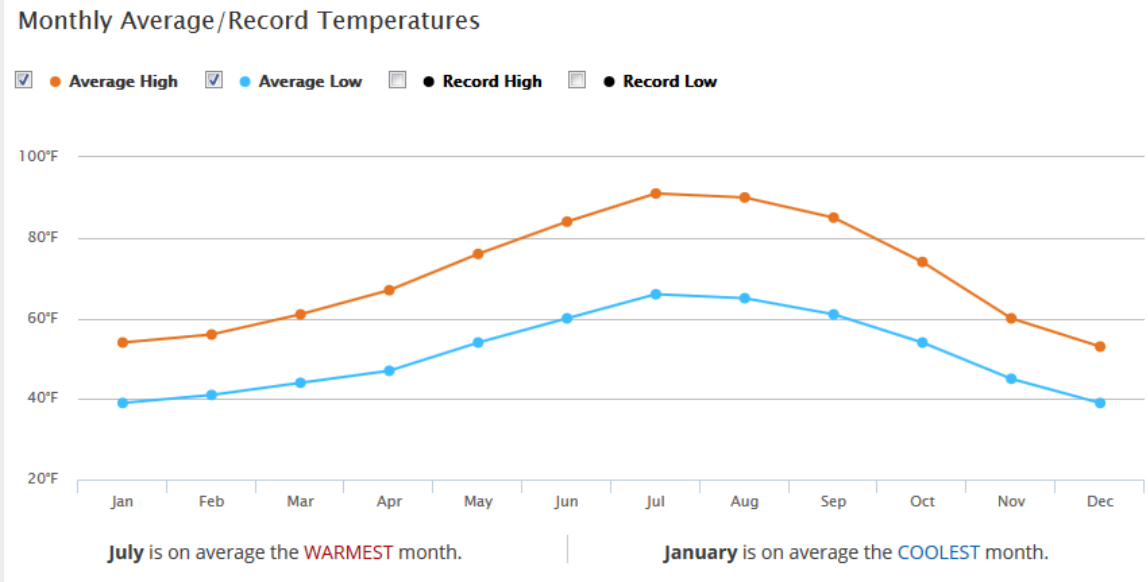

Paradise Lake
Paradise Pines District
Paradise Pines
Magalia Reservoir
Del Oro Intake
Paradise Irrigation District (PID) Treatment Plant
Magalia
Magalia District
Upper Centerville Canal
Little Butte Creek
Slaughterhouse Ravine
Firhaven Creek
W Branch Feather River
Nimshew Rd
Ponderosa Way
Skyway
Tank #1
Tank #2
Well #1
Well #2
Well #3
Well #4
Del Oro WC Tank
Dam
From Intake to Paradise Pines

3.3 Service Area Climate

Like much of California, DOWCPP weather is typically warm to hot, with moderately wet winters and very dry summers. Occasional snow does fall, however it tends to melt within a few hours to a few days at most. Winter lows are usually in the upper 30s F, with occasional drops below freezing, and summer highs are generally in the low 90s F. According to weather.com, the record low for this area is 14˚ F, set on December 9, 1972, and the record high is 113˚ F, set on August 5, 1998.

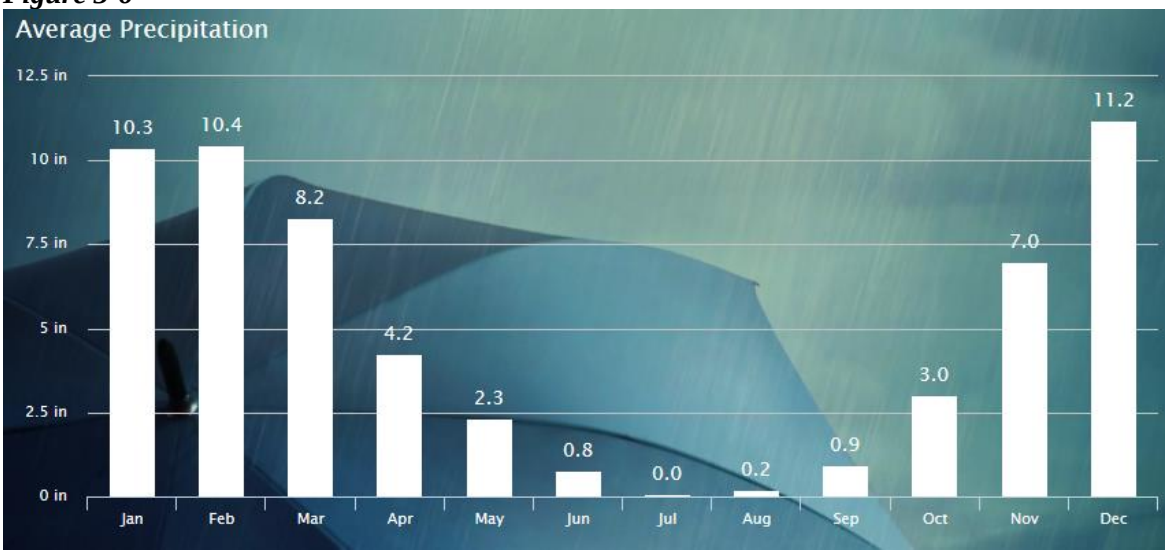
DOWCPP is situated on a ridge rising up into the Sierra Nevada mountain range, and crosses multiple small valleys. As such, the altitude varies significantly from the lowest southern end of the district to the highest northern end; the median altitude is 2,444 feet above sea level. As a result of this variation, it is common for one end of the District to receive snow while the other end receives rain or remains dry.

Figure 3-5



Source: https://weather.com/weather/monthly/l/USCA0659:1:US

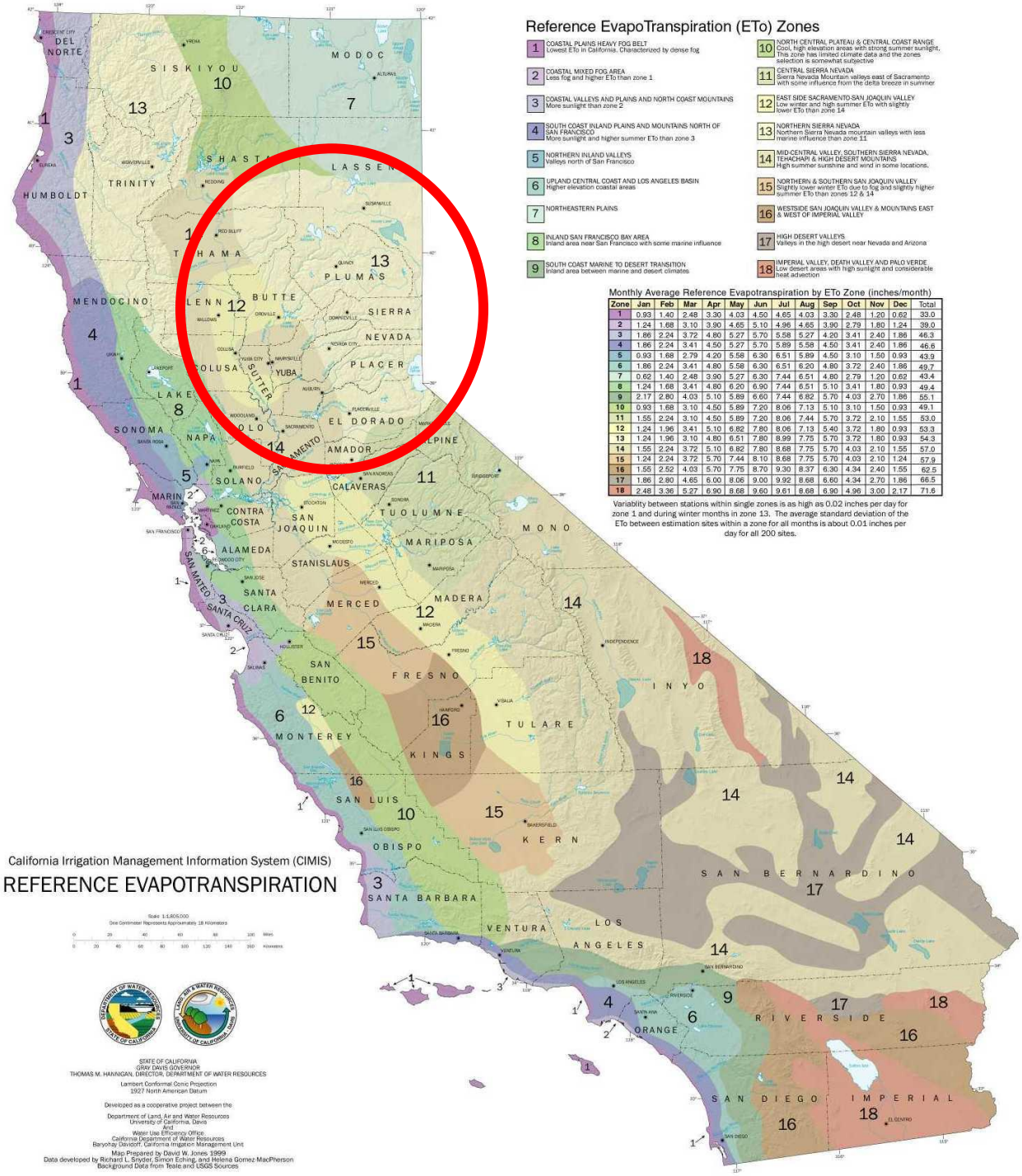
Figure 3-6



Source: https://weather.com/weather/monthly/l/USCA0659:1:US

DOWCPP is in *Zone 13 – Northern Sierra Nevada* of the California Irrigation Management Information System (CIMIS) Reference EvapoTranspiration zones, a map of which is provided below. Readers desiring to view the map at a greater resolution should visit: http://wwwcimis.water.ca.gov/App_Themes/images/etozonemap.jpg.

Figure 3-7



Source: http://wwwcimis.water.ca.gov/App_Themes/images/etozonemap.jpg

Zone 13 is described as "Northern Sierra Nevada mountain valleys with less marine influence than zone 11". Monthly average reference evapotranspiration, in inches per month, for Zone 13 is as shown below.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1.24	1.96	3.10	4.80	6.51	7.80	8.99	7.75	5.70	3.72	1.80	0.93	**54.3**

As a result of this CIMIS EvapoTranspiration Zone, which is indicative of fairly dry climate, when the SWRCB adjusted mandatory drought conservation percentages for Urban Water Suppliers in February 2016, DOWCPP's required conservation percentage was reduced by 3% (from 24% to 21%). By comparison, the statewide maximum allowable percentage reduction was 4%.

DOWCPP falls in Sunset Garden Climate Zone 7:

> *Hot summers and mild but pronounced winters give Zone 7 sharply defined seasons without severe winter cold or enervating humidity.*[1]

Natural land in DOWCPP is situated on dense, non-absorbent, red clay and has many native pine trees. Every dwelling or business within DOWCPP's service area disposes of wastewater by some form of septic system; this has resulted in larger lots that are mixed between extensive landscapes versus many homes that have minimal landscape in a natural setting. Typical properties in DOWCPP do not have lawns. Small shrubberies and flowers are common, but usually limited to the portion of the property nearest the home or business with the rest of property left natural, resulting in average water use lower than the California norm. However, those properties that do have lawns, as well as those properties that require extensive irrigation (such as cemeteries and schools), often have significantly higher water use, as frequent watering is needed because the red clay surface does not hold water well. Water use is discussed in greater depth in Chapter 4.

Figure 3-8

Source: http://img1.sunset.timeinc.net/sites/default/files/image/climate-zones/wgbmap-ncal-w-x.jpg

3.4 Service Area Population and Demographics

Table 3-1 Retail: Population - Current and Projected						
Population Served	2015	2020	2025	2030	2035	2040*(opt)*
	9,546	9,803	9,997	10,195	10,396	10,602
NOTES: 2015 Population from DWR Population Tool (see Chapter 5 SBx7-7 & Appendix D) For 2020-2040, DOWC estimates the population of DOWCPP by continuing the trends established by the DWR Population Tool.						

The 2015 population estimate was determined using the DWR Population Tool. The same method and estimates are used for both CWC and SB X7-7 calculations and requirements. SB X7-7 is discussed in greater detail in Chapter 5.

[1] http://www.sunset.com/garden/climate-zones/sunset-climate-zone-northern-california

For future population estimates, DOWC continued the trends established by the DWR population tool. The actual number of connections each year were entered for 1999 through 2015, and the DWR established formula (Number of Connections X Persons per Connection = Population) was used to calculate the Total Population, as shown in Table 3-A.

Table 3-A Population 1999-2015

Baseline Year	Number of Connections	Persons Per Connection	Total Population	Calculation Method
1999	4449	1.90	8,432	DWR Population Tool (Appendix D)
2000	4483	1.9	8,536	
2001	4485	1.91	8,562	
2002	4532	1.92	8,692	
2003	4628	1.93	8,918	
2004	4680	1.94	9,060	
2005	4730	1.95	9,200	
2006	4742	1.96	9,266	
2007	4752	1.97	9,328	
2008	4724	1.98	9,316	
2009	4707	1.985	9,343	Used same method as DWR Population Tool
2010	4701	1.99	9,355	
2011	4688	2	9,376	
2012	4695	2.01	9,437	
2013	4686	2.02	9,466	
2014	4693	2.03	9,527	
2015	4676	2.04	9,546	DWR Population Tool (Appendix D)

Having established the population figures through 2015, DOWC calculated the average change in number of connections from 2009 through 2016. Actual connections as of May 31, 2016, were used for the purposes of this calculation. Similarly, the average change in the number of persons per connection was also calculated.

Table 3-B Population change averages

Baseline Year	Number of Connections	% Change in Number of Connections	Persons Per Connection	% Change in Persons Per Connection
2009	4707	-0.13%	1.985	0.25%
2010	4701	-0.28%	1.99	0.50%
2011	4688	0.15%	2	0.50%
2012	4695	-0.19%	2.01	0.50%
2013	4686	0.15%	2.02	0.50%
2014	4693	-0.36%	2.03	0.49%
2015	4676	0.21%	2.04	0.25%
2016	4686	-0.13%		
Average Change		**-0.06%**		**0.46%**

DOWC then used these average change figures to project the Number of Connections and Persons per Connection for 2016 through 2040. (Previous year's figure X average percentage change = current year's figure).

The 40-acre Paradise Pines Golf Course, which was closed in October 2014, is tentatively planned to convert a portion of the acreage to 23 residential (single-family home) lots, with the remainder of the land to be converted to greenbelt. Therefore, in 2018, an additional 23 connections were added (after the above calculation) to account for build out of the proposed 23 lots on the acreage that was formerly Paradise Pines Golf Course. Other than the 2018 Number of Connections figure, no adjustments from the basic calculations were made.

Once the Number of Connections and Persons per Connection were projected, the Projected Population for each year was calculated in a manner similar to the DWR Population Tool (Number of Connections X Persons per Connection = Population).

Table 3-C Population Projections

Baseline Year	Number of Connections	Persons Per Connection	Projected Population
2016	4686*	2.05	9,603
2017	4683	2.06	9,641
2018	4703**	2.07	9,726
2019	4700	2.08	9,764
2020	**4697**	2.09	**9,803**
2021	4694	2.10	9,841
2022	4691	2.11	9,880
2023	4688	2.12	9,919
2024	4685	2.13	9,958
2025	**4682**	2.14	**9,997**
2026	4679	2.14	10,036
2027	4676	2.15	10,075
2028	4673	2.16	10,115
2029	4670	2.17	10,155
2030	**4667**	2.18	**10,195**
2031	4664	2.19	10,235
2032	4661	2.20	10,275
2033	4658	2.21	10,315
2034	4655	2.22	10,356
2035	**4652**	2.23	**10,396**
2036	4649	2.24	10,437
2037	4647	2.26	10,478
2038	4644	2.27	10,519
2039	4641	2.28	10,561
2040	**4638**	2.29	**10,602**

NOTES:
*Active Connections as of 5/31/16
** Calculated using the -0.06% decline in number of connections from year to year, and then added 23 connections for the proposed homes on the former PP Golf Course acreage.

DOWCPP is 90.7% built out, with limited growth possible by the addition of buildings on larger existing lots and by splitting existing parcels. At maximum build-out, it is estimated that DOWCPP would have 5,300 connections. However, based on the trends from 2007 to 2015, DOWCPP projects that full build out will not occur for several decades.

According to the Butte County General Plan 2030:

> *Much of the new development in these areas is fueled by in-migration of retirees from more urbanized regions of California, attracted by the recreational opportunities, relatively low land and housing costs, and rustic, wooded environment in the foothills.*

DOWC notes that, while this is true of the greater area in which DOWCPP is located, and was historically true of DOWCPP from 1963 through the mid-2000s, it is not reflective of the current status of DOWCPP. Since 2007, DOWCPP has seen a rise in the number of younger adults and families with children, and a decline in the total number of connections, as shown in Table 3-A. Current trends show that the retiree population, which previously fueled DOWCPP's growth, is gradually passing on, and the newly vacant properties are being occupied by new residents more slowly than the vacancies are being created. The combined result of these trends is a gradual decrease in total number of active connections at the same time that the overall population is steadily increasing.

3.4.1 Other Demographic Factors

Every dwelling or business within DOWCPP's service area disposes of wastewater by septic system, a special septic system, or clustered systems. This has historically impacted the growth in DOWCPP, reducing the ability to develop large housing densities.

DOWCPP has a small "snowbird" population, which results in an increased number of properties with little to no use in the winter months; however, this population is not large enough to be considered a driving factor in water calculations and planning. Likewise, as discussed in Chapter 4, water use in DOWCPP in 2015 was 89.71% single residential, so agricultural, institutional, and commercial customers do not greatly skew the GPCD.

Demographic factors such as employment, customer base, and industry do not uniquely affect water supply issues in the DOWCPP service area.

Chapter 4 - System Water Use

Chapter 4 describes and quantifies the historical, current, and projected water uses within DOWCPP's service area through the year 2035. As specified in Chapter 2, Table 2-3, all quantity figures provided in this UWMP are in CCF. "Demand" and "use" are used interchangeably throughout Chapter 4. Water production is discussed in greater detail in Chapter 6.

DOWC cautions all readers to remember that all figures given for years 2016 and beyond are projections, and all projections are based on currently available information and DOWC's conjecture as to future conditions. Actual future use may differ significantly from these projections.

4.1 Recycled versus Potable and Raw Water Demand

As discussed in Section 6.5, DOWCPP does not utilize recycled water. 100% of water supplied to customers in DOWCPP is potable.

The area that DOWCPP serves does not have a sewer system; all properties utilize septic systems. Further, there are no plans to move to a central reclamation system. As such, DOWCPP does not have the option of recycling wastewater, so recycled water cannot be provided to customers.

DOWCPP does not currently have any demand for raw water. As described in Chapter 3, the majority of properties have little landscaping, which would ordinarily be the primary source of raw water demand.

4.2 Water Uses by Sector

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

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape. (if other (ie. school) has a connection solely for landscape, it's landscape)

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural

(J) Distribution system losses

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

Since DOWCPP was established in 1963, all water served to customers has been metered. Table 4-A, below, provides a general summary of gross water production and water use per service connection from 1975 to present. Note that the low use in 1977-1979, 1990-1991, and 2014-2015 reflects voluntary and mandatory conservation requirements associated with the existing droughts, up to and including penalties for over-use.

Table 4-A Historical Demand for Potable Water - Actual

Year	Metered Connections	Total Production	Gross Water Use Per Connection
1975	990	147,401	149
1976	1,233	179,566	146
1977	1,910	212,953	111
1978	2,326	236,211	102
1979	2,481	274,967	111
1980	2,719	308,910	114
1981	2,869	354,552	124
1982	2,929	363,142	124
1983	3,023	367,392	122
1984	3,109	431,493	139
1985	3,195	471,270	148
1986	3,312	467,939	141
1987	3,445	547,945	159
1988	3,610	567,168	157
1989	3,799	521,516	137
1990	4,047	574,765	142
1991	4,477	452,778	101
1992	4,480	460,330	103
1993	4,441	548,967	124
1994	4,441	629,452	142
1995	4,389	629,053	143
1996	4,416	546,128	124
1997	4,405	626,956	142
1998	4,422	556,287	126
1999	4,449	646,685	145
2000	4,483	618,020	138
2001	4,485	695,762	155
2002	4,532	739,441	163
2003	4,628	743,741	161
2004	4,680	807,284	172
2005	4,730	745,073	158
2006	4,742	695,150	147
2007	4,752	695,759	146
2008	4,724	683,108	145
2009	4,707	635,846	135
2010	4,701	586,513	125
2011	4,688	556,451	119
2012	4,695	613,866	131
2013	4,686	599,979	128
2014	4,693	513,763	109
2015	4,676	406,785	87

DOWC notes that a redoubling of DOWC's Conservation Awareness programs from 2007 to present has resulted in reduced water use per service connection. As of 2015, water use per service connection is at an all-time low.

DOWCPP did not begin tracking water usage according to the CWC specified categories until 2013. Prior to 2013, all residential customers, both single-family and multi-family, where placed into the same "residential" category. Prior to 1999, water use by category is not available. Tables 4-B and 4-1, below, list actual past and current water demands, respectively, in five year increments. Water use is shown by demand sector, to the extent possible using available records.

Table 4-B Historical Demand for Potable Water - Actual

Use Type	1990	1995	2000	2005	2010	2015
Residential			490,517	501,034	436,045	323,964
Commercial			12,516	8,265	7,477	6,411
Institutional/Governmental			10,059	10,360	11,442	4,687
Landscape			41,778	30,832	23,771	1,012
Sub-Total: Demand of Metered Customer Connections	**476,336**	**465,669**	**554,871**	**550,492**	**478,735**	**336,074**
Sales/Transfers/Exchanges to other agencies			19,412	16,747	14,356	17,345
Water Losses & Authorized Unbilled/Unmetered (firefighting, flushing, etc)			67,075	262,283	108,317	70,738
TOTAL	**574,765**	**629,053**	**637,432**	**761,819**	**600,869**	**424,129**
All Water Use in DOWCPP *(Total less Transfers)*			**618,020**	**745,072**	**586,513**	**406,785**
Total Connections	4,047	4,389	4,483	4,730	4,701	4,676
Total annual METERED USE Per connection	*117.70*	*106.10*	*123.77*	*116.38*	*101.83*	*71.87*
Total annual DOWCPP Water Use Per connection	*142.02*	*143.32*	*137.86*	*157.52*	*124.76*	*86.99**
NOTES: *See Chapter 5: SB X7-7, All water supplied as shown above was drinking water quality.						

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Table 4-1 Retail: Demands for Potable and Raw Water - Actual			
Use Type	2015 Actual		
Drop down list *May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool*	Additional Description *(as needed)*	Level of Treatment When Delivered *Drop down list*	Volume
Single Family		Drinking Water	319,433
Multi-Family		Drinking Water	4,531
Commercial		Drinking Water	6,411
Institutional/Governmental		Drinking Water	4,687
Landscape		Drinking Water	1,012
Sales/Transfers/Exchanges to other agencies	To DOWC's Magalia District	Drinking Water	17,346
Other	Authorized Unbilled/ Unmetered (firefighting, flushing, etc)	Drinking Water	14,468
Losses	Per AWWA Water Loss Audit	Drinking Water	56,239
		TOTAL	424,128
See AWWA Water Loss Audit (Appendix E) and Section 4.3 for more information about Losses			

Tables 4-2 and 4-3 show current and projected future water demands. An explanation of how future demands were projected follows, together with Tables 4-C through 4-F.

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type *(Add additional rows as needed)*	Additional Description *(as needed)*	Projected Water Use *Report To the Extent that Records are Available*				
Drop down list *May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool*		2020	2025	2030	2035	2040 -opt
Single Family		469,668	479,969	490,495	501,253	512,246
Multi-Family		6,662	6,808	6,957	7,110	7,266
Commercial		9,426	9,633	9,844	10,060	10,281
Institutional/Governmental		6,892	7,043	7,198	7,355	7,517
Landscape		1,489	1,521	1,555	1,589	1,624
Sales/Transfers/Exchanges to other agencies	To DOWC's Magalia District	22,317	22,317	22,317	22,317	22,317
Other	Authorized (see Table 4-1)	21,273	21,740	22,217	22,704	23,202
Losses		82,689	84,502	86,356	88,250	90,185
TOTAL		620,415	633,533	646,938	660,638	674,637
NOTES: See AWWA Water Loss Audit (Appendix E) and Section 4.3 for more information about Losses						

Table 4-3 Retail: Total Water Demands						
	2015	2020	2025	2030	2035	2040 *(opt)*
Potable and Raw Water *From Tables 4-1 and 4-2*	424,128	620,415	633,533	646,938	660,638	674,637
Recycled Water Demand* *From Table 6-4*	0	0	0	0	0	0
TOTAL WATER DEMAND	424,128	620,415	633,533	646,938	660,638	674,637

Future demands (year 2020 and following) were projected as the product of the estimated population for the target year and the average SB X7-7 GPCD (see Chapter 5 for GPCD calculations) for the 5-year period of 2010-2014, as shown in Tables 4-C and 4-D. The year 2015 GPCD was not included in the average GPCD calculation as mandatory water use restrictions, implemented due to the drought and statewide conservation mandate, resulted in exceptional conservation by customers and an unusually low GPCD. Note that transfers are left out of the calculations in Tables 4-C and 4-D as the GPCD established in the Chapter 5 SB X7-7 calculations is based on total water net of transfers.

Table 4-C Average Historical GPCD – 2010-2014			
Year	Total Population *(from Table 3-C)*	Annual Gross Water Use (Less Transfers)	GPCD
2010	9,355	586,513	128
2011	9,376	556,451	122
2012	9,437	613,866	133
2013	9,466	599,979	130
2014	9,527	513,763	111
		AVERAGE GPCD 2010-2014	**125**
2015	*9,546*	*406,785*	*87*
NOTES: See Chapter 3 for calculation of Population Estimates & GPCD			

Table 4-D Demand for Potable Water (less transfers) – Projected				
Year	Total Population *(from Table 4-B)*	AVERAGE GPCD 2010-2014 *(from Table 4-B)*	Projected Annual Water Use (less transfers) GALLONS	**Projected Annual Water Use** (less transfers) **CCF**
2020	9,823	125	447,377,645	**598,098**
2025	10,039	125	457,189,616	**611,216**
2030	10,259	125	467,216,786	**624,621**
2035	10,484	125	477,463,874	**638,321**
2040	10,714	125	487,935,702	**652,320**

Since transfers are not included in the calculations shown in Tables 4-C and 4-D (as described above), transfer projections are fixed at the 10-year average of transfers from 2006 through 2015, as shown in Table 4-E. Annual transfers vary dramatically from year to year depending on local needs, supplies, and weather conditions, so it is not prudent to project transfers based solely on the 2015 transfers.

Table 4-E Transfers to Other Districts – Actual			
Year	Transfers (Gallons)	Transfers (CCFs)	
2015	12,974,808	17,345	
2014	17,521,152	23,422	
2013	21,599,996	28,875	
2012	21,169,896	28,300	
2011	12,808,752	17,123	
2010	10,739,036	14,356	
2009	13,367,508	17,870	
2008	22,186,428	29,659	
2007	14,325,696	19,151	
2006	20,252,472	27,074	
		22,317	**AVERAGE**

As shown in Table 4-F, future sector demands were projected proportional to actual sector demands experienced during 2015. Although overall 2015 demand was down dramatically due to the statewide conservation mandate, sector demands were reasonably proportional to those from the years preceding mandatory water use reductions. Since the imposition of mandatory conservation did not appear to skew the use of water by sector, the 2015 distribution of water use by sector was used to project future sector water use.

Table 4-F Demand for Potable Water – Projected							
Sector	2015	*%*	2020	2025	**2030**	**2035**	**2040**
Single Family	319,433	*78.53%*	469,668	479,969	490,495	501,253	512,246
Multi-Family	4,531	*1.11%*	6,662	6,808	6,957	7,110	7,266
Commercial	6,411	*1.58%*	9,426	9,633	9,844	10,060	10,281
Institutional/Governmental	4,687	*1.15%*	6,892	7,043	7,198	7,355	7,517
Landscape	1,012	*0.25%*	1,489	1,521	1,555	1,589	1,624
Other (Authorized Unbilled/Unmetered)	14,468	*3.56%*	21,273	21,740	22,217	22,704	23,202
Losses	56,239	*13.83%*	82,689	84,502	86,356	88,250	90,185
Subtotal	**406,782**	***100.00%***	**598,098**	**611,216**	**624,621**	**638,321**	**652,320**
Sales/Transfers/Exchanges to other agencies	17,346		22,317	22,317	22,317	22,317	22,317
TOTAL	**424,128**		**620,415**	**633,533**	**646,938**	**660,638**	**674,637**

4.3 Distribution System Water Losses

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

(J) Distribution system water loss

(3)(A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the

distribution system water loss shall be quantified for each of the five years preceding the plan update.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

Table 4-4 below reports the distribution system losses for calendar year 2015, calculated using the American Water Works Association Water Audit methodology. Complete results of the 2015 AWWA Water Audit are included in Appendix E.

Actual distribution system losses for prior years are tabulated in Table 4-B, above. Projected distribution system losses are listed in Tables 4-2 and 4-F, above.

Table 4-4 Retail: 12 Month Water Loss Audit Reporting

Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
01/2015	56,239
** Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.*	
NOTES: Figure above is converted from Million Gallons (required on the AWWA worksheet [Appendix E]) to CCF.	

4.4 Estimating Future Water Savings

CWC *10631(e)(4)(A) If available and applicable to an urban water supplier, water use projections may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.*

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following: (i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

Passive savings were not considered when preparing the projected water uses in Table 4-2, above. The projected growth rate for DOWCPP (see Chapter 3) suggests that there will be minimal water savings impact from new or future customers.

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Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	No
If "Yes" to above, state the section or page number, in the cell to the right, where citations of the codes, ordinances, etc… utilized in demand projections are found.	
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes

4.5 Water Use for Lower Income Households

CWC *10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.*

CHSC ***(****California Health and Safety Code) 50079.5 (a) "Lower income households" means persons and families whose income does not exceed the qualifying limits for lower income families… In the event the federal standards are discontinued, the department shall, by regulation, establish income limits for lower income households for all geographic areas of the state at 80 percent of area median income, adjusted for family size and revised annually.*

Low-income residential demands are included in the total projected demands above.

The DOWCPP area is not an incorporated area or a township, nor do the boundaries align with any specific census designated area, so gathering precise low-income statistics is nearly impossible. While the Housing Element of the Butte County General Plan 2030 ("Butte Plan") does address low-income housing needs in general terms, including the number of units needed on a countywide basis, it does not provide specific statistics as to average household size, current low-income population or households, number of units needed in the DOWCPP or greater Magalia area, or any other information which would be useful in calculating low-income water projections.

DOWCPP's service area does overlap a significant portion of the Census Designated Place (CDP) of Magalia, CA. According to the United States Census Bureau's *2010-2014 American Community Survey 5-Year Estimates* ("ACS-5") (see Appendix F), as of 2014, the median income for Magalia CDP was $39,514. By the CHSC definition above, "low-income" would be defined as an annual income of $31,611 or less, adjusted for household size. However, information as to the number of households meeting this definition of low-income in or near DOWCPP is not available.

The closest information available is from the ACS-5, which shows household income by income ranges. The problem with this is that the income range of $25,000 to $34,999 includes households that are low-income, as well as households that are below median-income but not low-income. Based on the ACS-5 data shown in Table 4-G, at least 30.4% of households in the Magalia CDP meet the CHSC definition of low-income, being those households which have an annual income of $24,999 or less. An additional 14.7% of households fall in the $25,000 to $34,999 range and there is no information available that would allow DOWC to accurately adjust the income statistics by household size or determine the percentage of those households which earn $31,611 or less.

Table 4-G Income in the Past 12 Months (In 2014 Inflation-Adjusted Dollars) In Magalia CDP		
Annual Income Range	**Households**	
	Estimate	Margin of Error
Less than $10,000	4.1%	+/-1.9
$10,000 to $14,999	6.8%	+/-2.7
$15,000 to $24,999	19.5%	+/-4.2
Subtotal	***30.4%***	
$25,000 to $34,999	14.7%	+/-3.7
Subtotal	***45.1%***	
$35,000 to $49,999	15.2%	+/-3.3
$50,000 to $74,999	22.0%	+/-3.9
$75,000 to $99,999	9.4%	+/-2.2
$100,000 to $149,999	6.8%	+/-2.1
$150,000 to $199,999	1.4%	+/-1.1
$200,000 or more	0.1%	+/-0.3
Median income (dollars)	39,514	+/-4,232

Based on the limited information available in the ACS-5, as described above, DOWC estimates that the DOWCPP service area is approximately 40% low-income. The projections provided below are based on 40% of the residential (single-family and multi-family) water use projections from Table 4-2.

Table 4-H Demand for Potable Water Among Low-Income Households – Projected						
Sector	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**
Single Family	127,773	187,853	191,973	196,183	200,486	204,883
Multi-Family	1,812	2,664	2,723	2,783	2,844	2,906
TOTAL	**129,585**	**190,517**	**194,696**	**198,966**	**203,329**	**207,789**

According to the ACS-5, 18.1% of individuals fall below the federal poverty line, 10.3% of households have Supplemental Security income, 5.8% had cash public assistance income, and 11.9% received Food Stamps/SNAP benefits in the preceding 12 months. In addition, 51.5% of households have Social Security Income, which is reflective of the large number of retirees residing in the Magalia CDP and in the DOWCPP service area.

Chapter 5 - SB X7-7 Baselines and Targets

The Water Conservation Act of 2009 (Appendix B) requires all urban water suppliers, publicly or privately owned, providing water service to more than 3,000 customers or supplying more than 3,000 acre feet annually, to prepare and adopt a plan with the goal of a per capita reduction in water use of 20% by 2020. This chapter demonstrates DOWCPP's compliance with the SB X7-7 requirements and is based on the methodologies outlined in the Methodologies Report provided by DWR.

Tables in this chapter are labeled according to two formats. Standardized tables provided by DWR have been incorporated in this report and bear the numbering scheme created by DWR, that is, {chapter number}-{table number}, for example *Table 5-1*, below. Tables specific to SB X7-7 compliance are in the format of SB X7-7 Table {table number}, for example *SB X7-7 Table 1*.

In discussing SB X7-7 Baselines and targets, it is important to differentiate between *GPCD* and the SWRCB's *R-GCPD*.

> **GPCD (Gallons Per Capita per Day)** is the total water use within a service area by all customer service types (residential, commercial, institutional, etc.), minus allowable exclusions, divided by the population. This is used in UWMPs for purposes of SB X7-7.
>
> **R-GPCD (Residential Gallons Per Capita per Day)** is the estimated *residential* water use in a service area divided by population. R-GPCD is used solely in drought reporting to SWRCB for purposes of complying with the Governor's drought declarations and executive orders in 2014, 2015, and 2016.

In this UWMP, DOWCPP has reviewed and confirmed the calculations establishing its base gallons per capita per day (GPCD) that forms the baseline for DOWCPP's statutory 20 percent water use reduction. DOWCPP has made significant reductions in its water use in the last ten years through pipeline replacement, leak detection and repair, customer leak notification, and (more recently) public response to the statewide drought. As a result, **as of December 31, 2015, not only has DOWCPP surpassed its 2015 Interim Target, it has also surpassed its 2020 Target.** Still, it will be important for DOWCPP and its customers to remain diligent in their efforts to continue to use water wisely.

Tables 5-1 and 5-2 provide a summary of DOWCPP's SB X7-7 calculations and compliance:

Table 5-1 Baselines and Targets Summary

Baseline Period	Start Year	End Year	Average Baseline GPCD*	2015 Interim Target *	Confirmed 2020 Target*
10-15 year	*1999*	*2008*	*162*	*146*	*130*
5 Year	*2003*	*2007*	*165*		

*All values are in Gallons per Capita per Day (GPCD)

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Table 5-2: 2015 Compliance								
Actual 2015 GPCD*	2015 Interim Target GPCD*	**Optional Adjustments to 2015 GPCD** Enter "0" if no adjustment is made *From Methodology 8*					2015 GPCD* *(Adjusted if applicable)*	Did Supplier Achieve Targeted Reduction for 2015? Y/N
		Extraor-dinary Events*	Economic Adjust-ment*	Weather Normal-ization*	TOTAL Adjust-ments*	Adjusted 2015 GPCD*		
87	146	0	0	0	0	87	87	Yes
**All values are in Gallons per Capita per Day (GPCD)*								
NOTES: See SB X7-7 tables for calculations								

The remainder of this chapter focuses on DOWCPP's SB X7-7 calculations.

SB X7-7 Table 0: Units of Measure Used in UWMP* *(select one from the drop down list)*
Hundred Cubic Feet

5.1 Wholesale Water Suppliers

CWC *10608.12 (r) "Urban wholesale water supplier" means a water supplier, either publicly or privately owned, that provides more than 3,000 acre feet of water annually at wholesale for potable municipal purposes.*

DOWC is not a wholesale water supplier as defined by California state law.

5.2 Updating Calculations from 2010 UWMP

CWC *10608.20 (g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).*

In DOWCPP's 2010 UWMP, Method 1 was used to calculate the 2020 Target. Method 1 is also used in this 2015 UWMP, however the population has changed slightly. This is a result of the finalized census figures not being available at the time that the 2010 UWMP was submitted. The full 2010 census data set was not available until 2012.

5.3 Baseline Periods

CWC *10608.20 (e) 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.*

(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

In this 2015 UWMP, DOWCPP has changed the baseline period to 1999-2008, as opposed to the 2001-2010 baseline period used in DOWCPP's 2010 UWMP. This change is based on changes to the calculated population, as described in section 5.2.

SB X7-7 Table-1: Baseline Period Ranges			
Baseline	**Parameter**	**Value**	**Units**
10- to 15-year baseline period	2008 total water deliveries	712,767	Hundred Cubic Feet
	2008 total volume of delivered recycled water	-	Hundred Cubic Feet
	2008 recycled water as a percent of total deliveries	0.00%	Percent
	Number of years in baseline period[1, 2]	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range[3]	2008	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range[4]	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.			
[3]The ending year must be between December 31, 2004 and December 31, 2010.			
[4]The ending year must be between December 31, 2007 and December 31, 2010.			

5.4 Service Area Population

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

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

10644 (a)(2) The plan…shall include any standardized forms, tables or displays specified by the department.

In order to calculate the service area population for the purposes of SB X7-7, DOWCPP used the DWR Population tool, available online at https://wuedata.water.ca.gov/secure/login_auth.asp. See Appendix D for the DWR Population Tool results confirmation sheet.

Continued on next page

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

SB X7-7 Table 3: Service Area Population					
Year		**Population**	**Year**		**Population**
10 to 15 Year Baseline Population			5 Year Baseline Population		
Year 1	1999	8,432	Year 1	2003	8,918
Year 2	2000	8,536	Year 2	2004	9,060
Year 3	2001	8,562	Year 3	2005	9,200
Year 4	2002	8,692	Year 4	2006	9,266
Year 5	2003	8,918	Year 5	2007	9,328
Year 6	2004	9,060	**2015 Compliance Year Population**		
Year 7	2005	9,200	**2015**		**9,546**
Year 8	2006	9,266	NOTES:		
Year 9	2007	9,328			
Year 10	2008	9,316			

5.5 Gross Water Use

CWC *10608.12 (g) "Gross Water Use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:*

(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier

(2) The net volume of water that the urban retail water supplier places into long term storage

(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier

(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

California Code of Regulations Title 23 Division 2 Chapter 5.1 Article

> *Section 596 (a) An urban retail water supplier that has a substantial percentage of industrial water use in its service area is eligible to exclude the process water use of existing industrial water customers from the calculation of its gross water use to avoid a disproportionate burden on another customer sector.*

DOWCPP does not have substantial recycled, agricultural use, or process (industrial) water. In addition to local groundwater wells, PP imports water from DOWC's Stirling Bluffs District (see chapter 6). Excess imported water is then exported to DOWC's Magalia District, which is reflected in the "Exported Water" figures in SB X7-7 Table 4. DOWCPP maintains a fairly consistent level of water in storage, so no deductions or additions are necessary for "Change in Distribution System Storage".

SB X7-7 Table 4: Annual Gross Water Use

Baseline Year *Fm SB X7-7 Table 3*		**Volume Into Dist. 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 Ag. 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	1999	676,926	30,241	-	-	-	-	646,685
Year 2	2000	637,432	19,412	-	-	-	-	618,020
Year 3	2001	729,419	33,658	-	-	-	-	695,762
Year 4	2002	762,367	22,925	-	-	-	-	739,441
Year 5	2003	756,202	12,461	-	-	-	-	743,741
Year 6	2004	820,642	13,358	-	-	-	-	807,284
Year 7	2005	761,819	16,747	-	-	-	-	745,073
Year 8	2006	722,224	27,074	-	-	-	-	695,150
Year 9	2007	714,910	19,151	-	-	-	-	695,759
Year 10	2008	712,767	29,659	-	-	-	-	683,108
10 - 15 year baseline average gross water use								**707,002**
5 Year Baseline - Gross Water Use								
Year 1	2003	756,202	12,461	-	-	-	-	743,741
Year 2	2004	820,642	13,358	-	-	-	-	807,284
Year 3	2005	761,819	16,747	-	-	-	-	745,073
Year 4	2006	722,224	27,074	-	-	-	-	695,150
Year 5	2007	714,910	19,151	-	-	-	-	695,759
5 year baseline average gross water use								**737,401**
2015 Compliance Year - Gross Water Use								
2015		424,129	17,345	-	-	-	-	**406,785**

"Volume Entering Distribution System" figures are the sum totals of the volume of water for each water source. SB X7-7 Tables 4-A, below, enumerate each water source.

SB X7-7 Table 4-A: Volume Entering the Distribution System(s)
Complete one table for each source.

Name of Source	**Well #2**			
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	1999	283,282	(11,331)	271,951
Year 2	2000	269,731	(10,789)	258,942
Year 3	2001	241,091	(9,644)	231,448
Year 4	2002	204,780	(8,191)	196,589
Year 5	2003	212,284	(8,491)	203,793
Year 6	2004	221,685	(8,867)	212,817
Year 7	2005	213,515	(8,541)	204,974
Year 8	2006	253,662	(10,146)	243,516
Year 9	2007	216,198	(8,648)	207,550
Year 10	2008	202,537	(8,101)	194,435
5 Year Baseline - Water into Distribution System				
Year 1	2003	212,284	(8,491)	203,793
Year 2	2004	221,685	(8,867)	212,817
Year 3	2005	213,515	(8,541)	204,974
Year 4	2006	253,662	(10,146)	243,516
Year 5	2007	216,198	(8,648)	207,550
2015 Compliance Year - Water into Distribution System				
2015		118,618	-	118,618

** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*

Continued on next page

SB X7-7 Table 4-A: Volume Entering the Distribution System(s) Complete one table for each source.				
Name of Source	**Well #3**			
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	1999	149,412	(5,678)	143,734
Year 2	2000	136,677	(5,194)	131,483
Year 3	2001	151,487	(5,757)	145,731
Year 4	2002	114,637	(4,356)	110,281
Year 5	2003	113,208	(4,302)	108,906
Year 6	2004	120,622	(4,584)	116,039
Year 7	2005	99,725	(3,790)	95,936
Year 8	2006	115,608	(4,393)	111,215
Year 9	2007	127,951	(4,862)	123,089
Year 10	2008	153,338	(5,827)	147,511
5 Year Baseline - Water into Distribution System				
Year 1	2003	113,208	(4,302)	108,906
Year 2	2004	120,622	(4,584)	116,039
Year 3	2005	99,725	(3,790)	95,936
Year 4	2006	115,608	(4,393)	111,215
Year 5	2007	127,951	(4,862)	123,089
2015 Compliance Year - Water into Distribution System				
2015		68,701	-	68,701
** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*				

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SB X7-7 Table 4-A: Volume Entering the Distribution System(s) Complete one table for each source.				
Name of Source	**Well #4**			
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	1999	185,094	(786)	184,309
Year 2	2000	157,948	(893)	157,056
Year 3	2001	174,562	(873)	173,689
Year 4	2002	135,194	(676)	134,518
Year 5	2003	148,580	(743)	147,837
Year 6	2004	114,903	(575)	114,329
Year 7	2005	115,288	(576)	114,712
Year 8	2006	108,371	(542)	107,830
Year 9	2007	110,248	(551)	109,697
Year 10	2008	111,428	(557)	110,871
5 Year Baseline - Water into Distribution System				
Year 1	2003	148,580	(743)	147,837
Year 2	2004	114,903	(575)	114,329
Year 3	2005	115,288	(576)	114,712
Year 4	2006	108,371	(542)	107,830
Year 5	2007	110,248	(551)	109,697
2015 Compliance Year - Water into Distribution System				
2015		72,839	-	72,839
** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*				

Continued on next page

SB X7-7 Table 4-A: Volume Entering the Distribution System(s) Complete one table for each source.				
Name of Source	**Well #6**			
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	1999	-	-	0
Year 2	2000	-	-	0
Year 3	2001	115,079	-	115,079
Year 4	2002	287,229	-	287,229
Year 5	2003	287,017	-	287,017
Year 6	2004	344,155	-	344,155
Year 7	2005	306,139	-	306,139
Year 8	2006	219,917	-	219,917
Year 9	2007	233,599	-	233,599
Year 10	2008	201,686	-	201,686
5 Year Baseline - Water into Distribution System				
Year 1	2003	287,017	-	287,017
Year 2	2004	344,155	-	344,155
Year 3	2005	306,139	-	306,139
Year 4	2006	219,917	-	219,917
Year 5	2007	233,599	-	233,599
2015 Compliance Year - Water into Distribution System				
2015		62,742	-	62,742
** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*				

Continued on next page

SB X7-7 Table 4-A: Volume Entering the Distribution System(s) Complete one table for each source.				
Name of Source	**Stirling Bluffs via PID**			
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	1999	80,227	(3,295)	76,932
Year 2	2000	93,797	(3,846)	89,951
Year 3	2001	66,187	(2,714)	63,473
Year 4	2002	35,194	(1,443)	33,751
Year 5	2003	9,019	(370)	8,649
Year 6	2004	34,727	(1,424)	33,303
Year 7	2005	41,772	(1,713)	40,059
Year 8	2006	41,445	(1,699)	39,746
Year 9	2007	42,726	(1,752)	40,974
Year 10	2008	60,754	(2,491)	58,263
5 Year Baseline - Water into Distribution System				
Year 1	2003	9,019	(370)	8,649
Year 2	2004	34,727	(1,424)	33,303
Year 3	2005	41,772	(1,713)	40,059
Year 4	2006	41,445	(1,699)	39,746
Year 5	2007	42,726	(1,752)	40,974
2015 Compliance Year - Water into Distribution System				
2015		101,230	-	101,230
** Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document*				

SB X7-7 Tables 4-B, 4-C, and 4-D are specific to indirect recycled water and process water, which DOWCPP does not have, so they are not included in the calculations or this UWMP.

5.6 Baseline Daily per Capita Water Use

SB X7-7 Table 5 calculates the average GPCD for the baseline periods and 2015. It is followed by Table 6 which summarizes the Baseline Period GPCDs and shows them in comparison to DOWCPP's 2015 GPCD.

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	1999	8,432	646,685	157
Year 2	2000	8,536	618,020	148
Year 3	2001	8,562	695,762	167
Year 4	2002	8,692	739,441	174
Year 5	2003	8,918	743,741	171
Year 6	2004	9,060	807,284	183
Year 7	2005	9,200	745,073	166
Year 8	2006	9,266	695,150	154
Year 9	2007	9,328	695,759	153
Year 10	2008	9,316	683,108	150
10-15 Year Average Baseline GPCD				**162**
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	8,918	743,741	171
Year 2	2004	9,060	807,284	183
Year 3	2005	9,200	745,073	166
Year 4	2006	9,266	695,150	154
Year 5	2007	9,328	695,759	153
5 Year Average Baseline GPCD				**165**
2015 Compliance Year GPCD				
2015		9,622	406,785	**87**

SB X7-7 Table 6: Gallons per Capita per Day *Summary From Table SB X7-7 Table 5*	
10-15 Year Baseline GPCD	162
5 Year Baseline GPCD	165
2015 Compliance Year GPCD	87

5.7 2015 and 2020 Targets

5.7.1 Target Methods

CWC *10608.20 (e) An urban retail water supplier shall include in its urban water management plan due in 2010. . . urban water use target, interim urban water use target,…along with the bases for determining those estimates, including references to supporting data (10608.20(e)).*

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

Each water supplier has four different methods to choose from when determining the 2020 Urban Water Use Target. The four target methods are summarized as follows:

- Target Method 1
  - 80 percent of 10- to 15- Year Baseline GPCD [*CWC 10608.20 (b) (1)*]
- Target Method 2
  - Performance Standards [*CWC 10608.20 (b) (2)*]
  - The sum of the following three performance standards:
    - Efficient Indoor Residential Use
    - Landscape Water Use Equivalent to Model Ordinance
    - 10% reduction in Commercial, Industrial, and Institutional (CII) Water Use from baseline CII use
- Target Method 3
  - 95 percent of Hydrologic Regional Target from the 20 x 2020 Water Convention Plan, State of California Agency Team, 2010. [*CWC 10608.20 (b) (3)*]
- Target Method 4
  - Savings by Water Sector DWR Method 4: DWR was directed to develop a fourth Target Method to calculate 2020 water use targets [*CWC 10608.20 (b) (4)*]. This method identifies water savings obtained through identified practices and subtracts them from the agency's baseline GPCD. Agencies that use Target Method 4 must have their calculations reviewed and approved by DWR.

DOWC reviewed the target methods available and opted to continue using Target Method 1. DOWCPP did not have sufficient data available to perform the calculations necessary for Methods 2 and 4. Using Method 3 would have resulted in a 2020 Target GPCD higher than the Target Identified in Method 1; as per DWR guidance, DOWCPP was therefore required to use the lower 2020 Target GPCD calculated using Method 1.

SB X7-7 Table 7: 2020 Target Method
Select Only One

Target Method		Supporting Documentation
☑	Method 1	SB X7-7 Tables 7A
☐	Method 2	SB X7-7 Tables 7B, 7C, and 7D
☐	Method 3	SB X7-7 Tables 7E
☐	Method 4	Method 4 Calculator

SB X7-7 Table 7-A: Target Method 1
20% Reduction

10-15 Year Baseline GPCD	**2020 Target GPCD**
162	**130**

5.7.2 2020 Target Confirmation & 5-Year Baseline

CWC *10608.22 Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph (3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.*

As part of the UWMP, DOWCPP is required to verify that the calculated 2020 Target GPCD will reduce the agency's 2020 water use by a minimum of 5 percent from the 5-year baseline. DOWCPP's 2020 Target of 130 GPCD meets this requirement and is also above the 100 GPCD minimum set by CWC 10608.22.

SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target

5 Year Baseline GPCD *From SB X7-7 Table 5*	Maximum 2020 Target[1]	Calculated 2020 Target[2]	**Confirmed 2020 Target**
165	157	130	**130**

[1]Maximum 2020 Target is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD.
[2]2020 Target is calculated based on the selected Target Method, see SB X7-7 Table 7 and corresponding tables for agency's calculated target.

DOWCPP must also calculate its 2015 Interim Target, which will be used to determine if DOWCPP is on track to meet the 20% reduction by 2020 requirement. The 2015 Interim Target is the value halfway between the 10- to 15-year Baseline GPCD (from SB X7-7 Table 5) and the confirmed 2020 Target (SB X7-7 Table 7).

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**
130	162	**146**

5.8 2015 Compliance Daily per Capita Water Use

CWC *10608.12 (e) "Compliance daily per-capita water use" means the gross water use during the final year of the reporting period…*

10608.24 (a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

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

As part of the SB X7-7 requirements, water suppliers must calculate their actual 2015 water use to determine whether or not they have met their per capita 2015 target water use and to assess their progress

toward meeting their 2020 target water use. As part of this calculation, in 2015 (and 2020), there are several allowable adjustments that can be made to an agency's gross water use. DOWCPP has not opted to pursue any of these adjustments in determining compliance with the 2015 Interim Target GPCD.

As shown in SB X7-7 Table 9, DOWCPP has surpassed its 2015 Interim Target GPCD. DOWC recognizes that the Drought of 2014-2015 and associated restrictions imposed by the SWRCB are partially responsible for the unprecedented level of conservation by DOWC customers.

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 Adjust-ments	Adjusted 2015 GPCD	2015 GPCD *(Adjusted if applicable)*	**Did Supplier Achieve Targeted Reduction for 2015?**
		Extraor-dinary Events	Economic Adjust-ment	Weather Normal-ization				
87	146	-	-	-	-	87	87	**YES**

Not only has DOWCPP surpassed its 2015 Interim Target, it has also surpassed its 2020 Target of 130 GPCD. DOWC recognizes that water use in 2016 through 2020 will likely rise moderately as a result of easing of the 2015 drought restrictions, but DOWC does not predict any issues with DOWCPP meeting its 2020 target.

The drought helped to raise customer awareness of water resource limitations and the importance of water conservation. DOWCPP continues to provide conservation kits to customers at their request, and also to publicize the importance of using water wisely. In addition, since November 2010, DOWC has printed monthly conservation tips on all customer bills, and DOWC's website, www.delorowater.com, includes numerous resources to assist customers in finding ways to conserve water. This conservation focus is reflected in a downward trend in GPCD, as shown below. These GPCD values were calculated using the same methodology as the data shown in the SB X7-7 tables. **Note that all years highlighted in gray have already fulfilled the 2020 Target of 130 GPCD.**

Table 5-A GPCD 2004-2015			
Year	Total Population	Annual Gross Water Use	GPCD
2004	9,060	807,284	183
2005	9,200	745,073	166
2006	9,266	695,150	154
2007	9,328	695,759	153
2008	9,316	683,108	150
2009	9,343	635,846	139
2010	9,355	586,513	128
2011	9,376	556,451	122
2012	9,437	613,866	133
2013	9,466	599,979	130
2014	9,527	513,763	111
2015	9,546	406,785	87

5.9 Regional Alliance

Del Oro does not participate in a Regional Alliance. Table 5-2 is therefore not applicable.

Chapter 6 - System Supplies

DOWCPP uses groundwater as its main source of supply. This is supplemented with transfers from DOWC's Stirling Bluffs District. Chapter 6 discusses these sources of supply and their origins. Discussion of supply reliability is discussed in Chapter 7, and water shortage contingency planning is discussed in Chapter 8.

6.1 Purchased or Imported Water

DOWCPP does not receive water from a wholesale supplier. In 2008, 2009 and 2010, DOWCPP purchased emergency water from Paradise Irrigation District (PID). This is discussed in further detail in Section 6.7 and Chapter 7.

DOWCPP receives transferred water from DOWC's Stirling Bluffs District; it also transfers water to DOWC's Magalia District. Transfers are discussed in Section 6.7.

6.2 Groundwater

CWC *10631 (b) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:*

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For 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 and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

DOWCPP uses groundwater as its main source of supply. Between 2011 and 2015, an annual average of 474,422 CCFs of ground water was pumped from four wells in the District. Water from these wells is of excellent quality and currently requires no treatment, although chlorine disinfection takes place at each of the well sites as a precaution.

6.2.1 Basin Description

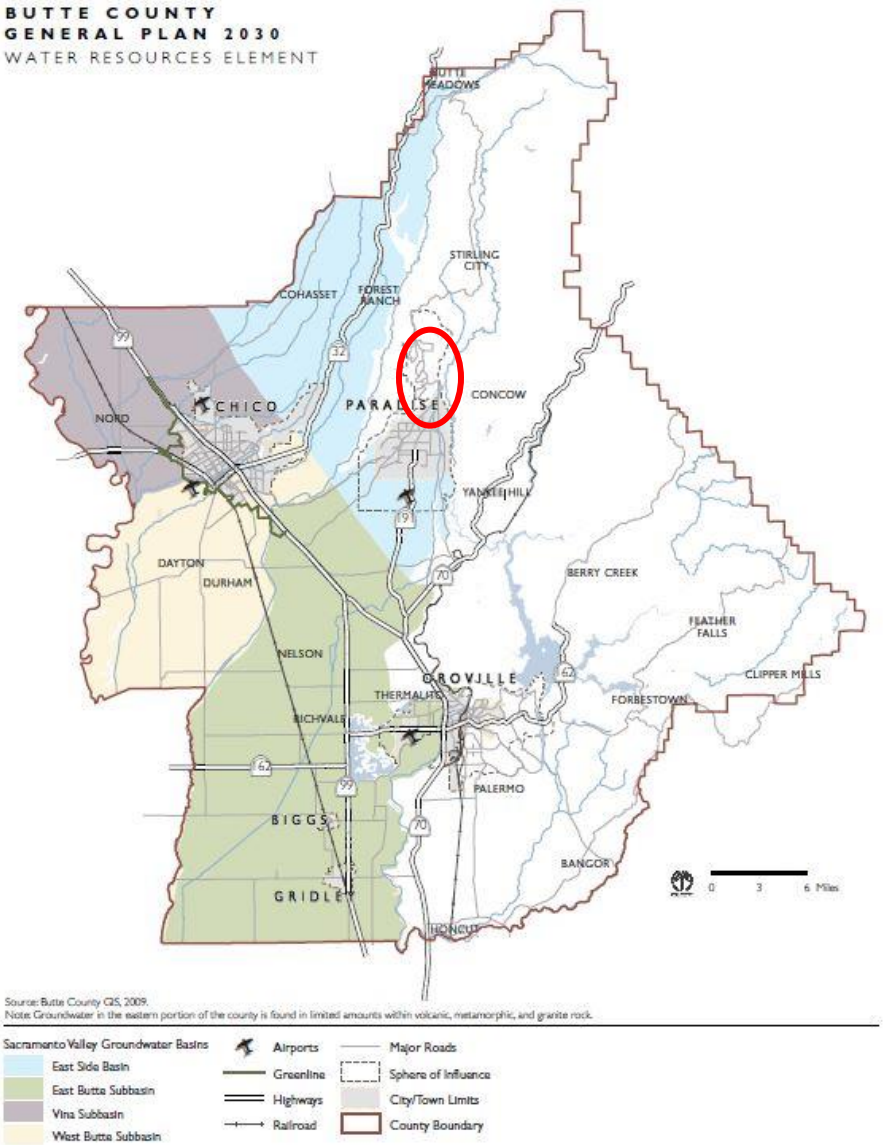
The groundwater in the DOWCPP area is within a volcanic setting; it is not an adjudicated basin. Wells extract water from major water-bearing formations of tertiary channels of the Magalia Channel, which is

filled with large boulders and coarse sand of approximately 20 to 75 feet in depth. These ancient streambeds are covered with multiple layers of pyroclastic flows and fractured rock. The flows are semi-porous and water must percolate down hundreds of feet to the ancient streambeds.

It should be noted that these ancient streambeds are displaced vertically by upthrust faulting. In the area of these wells, the faulting will average one to three faults per mile and in length of the ancient streambeds. The ancient streambeds (tertiary channels) are much different than acquiring water from an aquifer available in the valleys of California.

Ground water in Butte County is governed by the County's Groundwater Management Plan. The introduction to The Butte County Groundwater Management Plan is attached as Appendix G. On page 1-3, the introduction states "Additionally, the foothill and mountain areas of the County do not overlie groundwater basins as defined in Department of Water Resources (DWR) Bulletin 118-2003, and are therefore not included under this GMP". Butte County groundwater water basins are shown in Figure 6-1 from the Butte County General Plan 2030 ("Butte Plan"). Red circle indicates the approximate location of DOWCPP.

Figure 6-1



6.2.2 Groundwater Management

Water levels are monitored regularly at each well, and regular water quality testing is done to ensure water quality. All water pumped from the wells is metered and tracked. When weather and inter-agency supply conditions allow, DOWCPP reduces groundwater pumping and relies more heavily on water transfers from DOWC's Stirling Bluffs District (discussed in Section 6.7). By reducing pumping when feasible, DOWC allows the groundwater resources to recharge. DOWC also actively encourages conservation by its customers, as discussed in further detail in Chapter 9.

Changes to groundwater management under the Sustainable Groundwater Management Act (SGMA) are beginning to be implemented. Several of the activities, including adoption of regulations for Groundwater Sustainability Plans, are not expected to be finalized until June 30, 2016, which is when the 2015 UWMPs are due to DWR (July 1, 2016). Therefore, as per DWR, new requirements for groundwater management under SGMA do not apply to the 2015 UWMPs.

Butte County has begun the formation of a Groundwater Sustainability Agency (GSA) and the creation of a Groundwater Sustainability Plan (GSP), as per the requirements of the SGMA. Because DOWCPP is not served by a basin, DOWC is not eligible to participate in the Butte County area proposed GSA. As an Urban Water Supplier in the greater Butte County area, DOWC is considered an "interested party" for the purposes of SGMA discussion. DOWC therefore receives communications regarding SGMA implementation efforts, but has no vote.

6.2.3 Overdraft Conditions

The fractured rock aquifer groundwater supply is not adjudicated and DWR has not identified or projected this supply to be in overdraft.

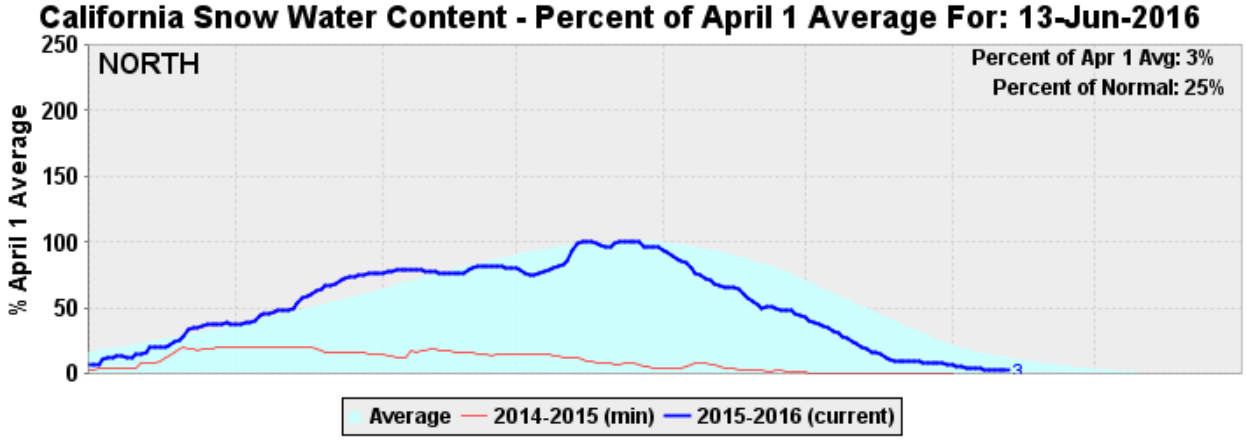
According to our records, DOWCPP did not suffer a water shortage in the 1977-78 drought, primarily due to the stability of the existing wells. Since that time, additional wells have been added to accommodate additional customer connections and the resulting increased demand.

With the recent drought of 2012-2015, the Sierra Foothills have suffered from below normal rainfall and snowfall; the 2013-2014 and 2014-2015 water years, in particular, saw the lowest snow pack on record (see figure 6-2). As a result, the aquifer(s) have not recharged to previous levels. Wells in the greater DOWCPP area, including those operated by DOWC, those operated by neighboring PID, and those operated by private individuals, appear to have taxed the ancient streambeds, as they are now pumping from substantially deeper levels and producing fewer gallons per minute due to lift. The conditions have limited the amount of water available from the tertiary channel(s).

Fortunately, as of June 16, 2016, the snowpack in the northern California region, which serves the Paradise Pines area, has returned to approximately average levels, as shown in Figure 6-2. DOWC is closely monitoring the water levels in the wells. DOWCPP has reduced pumping of the groundwater, as described above, to allow the aquifer(s) to recharge. DOWC will continue to consider the effects of past and potential drought on the system and act proactively, where possible, to protect and improve the groundwater source.

DOWC intends to investigate the aquifer(s) in the DOWCPP area to determine the "safe yield". This will culminate in a study that will provide guidelines for well water management to promote protection of the aquifer(s) from overdraft or "mining" of groundwater resources.

Figure 6-2



Source: Department of Water Resources, California Data Exchange Center.
http://cdec.water.ca.gov/cdecapp/snowapp/swcchart.action

In general, DOWCPP has anticipated, instead of reacted to, the lower yields and increased demand. This includes urging voluntary water conservation at all times, and imposing mandatory water conservation when necessary. Water conservation efforts made by its customers have been very effective, especially during the recent drought. From June 2015 through May 2016, DOWCPP conserved 41.61%, as compared to the same period in 2013. Water shortage contingency plans, including mandatory conservation, are discussed in Chapter 8. Demand management measures are discussed in greater detail in Chapter 9.

6.2.4 Historical Groundwater Pumping

The following wells provide water for DOWCPP:

- Well #2, located on Brandy Lane, was installed in 1965. It was drilled to a depth of 525 feet and is 20" in diameter. In 2015, this well produced 118,626 CCFs of water.

- Well #3, located on West Park Drive, was installed in 1976. It was drilled to a depth of 702 feet and is 12" in diameter. In 2015, this well produced 68,706 CCFs of water.

- Well #4, located on Compton Drive, was installed in 1986. It was drilled to a depth of 700 feet and is 14" in diameter. In 2015, this well produced 72,844 CCFs of water.

- Well #6, located on Lakeridge Court, was installed in 2001. It was drilled to a depth of 709 feet and is 14" in diameter. In 2015, this well produced 62,746 CCFs of water.

The following wells exist, but do not supply water to DOWCPP:

- Well #1 was installed in 1959. It was drilled to a depth of 507 feet and is 16" in diameter. This well has exceeded its expected lifespan; it is inactive and disconnected from the system. Using Well #1 has a detrimental effect on Well #2, so it will not likely be activated again.

- Well #5, located off Perry Rd., was installed in 1973. It was drilled to a depth of 475 feet and is 10" in diameter. This well is inactive and is disconnected from the system.

The four active wells owned by DOWCPP each have an estimated life expectancy of approximately forty (40) years. Therefore, the integrity of the wells is expected to remain stable until at least 2005, 2016, 2026, and 2041, respectively. Although Well #2 has exceeded its life expectancy, it currently shows no signs of problems. If an active well becomes inoperable, it will be rehabilitated or replaced as needed. Rehabilitation will probably not be required in the next 10 or more years.

Groundwater production for calendar years 2011 - 2015 is shown in Table 6-1, below. DOWCPP has observed decreased water levels, but has not experienced any deficiencies in groundwater pumped in this period. Projected groundwater production for 2020 - 2040 is shown in Table 6-9, in Section 6.9.

Table 6-1 Retail: Groundwater Volume Pumped

Groundwater Type *Drop Down List* *May use each category multiple times*	Location or Basin Name	2011	2012	2013	2014	2015
Add additional rows as needed						
Fractured Rock	WELL 2 - BRANDY	184,581	184,013	195,326	176,019	118,618
Fractured Rock	WELL 3 - W PARK	102,534	124,459	118,655	94,697	68,701
Fractured Rock	WELL 4 - COMPTON	84,783	106,494	111,691	89,361	72,839
Fractured Rock	WELL 6 - LAKERIDGE	106,420	139,547	105,344	75,737	62,742
	TOTAL	478,319	554,514	531,017	435,815	322,899

6.3 Surface Water

DOWCPP does not have direct access to a source of surface water, nor does it have the facilities to collect or treat surface water.

Some surface water from DOWC's Stirling Bluffs District, which has been treated by DOWCPP's neighbor, PID, is transferred to DOWCPP. Refer to section 6.7 for further information regarding transfers.

6.4 Stormwater

There is no stormwater capture system in the DOWCPP area; as such, DOWCPP does not have the option of treating stormwater.

6.5 Wastewater and Recycled Water

CWC *10633 The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.*

(a) (Describe) the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) (Describe) the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) (Describe) the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

DOWCPP does not have a sewer system; the area is fully serviced by septic systems with no plans to move to a central reclamation system. As such, DOWC does not have the option of recycling wastewater.

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

☑	There is no wastewater collection system. The supplier will not complete the table below.
0%	Percentage of 2015 service area covered by wastewater collection system *(optional)*
0%	Percentage of 2015 service area population covered by wastewater collection system *(optional)*

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2015	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
Add additional rows as needed						
Total Wastewater Collected from Service Area in 2015:		0				

Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2015

☑	No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.

Table 6-4 Retail: Current and Projected Recycled Water Direct Beneficial Uses Within Service Area

☑	Recycled water is not used and is not planned for use within the service area of the supplier. The supplier will not complete the table below.

Table 6-5 Retail: 2010 UWMP Recycled Water Use Projection Compared to 2015 Actual	
☑	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.

CWC *10633 (d) (Describe and quantify) the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.*

(e) (Describe) the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) (Describe the) actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre feet of recycled water used per year.

(g) (Provide a) plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

Table 6-6 Retail: Methods to Expand Future Recycled Water Use	
☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.

DOWCPP does not have a sewer system; the area is fully serviced by septic systems with no plans to move to a central reclamation system. As such, DOWC does not have the option of recycling wastewater. Further, the topography the DOWCPP service area prohibits an economical large-scale recycling project. There is a significant difference in elevation from the top of the service area to its lower levels. Pumping costs alone at current energy prices make potential projects not economically viable.

There are no feasible potential uses of recycled water for agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, or other appropriate uses.

By design, septic systems provide some level of groundwater recharge.

6.6 Desalinated Water Opportunities

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

As a landlocked water district located approximately 117 miles inland, there are no ocean water desalination opportunities. There are also no sources of brackish surface water or brackish groundwater available for desalination.

6.7 Exchanges or Transfers

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

To supplement the groundwater sources in DOWCPP, surplus water is transferred from DOWC's Stirling Bluffs District. An average of 96,669 CCFs was transferred annually between 2011 and 2015. This surplus water is conveyed via Pacific Gas and Electric's (PG&E) Hendricks Canal into Little Butte Creek, which flows into the PID Reservoir. PID treats this water at its filtration plant and delivers it to DOWCPP through an intertie. The intertie was renovated in 1997 and has a life expectancy of at least 40 years. This process was described in detail in DOWC's 2000 Water Management Program.

PID has previously sold DOWC surplus water from its reservoirs as a temporary solution to DOWCPP's supply shortfall, especially during drought years. The last such sale occurred in 2010, when DOWCPP imported approximately 49,689 CCFs (or 114.07 acre feet). Prior to 2011, some of the water transferred from DOWC's Stirling Bluffs District was allocated to DOWC's Lime Saddle District and "wheeled" through the neighboring PID system. The completion of the Regional Intertie Project (described in more detail in Chapter 7), has eliminated the need to "wheel" water to Lime Saddle. Thus the water previously transferred to Lime Saddle District is now available to DOWCPP, eliminating the need for DOWCPP to purchase water from PID.

DOWC maintains an agreement with PID that would allow the intertie to be used to supply DOWCPP with emergency water from PID, or to be used to supply PID with emergency water from DOWCPP, in the event of an emergency. Emergency interties are addressed in Chapter 7, Water Supply Reliability.

6.8 Future Water Projects

CWC *10631 (g) …The urban water supplier shall include a detailed description of expected future projects and programs… that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.*

Table 6-7 Retail: Expected Future Water Supply Projects or Programs	
☑	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.
☑	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.

The following are planned system improvements or ideas to be considered for DOWCPP that will have a positive effect on the water supply. DOWC is not able to reasonably estimate the increased water supply of each project at this time.

1) As new wells are considered a short-term solution only, investigate the possibility of injecting surplus surface water into the groundwater basin for the purpose of recharging the groundwater basin during off-peak months.

2) Utilize the Lake Oroville water entitlement currently used by DOWC's Lime Saddle District, but add a point of diversion to be able to take the water from the Feather River before it flows into Lake Oroville. This is to be taken at a time of the year when it would not affect the minimum flow in the river and all down-river water rights are satisfied. This water would be transported via the Hendricks Canal, processed by PID, and delivered to Paradise Pines using the current intertie, similar to the process of transferring water from DOWC's Stirling Bluffs District.

3) Explore the possibility of DOWCPP purchasing excess water that PID spills from its reservoirs in the winter months, thereby allowing DOWCPP to rest its wells during that period.

4) Explore the possibility of DOWCPP cooperating with PID in raising the dam at the Paradise reservoir to provide more surface-water storage for periods of higher demand.

5) Explore the possibility of acquiring water from PG&E at or near DeSabla Reservoir, which could then be gravity fed to DOWCPP's Upper Zone. This would require construction of a treatment plant.

6.9 Summary of Existing and Planned Sources of Water

CWC *10631(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision 10631(a).*

(4) [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.

Current year water supply values are included, by source, in Table 6-8, below.

Table 6-8 Retail: Water Supplies — Actual

Water Supply	Additional Detail on Water Supply	2015	
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		Actual Volume	Water Quality *Drop Down List*
Groundwater	WELL 2 - BRANDY	118,618	Drinking Water
Groundwater	WELL 3 – W PARK	68,701	Drinking Water
Groundwater	WELL 4 - COMPTON	72,839	Drinking Water
Groundwater	WELL 6 - LAKERIDGE	62,742	Drinking Water
Transfers	DOWC Stirling Bluffs	83,836	Drinking Water
	Total	406,735	

Projected water supplies for years 2020 through 2040 are reported in Table 6-9, below. Groundwater projections are based on the average historical well production during the 10-year period of 2004 through 2013. During a drought or other water disaster, the volume of available supply may be reduced.

Transfers are projected as follows: DOWC's Stirling Bluffs District has rights to 365 acre feet (AF) of surface water. Historically, Stirling Bluffs has rarely used more than 65 AF, leaving the remainder available for transfers. To be conservative, DOWC has assumed that Stirling Bluffs will use 70 AF, leaving 295 AF for transfers. DOWC then assumes that 10% will be lost to evaporation during transportation, reducing the available transfer total to 265.5 AF. Historically, approximately 30-40 AF have been transferred to DOWC's Magalia District; DOWC therefore assumes that 40 AF will be transferred to Magalia District, leaving 225.5 AF (98227.8 CCF) available for DOWCPP.

Table 6-9 Retail: Water Supplies — Projected

Water Supply	Additional Detail on Water Supply	Projected Water Supply *Report To the Extent Practicable*				
Drop down list *May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool*		**2020**	**2025**	**2030**	**2035**	**2040** *(opt)*
		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
Groundwater	WELL 2 - BRANDY	197,473	197,473	197,473	197,473	197,473
Groundwater	WELL 3 - W PARK	118,226	118,226	118,226	118,226	118,226
Groundwater	WELL 4 - COMPTON	103,837	103,837	103,837	103,837	103,837
Groundwater	WELL 6 - LAKERIDGE	199,109	199,109	199,109	199,109	199,109
Transfers	DOWC Stirling Bluffs	98,228	98,228	98,228	98,228	98,228
	Total	716,873	716,873	716,873	716,873	716,873

Chapter 7 - Water Supply Reliability

This chapter describes the reliability of DOWCPP's water supply and projects the reliability over 20 years. Descriptions provided include normal years, single dry years, and multiple dry years. All projections are based upon information known to DOWC at the time of preparation this 2015. As such, projections are subject to change.

This chapter focuses on the long-term reliability of DOWCPP's water supplies. Shorter-term reliability planning that may require immediate action, such as drought or a catastrophic supply interruption, is addressed in Chapter 8, Water Shortage Contingency Planning.

7.1 Constraints on Water Sources

CWC *10631(c)(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.*

10634 The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

There are no legal, environmental, or water quality factors that result in inconsistency of supply for DOWCPP for the period studied in this plan.

The 2015 Consumer Confidence Report for DOWCPP's water quality is provided as Appendix H. There are no water quality changes anticipated in the next 20 years that would affect the reliability of the water supply.

DOWCPP uses groundwater as its main source of supply, pumped from four wells, as described in Chapters 3 and 6. Water from these wells is of excellent quality and currently requires no treatment, although chlorine disinfection takes place at each of the well sites as a precaution.

Transferred groundwater is routed through Paradise Irrigation District's (PID) Paradise Lake and Magalia Reservoir and treated at the PID treatment plant before being delivered to DOWCPP. Per PID's UWMP[2],

> [PID's] biggest potential threat to the water quality… was contamination of our Magalia Reservoir… from a vehicle accident on the highway crossing the dam. We were vulnerable to a tanker truck overturning and spilling into the reservoir. This threat to our ability to deliver water… has been eliminated by the construction of our $2.8 million Magalia Reservoir Raw Water Bypass… PID now has a delivery pipeline that takes water from above Magalia Reservoir and delivers it directly to our treatment plant.

Further, Butte County has established a Watershed Protection Zone for the runoff that enters PID's reservoirs, to protect the quality of the raw water in these reservoirs, and therefore protect the quality of the final treated water that is transferred to DOWCPP.

Although climatic changes from seasonal rainfall can result in an inconsistent supply of water in many areas, the deep fractured rock aquifer(s) of DOWCPP's service area do not immediately reflect current weather conditions. It can take up to seven years for surface water to reach the aquifer(s) accessed by

[2] PID's UWMP is available at https://www.paradiseirrigation.com/
(Direct URL to final version not available at time of writing; only draft version available)

DOWCPP's wells. Because climate is not predictive of groundwater availability in the DOWCPP area, DOWC continuously monitors well levels, analyzing trends for predictors of declining groundwater levels and applying demand management measures to the extent possible to minimize the impact to our customers. Historically, transferred water from DOWC's Stirling Bluffs District was primarily used in the late summer and early fall months, when demand was highest. DOWC has recently taken a proactive approach to overall water management by utilizing transferred surface water in the winter and early spring months, when surface water is most abundant. This allows the wells to "rest" during this period, and minimizes impacts on surface water supplies in the greater Butte County area by utilizing surface water during periods of high surface water levels.

DOWCPP has been, and will continue to, replace aging pipelines to reduce water loss. Since 2010, DOWCPP has replaced a total of 14,350 feet of mainline, as well as replacing or upgrading 213 services and 20 hydrants. DOWCPP also undertook a meter replacement project, replacing nearly 800 of the oldest meters with new meters. These projects contributed to a significant reduction in water loss.

Further, in order to address long-term water supply reliability in DOWCPP, as well as DOWC's Lime Saddle and Magalia Districts, a Regional Intertie Project ("RIP") was recently completed. The RIP was primarily focused on Lime Saddle District, where additional mainlines and storage were added, together with an upgrade to the Lake Oroville intake. As a result of the RIP, Lime Saddle is now able to serve its customers with sufficient internal water supplies (from groundwater and Lake Oroville), such that Lime Saddle District no longer needs transferred water from DOWC's Stirling Bluffs District. This frees the excess water from Stirling Bluffs District to be used by DOWCPP and Magalia District. With the increased availability of transferred water, DOWCPP no longer faces a water supply deficit.

Possible plans to supplement existing water sources are discussed in Chapter 6, Section 6.8.

7.2 Reliability by Type of Year

CWC *10631(c)(1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:*

(A) an average water year,

(B) a single dry water year,

(C) multiple dry water years.

Table 7.1 is omitted from this section as DOWCPP's quantification of supplies is not compatible with the table. The requested information is instead provided in narrative form, as follows.

7.2.1 Transferred Water

As described in Section 6.9, DOWCPP expects 98,227.8 CCF (225.5 AF) of transferred water from DOWC's Stirling Bluffs District to be available in an average year. This same amount is also expected to be available in dry years. Climatic impact from dry years is not expected to limit the total water available for transfer to DOWCPP due to the following facts:

a) Stirling Bluffs District is contractually guaranteed 365 AF per year.
b) Stirling Bluffs District's water needs are not projected to increase in the next 20 years.
c) The water needs of Magalia District (which also receives transferred water from Stirling Bluffs District) are not projected to increase in the next 20 years.

7.2.2 Groundwater

DOWCPP is not located in a groundwater basin (monitored, partially monitored, or unmonitored) as defined by the California Statewide Groundwater Elevation Monitoring (CASGEM) Program or Bulletin 118. As such, there is no historical data available regarding the groundwater in DOWCPP, except for DOWC's own records of well levels and water production.

Average Year

As described in Section 7.1, DOWCPP's water supplies are minimally affected by climatic variations. While shortfalls of rain and snow do eventually affect the total percolation of water to the aquifer(s) of the DOWCPP area, water percolates at various rates and may take up to seven years to reach the aquifer(s). The result is that DOWCPP is unlikely to observe sharp increases or decreases in well levels due to climate. Instead, declining well levels may be observed for up to several years following the cessation of a drought, and rising well levels may be observed during a drought that follows good rainfall years. As such, it is very difficult to pinpoint an "average year". Rather, as shown in Chapter 6, Section 6.9, DOWC has calculated the "average year" as an average of the years 2004 through 2013. DOWC believes this period most closely represents the average water supply available to DOWCPP. Supply projections for average years are shown in Table 7.2.

Single Dry Year

The "single dry year" is the year that represents the lowest water supply available to the agency. DOWC has estimated the single dry year supply as the average of actual well production in 2013 and 2014. This is a conservative estimate, as the projected "single dry year supply" is probably lower than actual capacity; the wells have been actively supplemented with surface water annually since 1999, and groundwater pumping has been reduced to allow the wells to recharge. Further, water pumped in any zone can be transported to any other zone through the existing infrastructure, so issues with individual wells will not prevent water service to any portion of DOWCPP. Supply projections for single dry years are shown in Table 7.2.

Multiple Dry Year Period

The "multiple dry year period" is the period that represents the lowest average water supply available to the agency for a consecutive multiple year period (three years or more). In the absence of other predictive information, DOWC has conservatively projected multiple dry years as follows:

- First year – Groundwater supply equal to 90% of the average year.
- Second Year – Groundwater supply equal to the average of the first and third year projections.
- Third Year – Groundwater supply equal to the single dry year.

7.3 Supply and Demand Assessment

CWC *10635 (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional or local agency population projections within the service area of the urban water supplier.*

The following projected water supplies for normal (average), single-dry year, and multiple-dry years for 2020, 2025, 2030 and 2035 are based upon information available at the time the 2015 UWMP is prepared and are subject to change.

Supply projections for average years are given in Table 7-2 and compared to water demand as projected in Chapter 4. See Chapter 4 for a discussion of how the demand was calculated.

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

	2020	2025	2030	2035	2040 *(Opt)*
Supply totals *(autofill from Table 6-9)*	716,873	716,873	716,873	716,873	716,873
Demand totals *(autofill from Table 4-3)*	620,415	633,533	646,938	660,638	674,637
Difference	96,457	83,340	69,934	56,235	42,235

Supply projections for single dry years, as defined in Section 7.2, are given in Table 7-3 and compared to projected water demand. Historical records from the droughts of 1977-78, 1991-92, and 2014-15 show that DOWCPP customers conserve an average of 29.99% during "single dry years", which are the driest years on record, when mandatory drought restrictions (see Chapter 8) are in effect. During the most recent drought, from June 2015 through May 2016, DOWCPP conserved 41.61%, as compared to the same period in 2013. DOWC has therefore conservatively reduced the projected demand by 25% as compared to average year projections.

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison

	2020	2025	2030	2035	2040 (Opt)
Supply totals	581,643	581,643	581,643	581,643	581,643
Demand totals	465,312	475,150	485,204	495,478	505,978
Difference	116,332	106,494	96,440	86,165	75,665

Supply projections for multiple dry years, as defined in Section 7.2, are given in Table 7-4 and compared to projected water demand. Historical records from the droughts of 1977-78, 1991-92, and 2014-15 were reviewed to determine demand projections. Since droughts are not usually declared during the first dry year, the years immediately preceding declared drought years (1976, 1990, and 2013) are considered historical “first dry years”. The first years of declared droughts (1977, 1991, and 2014) are considered “second dry years”, and the second years of declared droughts (1978, 1992, and 2015) are considered “third dry years”. Historical records show that DOWCPP customers:

- Conserve less than 1% in the year immediately preceding a declared drought (1976, 1990, and 2013).
- Conserve an average of 22.24% during the first year of a declared drought (1977, 1991, and 2014).

- Conserve an average of 29.99% during the second year of a declared drought (1978, 1992, and 2015). During the most recent drought, from June 2015 through May 2016, DOWCPP conserved 41.61%, as compared to the same period in 2013.

Based on these facts, DOWC conservatively projected no change in demand in the first year, an 18% reduction in demand in the second year, and a 25% reduction in demand in the third year.

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison

		2020	2025	2030	2035	2040 (Opt)
First year	Supply totals	655,008	655,008	655,008	655,008	655,008
	Demand totals	620,415	633,533	646,938	660,638	674,637
	Difference	34,592	21,475	8,069	(5,630)	(19,630)
Second year	Supply totals	618,326	618,326	618,326	618,326	618,326
	Demand totals	508,741	519,497	530,489	541,723	553,203
	Difference	109,585	98,829	87,836	76,603	65,123
Third year	Supply totals	581,643	581,643	581,643	581,643	581,643
	Demand totals	465,312	475,150	485,204	495,478	505,978
	Difference	116,332	106,494	96,440	86,165	75,665

The above reductions in historical and projected demand assume implementation of demand management measures and/or drought stages (see chapter 8) and increased conservation/drought messaging to customers.

The possible shortage of water in first dry years in 2035 and beyond emphasizes the importance of DOWC's continuing emphasis on everyday conservation and reduction in overall water use among customers. DOWC will also continue looking for ways to decrease water loss, including Capital Improvement Plans which will replace some of DOWCPP's oldest (and most likely to leak) mainlines, and ongoing leak surveys. Also, as discussed previously, DOWC's supply projections are based on historical pumping data and are probably lower than the actual capacity of the wells. DOWC further maintains an agreement with neighboring PID, which allows the purchase of water from PID, via the existing intertie, on an emergency basis. PID has previously sold DOWC surplus water from its reservoirs as a temporary solution to DOWCPP's supply shortfall, especially during drought years.

In years when DOWCPP projects a surplus of water, DOWCPP intends to make full use of transferred water, allowing the excess groundwater to remain in the aquifer(s) to help maintain water levels for future dry years. DOWC will continue to monitor well levels; it is DOWC's intent that, by resting the wells in surplus years, a greater groundwater supply than currently projected will be available in dry years.

7.4 Regional Supply Reliability

CWC *10620(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.*

DOWCPP is looking at alternatives for drought supply. There is a more than adequate water supply for normal years. The need for drought supplies is based on historical periods of drought on record.

DOWC is exploring the possibility of installing a new well within DOWCPP's service area to increase available supply during drought events. Also, as discussed previously, DOWC's supply projections are based on historical pumping data and are probably lower than the actual capacity of the wells. Further exploration of the existing aquifer(s) will be necessary to better understand the maximum capacity of DOWCPP's wells.

DOWCPP has evaluated additional water supplies including alternative groundwater source development and imports from other sources. It appears at this time that maximizing DOWCPP's own resources and transferring excess water from DOWC's nearby Stirling Bluffs District is the most economically feasible long-term supply.

Chapter 8 - Water Shortage Contingency Planning

CWC *10632 (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier.*

As a CPUC-regulated utility, DOWCPP's authority is established and regulated by the CPUC. Authority for actions that may be taken to address water waste and conservation are established in Rules 11, 14.1, and 20, further discussed below. Staged plans for dealing with water shortages are specifically addressed in Rule 14.1 Water Shortage Contingency Plan (Appendix I) and Schedule 14.1 Staged Mandatory Water Use Reductions (Appendix J). Sudden emergencies and catastrophic supply interruptions are discussed in the Emergency Contingency Plan (Appendix K).

Rules 11, 14.1, and 20 are always in effect. The elevated Stages in Rule 14.1, however, must be specifically invoked as needed, which is discussed in greater detail in Section 8.1.

Rule 20 has been in place since 1995. It provides a summary of the need for water conservation, and provides specific requirements as to Water-Saving Kits that must be made available to customers. Kits are available at all times, even when there are no dry weather conditions or supply shortages.

Rule No. 20 – Water Conservation

A. Purpose

The purpose of this rule is to ensure that water resources available to the utility are put to reasonable beneficial use and that the benefits of the utility's water supply and service extend to the largest number of persons.

B. Waste of Water Discouraged

Refer to Rule 11.B.(3).

C. Use of Water-Saving Devices and Practices

Each customer of the utility is urged to install devices to reduce the quantity of water to flush toilets and to reduce the flow rate of showers. Each customer is further urged to adopt such other water usage and reusage practices and procedures as are feasible and reasonable.

D. Water-Saving Kits

The utility will make available, without initial cost to the customer, for use in each residence receiving water service from the utility, a water-saving kit containing the following:

(1) A device or devices for reducing toilet flush water requirements;

(2) A device or devices for reducing shower flow rates;

(3) A dye tablet or tablets for determining if a toilet tank leaks;

(4) Other devices from time to time approved by the utility;

(5) Installation and other instructions and information pertinent to conservation of water.

Rule 11 addresses Discontinuance and Restoration of Service. As identified in Rule 20, the portion specific to Waste of Water, is Rule 11.B.(3). Rule 11.B.(2) also addresses discontinuance where safety of

the water supply is endangered. Finally, Rule 11.D.(1) provides that DOWC can refuse to serve anyone whose intended use of the water would harm existing customers, or who refuses to comply with DOWC's CPUC-approved rules, including Rules 11, 14.1, and 20.

Rule 11 Discontinuance and Restoration of Service

B. Discontinuance of Service by Utility

2. For Noncompliance with Rules

The utility may discontinue service to any customer for violation of these rules after it has given the customer at least five day's written notice of such intention. Where safety of water supply is endangered, service may be discontinued immediately without notice.

3. For Waste of Water

a. Where negligent or wasteful use of water exists on a customer's premises, the utility may discontinue the service if such practices are not remedied within five days after it has given the customer written notice to such effect.

b. In order to protect itself against serious and unnecessary waste or misuse of water, the utility may meter any flat rate service and apply the regularly established meter rates where the customer continues to misuse or waste water beyond five days after the utility has given the customer written notice to such effect.*

D. Refusal to Serve

1. Conditions for Refusal

The utility may refuse to serve an applicant for service under the following conditions:

a. If the applicant fails to comply with any of the rules as filed with the Public Utilities Commission.

b. If the intended use of the service is of such a nature that it will be detrimental or injurious to existing customers.

*Note that all DOWCPP customers are metered, so Rule 11.B.(3).b is no longer applicable.

8.1 Stages of Action

CWC *10632(a)(1) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.*

As the water purveyor, DOWCPP must provide the minimum health and safety water needs of the community at all times. The water shortage response is designed to provide a minimum of 50% of normal supply during a severe or extended water shortage. The stages shown in Table 8-1, below, were

established, in part, to ensure this goal is met. Note that, although not designated as a Stage, certain prohibitions on end use are always forbidden by DOWC's Rule 14.1, as described in Section 8.2.

Table 8-1 Retail - Stages of Water Shortage Contingency Plan

Stage	Complete Both	
	Percent Supply Reduction[1] *Numerical value as a percent*	Water Supply Condition (*Narrative description)*
Add additional rows as needed		
Rule 14.1 - 1	0%	SEE NOTES & UWMP NARRATIVE
Rule 14.1 - 2	10%	
Rule 14.1 - 3	25%	
Rule 14.1 - 4	50%	
Schedule 14.1 - 1	20%+	
Schedule 14.1 - 2	25%+	
Schedule 14.1 - 3	25%+	
Schedule 14.1 - 4	25%+	
[1] One stage in the Water Shortage Contingency Plan must address a water shortage of 50%.		

NOTES:
% Supply reduction figures are guidelines only. So long as one or more of the following requirements are met, DOWCPP may choose to implement any Stage of Rule 14.1 that management deems appropriate, subject to CPUC approval of a Tier 1 Advice Letter:

A. Water supplies are projected to be insufficient to meet normal customer demand by DOWC; or
B. A water supply shortage or threatened shortage exists; or
C. Water supplies are curtailed by a wholesale water supplier; or
D. [When] Directed to do so under a duly adopted emergency regulation by the Commission or other authorized government agencies.

Further, Schedule 14.1, which includes rationing procedures, may be implemented in conjunction with any Stage of Rule 14.1, with approval by the CPUC of a Tier 2 Advice Letter.

In all stages of Rule 14.1 and Schedule 14.1, customers are encouraged to adjust both indoor and outdoor water use to meet the voluntary water reduction requirement. Surcharges for excess use, as well as fines for violating end use prohibitions, are not applicable until Schedule 14.1 has been activated at Stage 2 or higher. Also, once Schedule 14.1 is activated (with approval of the CPUC), if there are any provisions in Rule 14.1 that are inconsistent with Schedule 14.1, then Schedule 14.1 supersedes Rule 14.1.

Stage 4 of both Rule 14.1 and Schedule 14.1 are likely to be implemented only as the result of a prolonged water shortage or disaster. In these stages, an allotment is provided such that each household receives enough water for essential interior water use.

8.2 Prohibitions on End Uses

CWC *10632(a)(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.*

(a)(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

(b) Commencing with the urban water management plan update due July 1, 2016, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

Health and Safety Code Section 115921 *As used in this article the following terms have the following meanings: (a) "Swimming pool" or "pool" means any structure intended for swimming or recreational bathing that contains water over 18 inches deep. "Swimming pool" includes in-ground and aboveground structures and includes, but is not limited to, hot tubs, spas, portable spas, and non-portable wading pools.*

Table 8.2 Summarizes restrictions and prohibitions on end uses. In the Stage column, "R" indicates Rule 14.1 and "S" indicates Schedule 14.1. Specific prohibitions on end uses are provided in greater detail in Rule 14.1 (Appendix I) and Schedule 14.1 (Appendix J).

Table 8-2 Retail Only: Restrictions and Prohibitions on End Uses

Stage	Restrictions and Prohibitions on End Users *Drop down list* *These are the only categories that will be accepted by the WUEdata online submittal tool*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? *Drop Down List*
Always	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	within 7 days of written notification by DOWC	Yes
R1, S 1-2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	within 5 days of written notification by DOWC	Yes
R2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	within 3 days of written notification by DOWC	Yes
R3, S3	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	within 2 days of written notification by DOWC	Yes
R4, S4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	within 1 day of written notification by DOWC	Yes
Always	Other - Require automatic shut of hoses		Yes
R 1-4, S 1-4	Other - Prohibit use of potable water for washing hard surfaces	Driveways and sidewalks	Yes
R 1-4, S 1-4	Other	Any restrictions prescribed by the CPUC or other authorized government agencies	Yes

Always	Landscape - Restrict or prohibit runoff from landscape irrigation		Yes
R 1-4, S 1-4	Landscape - Other landscape restriction or prohibition	Prohibited during and within 48 hours of measurable rainfall	Yes
R 1-3, S 1-3	Landscape - Limit landscape irrigation to specific times	No watering 8am to 6pm	Yes
R 1-2, S 1-2	Landscape - Limit landscape irrigation to specific days	3 days per week	Yes
R3, S-3	Landscape - Limit landscape irrigation to specific days	2 days per week	Yes
R4, S4	Landscape - Prohibit all landscape irrigation	Except hand watering	Yes
R 2-4, S 1-4	Landscape - Other landscape restriction or prohibition	Prohibited on public street medians	Yes
R 2-3, S 1-3	Landscape - Other landscape restriction or prohibition	New construction must be drip or micro spray only	Yes
R 1-4, S 1-4	Water Features - Restrict water use for decorative water features, such as fountains	Must recirculate	Yes
R 2-4, S 1-4	Other water feature or swimming pool restriction	No filling/re-filling of lakes/ponds, except where necessary to maintain valuable pre-existing aquatic life	Yes
R2, S 1-2	Other water feature or swimming pool restriction	No filling/re-filling of pools/spas (some exceptions)	Yes
R 3-4, S 3-4	Other water feature or swimming pool restriction	No filling/re-filling of pools/spas (no exceptions)	Yes
R 2-4, S 1-4	CII - Restaurants may only serve water upon request		Yes
R 2-4, S 1-4	CII - Lodging establishment must offer opt out of linen service		Yes
R3, S3	CII - Other CII restriction or prohibition	Use of potable water for street cleaning with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible)	Yes
R4, S4	CII - Other CII restriction or prohibition	No street cleaning - no exceptions	Yes

R3, S3	CII - Other CII restriction or prohibition	Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used	Yes
R4, S4	CII - Other CII restriction or prohibition	No construction purposes - no exceptions	Yes
NOTES: Landscape: Stages R 1-3 and S 1-3 allow exceptions provided for drip irrigation and micro spray irrigation systems, hand watering, health and safety, and commercial nurseries with alternative conservation plans.			

For Rule 14.1 Stages 2-4 and all of Schedule 14.1, customers may request variances from specific prohibitions, subject to DOWC approval.

In addition, Stages 2 through 4 of Schedule 14.1 establish water budgets for each consumer with ascending surcharges for water use exceeding the budgets. The budgets are based on a specified historical period and are designed to meet the percentage reductions necessary to meet the current water shortage needs. Residential budgets include a minimum threshold, below which no budgets are set regardless of historical usage, to ensure that sufficient water is available to protect the health and safety of customers. Any customer with a special situation, such as medical need or increased household size, is able to submit an *Appeal For Variance From Water Budget* requesting a higher budget than they would otherwise receive. In the recent 2014-2015 drought, Stage 2 of Schedule 14.1 was activated in DOWCPP. DOWC processed 545 appeals and approved 504 variances.

8.3 Penalties, Charges, Other Enforcement of Prohibitions

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

8.3.1 Rule 11 & Rule 14.1

As a CPUC-regulated private utility, DOWCPP does not ordinarily have authority to charge penalties for violations of the prohibitions described in Section 8.2, unless Schedule 14.1 has been activated (which requires CPUC approval). When Schedule 14.1 is not active, DOWCPP's regular enforcement authority is limited to Rule 11 disconnection measures (as previously described), and Rule 14.1 enforcement as shown on the following pages.

Customers whose service has been discontinued according to Rule 11, must pay a $25 reconnection charge when service is restored. However, this is not a penalty for violating the prohibitions; rather, it is a standard charge applicable to all accounts that are reconnected to the water system.

Continued on next page

Rule 14.1

D. Enforcement

Each Stage of this Rule establishes certain restrictions on the use of potable water. Violating the restrictions set forth in a particular Stage while it is in effect is declared a non-essential, wasteful use of potable water. Subject to the schedule and conditions outlined below, DOWC is authorized to install a flow-restricting device on the service line of any customer when its personnel verify a customer is using potable water for non-essential, wasteful uses. No person shall have any right or claim in law or in equity, against DOWC because of, or as a result of, any matter or thing done or threatened to be done pursuant to the restrictions on using potable water for non-essential, wasteful uses.

1. FIRST VIOLATION: DOWC shall provide the customer with a written notice of violation.

2. SECOND VIOLATION: If DOWC verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the first violation, DOWC shall provide the customer with a second written notice of violation and is authorized to install a flow-restricting device on the customer's service line. DOWC shall not be held liable for any injuries, damages, and/or consequences arising from the installation of a flow restricting device.

3. NOTICES OF VIOLATION:

   A. Written notices of violation provided to customers pursuant to this Rule shall document the verified violation and alert the customer to the fact that future violations of the restricted uses of potable water may result in the installation of a flow-restricting device on the customer's service line or the discontinuation of the customer's service.

   B. If DOWC elects to install a flow-restricting device on a customer's service line, the written notice of violation shall explain that a flow-restricting device has or will be installed on the customer's service line, document the steps the customer must take in order for the flow-restricting device to be removed, and explain that after the flow-restricting device is removed, it may be reinstalled, without further notice, if the customer is again verified by DOWC's personnel to be using potable water for non-essential, wasteful uses.

4. FLOW RESTRICTING DEVICE CONDITIONS: The installation of a flow-restricting device on a customer's service line is subject to the following conditions:

   A. The device shall be capable of providing the premise with a minimum of 3 CCF per person, per month, based upon the U.S. Census calculation of the average number of people in a household in the area.

   B. The device may only be removed by DOWC, and only after a minimum three-day period has elapsed.

Rule 14.1 *continued*

C. Any tampering with the device may result in the discontinuation of the customer's water service and the customer being charged for any damage to DOWC's equipment or facilities and any required service visits.

D. After the removal of the device, if DOWC verifies that the customer is using potable water for non-essential, wasteful uses, DOWC may install another flow-restricting device without prior notice. This device may remain in place until water supply conditions warrant its removal. If, despite the installation of the device, DOWC verifies that the customer is using potable water for non-essential and, unauthorized wasteful uses, then DOWC may discontinue the customer's water service, as provided in its Rule No. 11.

5. FLOW-RESTRICTING DEVICE REMOVAL CHARGES: The charge to customers for removal of a flow-restricting device installed pursuant to this Rule is $100 during normal business hours, and $150 for the device to be removed outside of normal business hours.

8.3.2 Schedule 14.1

DOWCPP can invoke Schedule 14.1 Staged Mandatory Water Use Reductions and Drought Surcharges (see Appendix J) with CPUC approval of a Tier 2 Advice Letter. When Schedule 14.1 is activated, the enforcement measures in Schedule 14.1 supersede those in Rule 14.1.

Schedule 14.1

D. Waste of Water Penalties

Each Stage of this Schedule establishes certain restrictions on the use of potable water. Violating the restrictions set forth in a particular Stage while it is in effect is declared a non-essential, wasteful use of potable water. DOWC is authorized to take the following actions when its personnel verify a customer is using potable water for non-essential, wasteful uses. No person shall have any right or claim in law or in equity, against DOWC because of, or as a result of, any matter or thing done or threatened to be done pursuant to the restrictions on using potable water for non-essential, wasteful uses.

Note: When a Stage in this Schedule has been activated, Section D in this Schedule supersedes Section D (Enforcement) in Rule 14.1.

1. FIRST VIOLATION: DOWC shall provide the customer with a written notice of violation. In addition, DOWC is authorized to take the following actions:

A. If the customer currently receives service through a metered connection, install a real-time water measurement device on the customer's service line and provide the customer with access to information from the device. The cost of the device, including installation and ongoing operating costs, shall be billed to the customer, and nonpayment may result in discontinuance of service.

Schedule 14.1 *continued*

B. If the customer does not currently receive service through a metered connection, install a water meter on the customer's service line, charge the customer for water use pursuant to DOWC's metered service tariffs and rules.

2. SECOND VIOLATION: If DOWC verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the first violation, DOWC shall provide the customer with a second written notice of violation. In addition to the actions prescribed under the first violation above, DOWC is authorized to take the following actions:

   A. Apply the following waste of water penalties, which are in addition to any other charges authorized by this Schedule or other DOWC tariffs.

      i. If Stage 1 is in effect, $25 (Stage 1 is detailed below in Section E).

      ii. If Stage 2 is in effect, $50 (Stage 2 is detailed below in Section F).

      iii. If Stage 3 is in effect, $100 (Stage 3 is detailed below in Section G).

      iv. If Stage 4 is in effect, $200 (Stage 4 is detailed below in Section H).

   B. At its sole discretion, waive the waste of water penalty if the customer participates in a water use evaluation provided by DOWC and/or provides documentation to DOWC proving that a drip irrigation system, micro spray irrigation system, high-efficiency sprinkler system, or properly programmed smart irrigation controller has been installed, after a notice of violation was delivered, and is in use at the customer's service address.

3. THIRD VIOLATION: If DOWC verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the second violation, DOWC shall provide the customer with a third written notice of violation. In addition to the actions prescribed under the first and second violations above, DOWC is authorized to take the following actions:

   A. Apply the following waste of water penalties, which are in addition to any other charges authorized by this Schedule or other DOWC tariffs.

      i. If Stage 1 is in effect, $50 (Stage 1 is detailed below in Section E).

      ii. If Stage 2 is in effect, $100 (Stage 2 is detailed below in Section F).

      iii. If Stage 3 is in effect, $200 (Stage 3 is detailed below in Section G).

      iv. If Stage 4 is in effect, $400 (Stage 4 is detailed below in Section H).

Schedule 14.1 *continued*

B. At its sole discretion, waive the waste of water penalty if the customer participates in a water use evaluation provided by DOWC and/or provides documentation to DOWC proving that a drip irrigation system, micro spray irrigation system, high-efficiency sprinkler system, or properly programmed smart irrigation controller has been installed, after a notice of violation was delivered, and is in use at the customer's service address.

4. FOURTH VIOLATION: If DOWC verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the third violation, DOWC shall provide the customer with a fourth written notice of violation. In addition to actions set forth in previous violations prescribed above, DOWC is authorized to install a flow-restricting device on the customer's service line. DOWC shall not be held liable for any injuries, damages, and/or consequences arising from the installation of a flow restricting device.

5. EGREGIOUS VIOLATIONS: Notwithstanding the foregoing framework for penalties, customers who DOWC has verified are egregiously using potable water for non-essential, wasteful uses are subject to having a flow-restricting device installed on their service line. After providing the customer with one notice of egregious violation, either by direct mail or door hanger, which documents the egregious use of potable water for non-essential, wasteful uses and explains that failure to correct the violation may result in the installation of a flow-restricting device on the customer's service line, DOWC is authorized to install a flow-restricting device on the customer's service line. DOWC shall not be held liable for any injuries, damages, and/or consequences arising from the installation of a flow restricting device.

6. NOTICES OF VIOLATION:

   A. Unless otherwise specified, written notices of violation provided to customers pursuant to this Schedule shall document the verified violation and alert the customer to the fact that future violations of the restricted uses of potable water may result in waste of water surcharges being applied to the customer's bill, the installation of a flow-restricting device on the customer's service line, or the discontinuation of the customer's service.
   B. If DOWC elects to install a flow-restricting device on a customer's service line, the written notice of violation shall also explain that a flow-restricting device has or will be installed on the customer's service line, shall document the steps the customer must take in order for the flow-restricting device to be removed, and shall explain that after the flow-restricting device is removed, it may be reinstalled, without further notice, if the customer is again verified by DOWC to be using potable water for non-essential, wasteful uses.

7. FLOW RESTRICTING DEVICE CONDITIONS: The installation of a flow-restricting device on a customer's service line is subject to the following conditions:

   A. The device shall be capable of providing the premise with a minimum of 3 Ccf per person, per month, based upon the U.S. Census calculation of the average number of people in a household in the area.

Schedule 14.1 *continued*

B. The device may only be removed by DOWC, and only after a minimum three-day period has elapsed.

C. Any tampering with the device may result in the discontinuation of the customer's water service and the customer being charged for any damage to DOWC's equipment or facilities and any required service visits.

D. After the removal of the device, if DOWC verifies that the customer is using potable water for non-essential, wasteful uses, DOWC may install another flow-restricting device without prior notice. This service shall remain in place until water supply conditions warrant its removal.

If, despite the installation of the device, DOWC verifies that the customer is using potable water for non-essential and, unauthorized wasteful uses, then DOWC may discontinue the customer's water service, as provided in its Rule No. 11.

8. FLOW-RESTRICTING DEVICE REMOVAL CHARGES: The charge to customers for removal of a flow-restricting device installed pursuant to this Schedule is $100 during normal business hours, and $150 for the device to be removed outside of normal business hours.

8.4 Consumption Reduction Methods

CWC *10632(a)(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.*

In addition to the end use restrictions discussed in Section 8.2, there are steps DOWCPP can take to reduce the total volume of water supply needed during water shortage events. Table 8-3 summarizes some of the reduction methods available to DOWCPP.

Continued on next page

Table 8-3 Retail Only: Stages of Water Shortage Contingency Plan - Consumption Reduction Methods		
Stage	Consumption Reduction Methods by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	Additional Explanation or Reference *(optional)*
Add additional rows as needed		
Always	Reduce System Water Loss	
R 1-4, S 1-4	Decrease Line Flushing	
R 1-4, S 1-4	Expand Public Information Campaign	
R 1-4, S 1-4	Offer Water Use Surveys	
S 2-4	Implement or Modify Drought Rate Structure or Surcharge	Requires approval by CPUC to enact Schedule 14.1
R 3-4, S 1-4	Increase Water Waste Patrols	
R4, S4	Moratorium or Net Zero Demand Increase on New Connections	Requires approval by CPUC
NOTES: "R" indicates Rule 14.1 and "S" indicates Schedule 14.1		

8.5 Determining Water Shortage Reductions

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

All DOWCPP customers are metered. Actual reductions in water use (water savings) by customers are therefore measureable by comparing metered use during periods in which Rule 14.1 and/or Schedule 14.1 stages are activated to preceding periods when the stages were not activated.

Meter readings are reviewed by a corporate analyst immediately after meters are read for each route. Work orders are then issued for field review of individual anomalies, such as unusually high use. This allows DOWC staff to identify potential leaks and notify customers as quickly as possible.

In addition, all of DOWCPP's wells, as well as the transferred water intertie, are metered. Readings are recorded on a daily basis. Therefore, total water production during periods in which Rule 14.1 and/or Schedule 14.1 stages are activated can be easily compared to preceding periods when the stages were not activated. This total production comparison method was used by the SWRCB during the 2014-2015 drought to establish water savings statistics.

All production information is monitored by the Superintendent on a weekly basis. In addition, reports are provided to the corporate office monthly. Production and meter reports are reviewed by accounting and executive staff and compared to projections and reduction goals. During implementation of higher stages, production data is reviewed daily by the superintendent and weekly by the corporate office. During emergency situations, production figures are to be provided to the Superintendent on an hourly basis. Reports may also be reviewed by the Butte County Office of Emergency Services during emergencies.

8.6 Revenue and Expenditure Impacts

CWC *10632(a)(7) An analysis of the impacts of each of the actions and conditions described in*

paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

As per standard CPUC rate structure, DOWCPP rates include a fixed monthly service charge, called a Readiness To Serve (RTS) charge, and a consumption based charge, called Water Quantity (WQ). Therefore, when customer water consumption declines as a result of activating any Stage(s) in Rule 14.1 and/or Schedule 14.1, there is a direct impact to revenue as the total WQ charges decrease. This is usually offset by some savings in the reduction of certain variable costs, such as electricity used to power groundwater well pumps. Direct costs related to the water shortage may also be incurred, such as costs for increased public information campaigns.

When Schedule 14.1 is activated (see Section 8.2, above), penalties may be charged for violations of end use prohibitions, which can result in some revenue to help offset the lost revenues from overall decreased water consumption. When Schedule 14.1 Stage 2, 3, or 4, is activated, customers receive water budgets and Drought Surcharges apply for all water used exceeding the budgets. Drought Surcharges also help to offset the lost revenue from overall decreased water consumption.

All lost revenue, cost savings, drought/shortage related expenses, fines/penalties, and drought surcharge income is tracked in the Lost Revenue Recovery Memorandum Account, as specified in Rule 14.1.B.(1). DOWCPP then submits the net balance of the memorandum account, together with supporting documentation, to the CPUC in an Advice Letter requesting a surcharge to replace the net lost revenue.

8.7 Resolution or Ordinance

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

DOWC's CPUC-approved Rule 14.1 Water Shortage Contingency Plan is attached as Appendix I. Schedule 14.1 is Appendix J.

8.8 Catastrophic Supply Interruption

CWC *10632(a)(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.*

Catastrophic supply interruption is addressed in DOWCPP's Emergency Response Plan (ERP), the full text of which is provided in Appendix K. The ERP includes 3 designated emergency stages and is intended to address states of emergency that may be caused by events including, but not limited to:

1. Severe Weather Conditions and other Meteorological Phenomena
2. Fire
3. Terrorism and Sabotage
4. Water Contamination
5. Drought and Water Shortage
6. Earthquakes
7. Floods
8. Extended Power Outages
9. Unplanned Downtime of the Automated Telemetry Control System
10. Accidental Release of Hazardous Materials

The following is a summary of key elements of the ERP; the complete ERP is included in Appendix K.

The ERP includes methods of contact and communication with customers ranging from media communications, including the internet, television, and telephone, to direct methods of communication, including door-to-door notifications and the use of sound trucks which will drive through the service areas loudly notifying customers of the emergency. Customers will be advised as to the actions appropriate to the current emergency, which may include, but are not limited:

1. Boil Water Orders
2. Unsafe Water Alerts
3. Limits or bans on tap water use
4. Notification of alternate water sources (such as DOWC-supplied bottled water)
5. Temporary prohibitions on certain activities

Sample public notices are included in the ERP.

DOWCPP's ERP also includes communication information for all key personnel and emergency equipment/service suppliers. All appropriate government agencies will also be contacted, such as the State Water Resources Control Board, California Office of Emergency Services, and Butte County Office of Emergency Services.

Power outages and other events may result in the available water supplies being temporarily limited to the water available in DOWCPP's storage tanks. In such cases the first two priorities are:

1. Conserve water in aboveground storage facilities. These reservoirs may drain by gravity from downstream distribution system damage. This activity may require temporary isolation of facilities.

2. Preserve water quality in isolated storage facilities. Portable chlorination unit will be used as required.

If stored water is not sufficient for the duration of the emergency, alternate water sources will be sought. The first preference is to use the emergency intertie with neighboring Paradise Irrigation District (PID). If emergency water is not available from PID, or if the intertie system is damaged, water may be trucked in. The preference would be to bring water from a nearby DOWC water district, such as Stirling City, but other suppliers will be used as needed.

Where water quality is impacted, the ERP includes isolation, water testing, and emergency treatment procedures. Documentation of all emergency actions is required throughout the state of emergency. If necessary, bottled water will be distributed to customers throughout the duration of the emergency.

In addition to the procedures specified in the ERP, DOWCPP is studying the feasibility of increasing the storage tank capacity by at least 500,000 gallons, most likely in Zone 2. This will increase operating storage during periods of higher demand and provide an increase in emergency storage for power-interrupting events. DOWCPP is also considering constructing a new intertie between the Upper Zone and the Middle Zone of DOWCPP's system to minimize service interruptions to several hundred customers during repair events within the Upper Zone.

8.9 Minimum Supply Next Three Years

CWC *10632(a)(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.*

An estimate of minimum water supply for years 2016, 2017 and 2018 is shown in Table 8-4, below. This estimate was formed on the basis of 3 multiple dry years as described in Chapter 7.

Table 8-4 Retail: Minimum Supply Next Three Years

	2016	2017	2018
Available Water Supply	655,008	618,326	581,643

Chapter 9 - Demand Management Measures

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

(1) (A) …a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measure that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

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

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

DOWCPP is focused on Demand Management Measures (DMMs) that it feels are most effective in its service area. All conservation programs listed below have been in effect during the last five years (2011 through 2015). In 2014, DOWCPP activated Rule 14.1, and in 2015, DOWC also activated Schedule 14.1; activities described below that are specific to Rule 14.1 and/or Schedule 14.1 were implemented during the 2014-2015 period.

The effectiveness of DOWCPP's water conservation programs may be judged by reviewing the history of water use in the district and the conservation statistics from the 2014-2015 drought. As shown in Table 4-A, the gross annual water use per customer has decreased every year since 2004. In addition, during the most recent drought in 2014-2015, DOWCPP conserved an average of 21.61% (as compared to the same months in 2013), during the period of June 2014 through May 2015, when Rule 14.1 alone was in effect. Even more impressively, DOWCPP conserved 41.61% (as compared to the same months in 2013), during the period of June 2015 through May 2016, when Schedule 14.1 was in effect. These statistics demonstrate the effectiveness of DOWCPP's demand management efforts to date.

9.1 Water Waste Prevention Ordinances

As a CPUC-regulated private water utility, DOWCPP's regulations are in the form of Rules and Tariffs. Rules 11, 14.1, and 20 address water waste and are always in effect. Rule 14.1 also includes elevated Stages with additional restrictions that DOWC can activate as needed. See chapter 8 for details about Rules 11, 14.1, and 20.

Implementation of Rule 14.1 and/or Schedule 14.1 may result in significant expense and financial ramifications for DOWCPP. These are discussed in Chapter 8.

9.2 Metering

CWC *526(a) Notwithstanding any other provisions of law, an urban water supplier that, on or after January 1, 2004, receives water from the federal Central Valley Project under a water service contract or subcontract... shall do both of the following:*

(1) On or before January 1, 2013, install water meters on all service connections to residential and nonagricultural commercial buildings... located within its service area.

CWC *527(a) An urban water supplier that is not subject to Section 526 shall do both the following:*

(1) Install water meters on all municipal and industrial service connections located within its service area on or before January 1, 2025.

It is a well-known fact that water metering effectively encourages water conservation. Per Assembly Bill 975, utilities are required to meter any new connections by January 1, 2010, and to convert all current flat rate connections to metered connections by January 1, 2020. DOWC has taken a proactive approach to this strategy; DOWCPP has been completely metered since 1973. Meters are read monthly. In addition, in the last 5 years, DOWC staff has replaced all standard 5/8" meters installed before 1991. This is part of DOWC's overall plan to more accurately track water usage and reduce excessive use on the system, such as leaks that may not have been identified due to slow or stopped meters.

When a customer reports a problem with their meter, DOWC field personnel are dispatched to investigate the situation. If a specific problem is not evident, field personnel will conduct a three phase meter test, usually with the customer present. If the meter does not register at least 98% accuracy, the meter will be replaced at no cost to the customer. In addition, every meter that is removed (such as when an account is closed) is tested and must register at least 98% accuracy before it is reused.

DOWC is currently exploring the possibility of moving to Advanced Metering Infrastructure (AMI) or Automatic Meter Reading (AMR) to make meter reading more efficient and to create a system where issues, such as leaks, are more quickly identified and communicated to customers. AMI has the potential to increase the efficiency and reduce the cost of monthly meter reading; however, there will be a large up-front expense to install the AMI system. DOWC will conduct a thorough cost/benefit analysis before implementing any AMI plan.

9.3 Conservation Pricing

DOWCPP does not currently use a conservation pricing model. Schedule 14.1 does allow for a drought rate structure to be implemented when needed, as described in Chapter 8.

9.4 Public Education and Outreach

The CPUC currently requires regulated utilities with annual revenues in excess of $50,000 to initiate programs of customer involvement and education. Specifically, the CPUC requires those utilities to request and install water conservation devices, advise customers on methods of reducing waste, and attempt to enlist community support in their conservation programs.

The conservation campaigns carried out by DOWC are diverse, and promotional campaigns are focused on specific needs. The current programs for public education and information, as outlined in this section, have proven successful and are well received by customers. Programs will be expanded as appropriate to meet specific goals as dictated by the future water supply and the requirements of SB X7-7. DOWC will supervise and promote each program toward this end.

9.4.1 Conservation Literature

Providing up-to-date water conservation information is a key part of DOWCPP's activities. General conservation information is posted on DOWC's website, www.DelOroWater.com. A list, with URLs, of water conservation literature available to DOWC customers is included in Appendix L. Conservation literature can also be mailed to customers as needed.

Because most customers access the conservation literature from the website, the cost of conservation literature is minimal.

9.4.2 Water Bill Messaging

DOWC bills monthly. DOWC's bills are designed to allow customers to easily track how much water they are using. The current use is provided in cubic feet (rather than CCFs), giving customers a more precise measure of their water usage. A graph depicting the last 13 months of water use is also included, making it easier for customers to identify unusually high use and potential leaks, as well as to see the results of their conservation efforts. In addition, a monthly water saving tip, appropriate to the season, is included on every bill, as well as links to conservation resources available on www.delorowater.com.

When a water shortage is experienced or declared by an appropriate government entity, DOWC includes cautionary language on the bills to inform the public of the need for increased water conservation. During droughts, and at other times when Rule 14.1 and/or Schedule 14.1 is activated, the bill message includes monthly updates regarding the total percentage of conservation to date within DOWCPP. During these periods, DOWC is also able to print budgets on each bill. A sample bill, which includes drought messaging, is shown on the next page in Figure 9-1.

DOWC also maintains a supply of flyers that can be printed on demand and enclosed with bills when the utility desires to provide more information on a subject than can reasonably be included on a bill. Some examples are included in Appendix L. DOWC has ready two flyers that can be immediately sent to customers (with or without their bill) when voluntary or mandatory conservation is enacted per Rule 14.1 and/or Schedule 14.1. DOWC can also create and insert custom notices as needed.

Bill messaging is a standard part of DOWC's operations and does not result in additional costs. The average total cost of inserting a single page notice in DOWCPP bills for one monthly billing is $224.97.

9.4.3 Telephone Support

DOWC's Customer Care Center is available by phone from 8am to 4:30pm on all business days. Telephone agents are trained to answer customer questions regarding water use, restrictions, conservation techniques, and identifying leaks. They are able to supply customers with conservation literature as needed, and to issue Work Orders for field staff to meet with customers.

9.4.4 Direct Contact

As part of the DOWC Water Conservation Program, all DOWC employees are instructed to be "Water Watchers." Acting as goodwill ambassadors for DOWC, field employees assist customers in conducting water audits, providing water management guidance, teaching customers how to read their meters, how to check for leaks, and how to recognize unusually high consumption as a potential leak.

Each field employee's vehicle carries a supply of water saving kits and water conservation literature to be given out to customers who request them, and/or where high use is noted by a DOWC employee. Water conservation kits include toilet displacement bags, leak detection tablets, shower flow restrictor valves, and a water conservation wheel for easy reference, as well as general conservation literature. Customers

have only to call the corporate office to request a kit, and it is delivered to their doorstep; often the same day.

Figure 9-1

DEL ORO WATER COMPANY — 52 YEARS

Account Overview 05/25/2016

DEL ORO WATER COMPANY - PARADISE PINES DISTRICT CYCLE 3

Customer [redacted]
Service Address [redacted] WOOD RD
Account Number 002[redacted]
Meter ID 516[redacted]
Meter Size 5/8" METER

Important Customer Message

This bill reflects temporary EPA & SWB surcharges per Advice Letters 434 & 435.

~ 2-DAY-A-WEEK WATERING & other restrictions extended through 10/31/16 ~ Paradise Pines District, as a whole, has averaged 38% conservation through the May billing period; ONLY 21% CONSERVATION IS REQUIRED. Current DROUGHT information and restrictions: www.delorowater.com/drought.html

TIP OF THE MONTH: Adjust your lawn mower to a higher setting. Longer grass shades root systems and holds soil moisture better than a closely clipped lawn. Del Oro's conservation tips: www.delorowater.com/water-conservation.html www.delorowater.com/monthly-tips.html

~Annual Consumer Confidence Notice Enclosed ~

Account Activity *Payments received after statement date are not reflected*

Description of Activity		Amount
Balance from Prior Bill	$	22.24
Payment Received - (05/13/2016) - Thank you	$	-22.24
Balance Foward	$	0.00

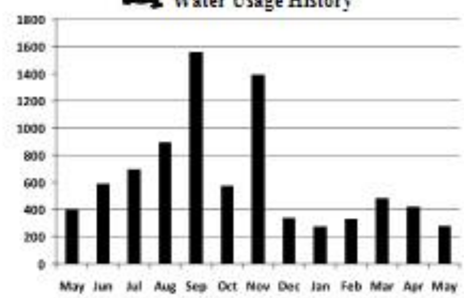
Usage Detail Meter

Service From	04/08/2016 - 05/09/2016
Current Read	115252
Prior Read	114977
Usage Cu. Ft.	275

Account Detail

Quantity Charge	8.94
Readiness To Serve Charge	14.68
C P U C Fee	0.37
E P A Fee Surchg	0.23
S R F Intertie Surchg	4.33
S W B Fee Surchg	2.17

Water Usage History



The information represented by the graph above is presented for conservation purposes only; please refer to Account Detail for specific billing, usage, and payment information.

June Water Usage Budget: 1349 cubic feet
July Water Usage Budget: 1209 cubic feet
(1 cubic foot = 7.48 gallons)

Current Charges Due By 06/13/2016 $ 32.30

Total Amount Due $ 32.30

See reverse for information on Check & Bill Pay Processing times

Del Oro Water Company

Web Address *www.DelOroWater.com*
Visit us online to review your account, make your payment or update your personal information

Payment Mailing Address DRAWER 5172 CHICO, CA 95927-5172

Customer Care Center (530)717-2502
Hours of Operation Mon- Fri 8 am - 4:30 pm
Emergency Call Center (530)717-2502
Hours of Operation 24 / 7 / 365
Toll Free (877) DEL-ORO-H20

Keep

PLEASE DO NOT STAPLE CHECKS TO THE PAYMENT STUB Return

DEL ORO WATER COMPANY

Payment Details *If payment is not received by due date you may be assessed a late charge*

Account Number	002[redacted]
Current Charges Due By	06/13/2016
Total Amount Due	$ 32.30
Auto Pay Status	Inactive: Sign up today!

Total Amount Paid $

Optional Customer Meter Reading Verification (CMRV)

X

To enroll in Bankdraft AutoPay sign here and complete Authorization on the reverse.

Address Change? Check box and note changes.

Mail Payment to:

DEL ORO WATER CO., INC.
PARADISE PINES DISTRICT
DRAWER 5172
CHICO, CA 95927-5172

***************************SNGLP 956 P9 5484 1 SP 0.465

[redacted]
PARADISE, CA 95969-

9.5 Programs to Assess and Manage Distribution System Real Loss

DOWC staff conduct regular maintenance of system pumps, valves, and tanks, which is key to preventing system water loss.

Field and office personnel have worked diligently to improve response time for all leak repairs, both large and small. Identifying and repairing all leaks promptly is critical to reducing water waste and strain on the groundwater system. The DOWC field operators are available 24/7/365.

In addition, DOWCPP has been replacing aging pipelines to reduce water loss. Since 2010, DOWCPP has replaced a total of 14,350 feet of mainline, as well as replacing or upgrading 213 services and 20 hydrants. Further mainline replacements are planned on an every-other-year basis.

A distribution system water audit compares the amount of water produced within the district (from wells and imported surface water) to the amount of water used by customers (as reported by meter readings). The difference is non-metered, or lost, water. After allowing for authorized non-metered uses, such as firefighting, main flushing, and hydrant flow checks, it can be assumed that the remaining non-metered water is explained by inaccurate meters, malfunctioning valves, leakage, and theft. Underground leaks are detected by using electronic amplifying equipment to listen for particular types of sounds along water mains and at valves, hydrants, and meters.

Since 1997, Paradise Pines has contracted with Utility Services Associates (USA) to perform water audits and leak detection surveys, as previously described. DOWC has repaired distribution system leaks in response to problems discovered by its customers, DOWC staff, and USA. This program is expected to continue indefinitely. It is estimated that an annual savings of lost water of at least 3% can be achieved.

In 1997, DOWC hired USA to perform a leak detection survey of the DOWCPP service area of approximately 61.9 square miles. In that survey, some 36 leaks were located, none of which were attributed to customers. The water loss from those leaks was determined to be approximately 269,352 GPD. These leaks have all been repaired. Two customer leaks were also detected in the course of the survey.

In 2002, DOWC again hired USA and 4 new leaks were found, with an estimated water loss of 52,200 GPD. In 2003, a similar survey found 12 new leaks with an estimated water loss of 52,200 GPD. The survey was again repeated in 2006, and 21 leaks were found for an estimated water loss of 78,120 GPD. All of the leaks found were fixed immediately, and this survey is partially responsible for the decision to replace the mainlines and service connections in and near Endicott Circle, which was completed in 2010; in the South Park Dr. area, which was completed in 2013; and in the West Park Dr. area, which was just completed in 2016. As of June 2016, the total estimated water saved by the repair of these leaks is over 2.5 billion gallons.

9.6 Water Conservation Program Coordination and Staffing Support

As described above, water conservation programs are an integral part of DOWCPP's daily operations. Staff involved include all field staff, all customer care staff, and staff responsible for the preparation of bills and inserts. Water conservation program activities and supplies are overseen by the Director of Community Relations, who also maintains www.delorowater.com.

9.7 Other Demand Management Measures

9.7.1 Rebates

DOWCPP does not currently offer rebates for water conservation activities or devices. DOWCPP has reviewed the possibility of implementing a rebate program; at this time, the cost to customers of a rebate program outweighs the potential benefits.

9.7.2 Local Water Conservation Advisory Committees

Although a specific local water conservation advisory has not been formed, there are several local organizations concerned with water conservation in the DOWCPP service area. DOWC encourages these organizations to provide comments and feedback on both DOWC's current actions and future plans. When comments are received, they are integrated into DOWC's planning and practices. The groups include the Butte Environmental Council (BEC)[3] and the Butte Creek Watershed Conservancy[4].

The Butte County Water Advisory Committee (WAC) is also concerned with water conservation in the Paradise Pines service area, although this is only a small portion of their directive. Where the WAC makes recommendations related to water conservation, DOWC tries to integrate their comments into its plans and practices.

9.8 Planned Implementation to Achieve Water Use Targets

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

(1)(A) …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.

DOWC plans to continue using the above described DMMs, which have already proven effective. Annual average GPCD from 2010 through present already nearly meets or exceeds the GPCD required in 2020 by the SB X7-7 legislation. As discussed in Section 9.2, DOWCPP is also exploring AMI options to improve ease of meter reading and also improve identification of leaks and other issues. Finally, DOWC continues to stay abreast of new trends in water conservation; DOWC will implement newly identified water conservation programs that it believes will best benefit DOWCPP as a whole.

9.9 Members of the California Urban Water Conservation Council

CWC *10631(i) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.*

DOWC is not a member of the California Urban Water Conservation Council.

[3] Butte Environmental Council (BEC) website: http://www.becnet.org
[4] Butte Creek Watershed Conservancy website: http://buttecreekwatershed.org

Chapter 10 - Plan Adoption, Submittal, and Implementation

10.1 Inclusion of all 2015 Data

2015 data included throughout this UWMP has been provided for the calendar year 2015.

10.2 Notice of Public Hearing

CWC *10621(b) Every urban water supplier required to prepare a plan shall… at least 60 days prior to the public hearing on the plan … notify any city or county within which the supplier provides waters supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.*

10642 …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…

…Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection…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…

Government Code 6066 *Publication of notice pursuant to this section shall be once a week for two successive weeks. Two publications in a newspaper published once a week or oftener, with at least five days intervening between the respective publication dates not counting such publication dates, are sufficient. The period of notice commences upon the first day of publication and terminates at the end of the fourteenth day, including therein the first day.*

DOWCPP is located in Butte County. DOWCPP is not located in an incorporated town or township; however, the border of the Town of Paradise is within 5 miles of DOWCPP, so DOWC treats Paradise as an interested party. DOWC also notices the neighboring Paradise Irrigation District.

In compliance with CWC 10621(b), all of the above parties were noticed, by mail, of DOWCPP's intent to update the UWMP on November 30, 2015. Copies of the letters are included in Appendix M-1.

A public meeting was scheduled for June 30, 2016 to solicit public input. The above referenced agencies were provided notice by mail, on June 10, 2016, of the public meeting and of the availability of the UWMP for review prior to the meeting. Copies of these letters are included in Appendix M-2.

Table 10-1, below, summarizes public agency notifications.

Table 10-1 Retail: Notification to Cities and Counties

City Name	60 Day Notice	Notice of Public Hearing
Town of Paradise	☑	☑
County Name	**60 Day Notice**	**Notice of Public Hearing**
Butte County	☑	☑

Finally, the public was notified of the public meeting in the local newspaper, the Paradise Post, for two successive weeks prior to the meeting. By publishing this notice in the newspaper, notice was provided to diverse social, cultural, and economic elements of the population in the service area. A copy of the published notice is included in Appendix M-3.

10.3 Public Hearing and Adoption

CWC *10642 …Prior to adopting a plan, the urban water supplier shall hold a public hearing thereon. …After the hearing, the plan shall be adopted as prepared or as modified after the hearing.*

10608.26(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20 for determining its urban water use target.

A public hearing was held on June 30, 2016. Information was provided to the public regarding DOWCPP's baseline values, water use targets, and implementation plan as required in the Water Conservation Act of 2009 (SB X7-7). No changes to the UWMP were suggested.

The 2015 UWMP was adopted by the Del Oro Water Company Board of Directors following the public meeting (see Appendix M-4).

10.4 Plan Submittal

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

10644(a)(1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption.

10635(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

This 2015 update to the Del Oro Water Company, Paradise Pines District, Urban Water Management Plan was submitted to the California Department of Water Resources and the California State Library on July 1, 2016. A copy of the UWMP was also transmitted to Butte County on that date.

10.5 Public Availability

CWC *10645 Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.*

As of July 1, 2016, this UWMP is available on DOWC's website, at http://www.delorowater.com/paradise-pines.html.

10.6 Amending an Adopted UWMP

CWC *10621(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).*

10644(a)(1) 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.

DOWCPP will adopt and file any subsequent amendments to this 2015 UWMP as required by law. The amended UWMP document will be submitted to DWR, The California State Library, city and county governments and be made available to the public within 30 days of adoption.

APPENDIX A

URBAN WATER MANAGEMENT PLANNING ACT

Assembly Bill No. 797

Assembly Bill No. 797
Urban Water Management Planning Act

California Water Code Division 6, Part 2.6.

CHAPTER 1. GENERAL DECLARATION AND POLICY

10610. This part shall be known and may be cited as the "Urban Water Management Planning Act."

10610.2. (a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

10610.4. The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

(b) The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.

(c) Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

CHAPTER 2. DEFINITIONS

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

10611.5. “Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

10612. "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

10616.5. "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

CHAPTER 3. URBAN WATER MANAGEMENT PLANS

Article 1. General Provisions

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.

(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

10621. (a) Each urban water supplier shall update its plan at least once every five years on or before December 31, in years ending in five and zero, except as provided in subdivision (d).

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640).

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

Article 2. Contents of Plan

10630. It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied.

10631. A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a). If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information shall be included in the plan:

(1) A copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management.

(2) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to eliminate the long-term overdraft condition.

(3) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(4) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) (1) Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following:

(A) An average water year.

(B) A single-dry water year.

(C) Multiple-dry water years.

(2) For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable.

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

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

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(J) Distribution system water loss.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(3) (A) For the 2015 urban water management plan update, the distribution system water loss shall be quantified for the most recent 12-month period available. For all subsequent updates, the distribution system water loss shall be quantified for each of the five years preceding the plan update.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(4) (A) If available and applicable to an urban water supplier, water use projections

may display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

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

(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

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

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (B) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(g) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision

(a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

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

(i) For purposes of this part, urban water suppliers that are members of the California Urban Water Conservation Council shall be deemed in compliance with the requirements of subdivision (f) by complying with all the provisions of the "Memorandum of Understanding Regarding Urban Water Conservation in California," dated December 10, 2008, as it may be amended, and by submitting the annual reports required by Section 6.2 of that memorandum.

(j) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c).

10631.1. (a) The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

10631.2. (a) In addition to the requirements of Section 10631, an urban water management plan may, but is not required to, include any of the following information:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

10631.5. (a)(1) Beginning January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures described in Section 10631, as determined by the department pursuant to subdivision (b).

(2) For the purposes of this section, water management grants and loans include funding for programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability, and water supply augmentation. This section does not apply to water management projects funded by the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5).

(3) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if the urban water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the water demand management measures. The supplier may request grant or loan funds to implement the water demand management measures to the extent the request is consistent with the eligibility requirements applicable to the water management funds.

(4) (A) Notwithstanding paragraph (1), the department shall determine that an urban water supplier is eligible for a water management grant or loan even though the supplier is not implementing all of the water demand management measures described in Section 10631, if an urban water supplier submits to the department for approval documentation demonstrating that a water demand management measure is not locally cost effective. If the department determines that the documentation submitted by the urban water supplier fails to demonstrate that a water demand management measure is not locally cost effective, the department shall notify the urban water supplier and the agency administering the grant or loan program within 120 days that the documentation does not satisfy the requirements for an exemption, and include in that notification a detailed statement to support the determination.

(B) For purposes of this paragraph, "not locally cost effective" means that the present value of the local benefits of implementing a water demand management measure is less than the present value of the local costs of implementing that measure.

(b) (1) The department, in consultation with the state board and the California Bay- Delta Authority or its successor agency, and after soliciting public comment regarding eligibility requirements, shall develop eligibility requirements to implement the requirement of paragraph (1) of subdivision (a). In establishing these eligibility requirements, the department shall do both of the following:

(A) Consider the conservation measures described in the Memorandum of Understanding Regarding Urban Water Conservation in California, and alternative conservation approaches that provide equal or greater water savings.

(B) Recognize the different legal, technical, fiscal, and practical roles and responsibilities of wholesale water suppliers and retail water suppliers.

(2) (A) For the purposes of this section, the department shall determine whether an urban water supplier is implementing all of the water demand management measures described in Section 10631 based on either, or a combination, of the following:

(i) Compliance on an individual basis.

(ii) Compliance on a regional basis. Regional compliance shall require participation in a regional conservation program consisting of two or more urban water suppliers that achieves the level of conservation or water efficiency savings equivalent to the amount of conservation or savings achieved if each of the participating urban water suppliers implemented the water demand management measures. The urban water supplier administering the regional program shall provide participating urban water suppliers and the department with data to demonstrate that the regional program is consistent with this clause. The department shall review the data to determine whether the urban water suppliers in the regional program are meeting the eligibility requirements.

(B) The department may require additional information for any determination pursuant to this section.

(3) The department shall not deny eligibility to an urban water supplier in compliance with the requirements of this section that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the water demand management measures described in Section 10631.

(c) In establishing guidelines pursuant to the specific funding authorization for any water management grant or loan program subject to this section, the agency administering the grant or loan program shall include in the guidelines the eligibility requirements developed by the department pursuant to subdivision (b).

(d) Upon receipt of a water management grant or loan application by an agency administering a grant and loan program subject to this section, the agency shall request an eligibility determination from the department with respect to the requirements of this section. The department shall respond to the request within 60 days of the request.

(e) The urban water supplier may submit to the department copies of its annual reports and other relevant documents to assist the department in determining whether the urban water supplier is implementing or scheduling the implementation of water demand management activities. In addition, for urban water suppliers that are signatories to the Memorandum of Understanding Regarding Urban Water Conservation in California and submit biennial reports to the California Urban Water Conservation Council in accordance with the memorandum, the department may use these reports to assist in tracking the implementation of water demand management measures.

(f) This section shall remain in effect only until July 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before July 1, 2016, deletes or extends that date.

10631.7. The department, in consultation with the California Urban Water Conservation Council, shall convene an independent technical panel to provide information and recommendations to the department and the Legislature on new demand management measures, technologies, and approaches. The panel shall consist of no more than seven members, who shall be selected by the department to reflect a balanced representation of experts. The panel shall have at least one, but no more than two, representatives from each of the following: retail water suppliers, environmental organizations, the business community, wholesale water suppliers, and academia. The panel shall be convened by January 1, 2009, and shall report to the Legislature no later than January 1, 2010, and every five years thereafter. The department shall review the panel report and include in the final report to the Legislature the department's recommendations and comments regarding the panel process and the panel's recommendations.

10632. (a) The plan shall provide an urban water shortage contingency analysis that includes each of the following elements that are within the authority of the urban water supplier:

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

(2) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.

(3) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.

(4) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.

(5) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that

would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.

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

(7) An analysis of the impacts of each of the actions and conditions described in paragraphs (1) to (6), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.

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

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

(b) Commencing with the urban water management plan update due July 1, 2016, for purposes of developing the water shortage contingency analysis pursuant to subdivision (a), the urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

10633. The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

10634. The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

Article 2.5. Water Service Reliability

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(c) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(d) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers.

Article 3. Adoption and Implementation of Plans

10640. Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

10641. An urban water supplier required to prepare a plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan. Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the

Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing, the plan shall be adopted as prepared or as modified after the hearing.

10643. An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

10644. (a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1) shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) (1) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before December 31, in the years ending in six and one, a report summarizing the status of the plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans submitted pursuant to this part.

(2) A report to be submitted pursuant to paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

(c) (1) For the purpose of identifying the exemplary elements of the individual plans, the department shall identify in the report water demand management measures adopted and implemented by specific urban water suppliers, and identified pursuant to Section 10631, that achieve water savings significantly above the levels established by the department to meet the requirements of Section 10631.5.

(2) The department shall distribute to the panel convened pursuant to Section 10631.7 the results achieved by the implementation of those water demand management measures described in paragraph (1).

(3) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

10645. Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

CHAPTER 4. MISCELLANEOUS PROVISIONS

10650. Any actions or proceedings to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan, or action taken pursuant to the plan, does not comply with this part shall be commenced within 90 days after filing of the plan or amendment thereto pursuant to Section 10644 or the taking of that action.

10651. In any action or proceeding to attack, review, set aside, void, or annul a plan, or an action taken pursuant to the plan by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

10652. The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

10653. The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the State Water Resources Control Board and the Public Utilities Commission, for the preparation of water management plans or conservation plans; provided, that if the State Water Resources Control Board or the Public Utilities Commission requires additional information concerning water conservation to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan prepared to meet federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

10654. An urban water supplier may recover in its rates the costs incurred in preparing its plan and implementing the reasonable water conservation measures included in the plan. Any best water management practice that is included in the plan that is identified in the "Memorandum of Understanding Regarding Urban Water Conservation in California" is deemed to be reasonable for the purposes of this section.

10655. If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

10656. An urban water supplier that does not prepare, adopt, and submit its urban water management plan to the department in accordance with this part, is ineligible to receive funding pursuant to Division 24 (commencing with Section 78500) or Division 26 (commencing with Section 79000), or receive drought assistance from the state until the urban water management plan is submitted pursuant to this article.

APPENDIX B

WATER CONSERVATION ACT OF 2009

Senate Bill 7 (SBx7-7)

Senate Bill No. 7
Sustainable Water Use and Demand Reduction
Water Conservation Act of 2009

California Water Code Division 6, Part 2.55.

CHAPTER 1. GENERAL DECLARATIONS AND POLICY

10608. The Legislature finds and declares all of the following:

(a) Water is a public resource that the California Constitution protects against waste and unreasonable use.

(b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.

(c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.

(d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve streamflows, and reduce greenhouse gas emissions.

(e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.

(f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

(g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

(h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

10608.4. It is the intent of the Legislature, by the enactment of this part, to do all of the following:

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(k) Advance regional water resources management.

10608.8. (a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (b) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

(b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

(c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

(d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

CHAPTER 2 DEFINITIONS

10608.12. Unless the context otherwise requires, the following definitions govern the construction of this part:

(a) "Agricultural water supplier" means a water supplier, either publicly or privately owned, providing water to 10,000 or more irrigated acres, excluding recycled water. "Agricultural water supplier" includes a supplier or contractor for water, regardless of the basis of right, that distributes or sells water for ultimate resale to customers. "Agricultural water supplier" does not include the department.

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

(1) The urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous 10-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(2) For an urban retail water supplier that meets at least 10 percent of its 2008 measured retail water demand through recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier, the urban retail water supplier may extend the calculation described in paragraph (1) up to an additional five years to a maximum of a continuous 15-year period ending no earlier than December 31, 2004, and no later than December 31, 2010.

(3) For the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than December 31, 2007, and no later than December 31, 2010.

(c) "Baseline commercial, industrial, and institutional water use" means an urban retail water supplier's base daily per capita water use for commercial, industrial, and institutional users.

(d) "Commercial water user" means a water user that provides or distributes a product or service.

(e) "Compliance daily per capita water use" means the gross water use during the final year of the reporting period, reported in gallons per capita per day.

(f) "Disadvantaged community" means a community with an annual median household income that is less than 80 percent of the statewide annual median household income.

(g) "Gross water use" means the total volume of water, whether treated or untreated, entering the distribution system of an urban retail water supplier, excluding all of the following:

(1) Recycled water that is delivered within the service area of an urban retail water supplier or its urban wholesale water supplier.

(2) The net volume of water that the urban retail water supplier places into longterm storage.

(3) The volume of water the urban retail water supplier conveys for use by another urban water supplier.

(4) The volume of water delivered for agricultural use, except as otherwise provided in subdivision (f) of Section 10608.24.

(h) "Industrial water user" means a water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development.

(i) "Institutional water user" means a water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions.

(j) "Interim urban water use target" means the midpoint between the urban retail water supplier's base daily per capita water use and the urban retail water supplier's urban water use target for 2020.

(k) "Locally cost effective" means that the present value of the local benefits of implementing an agricultural efficiency water management practice is greater than or equal to the present value of the local cost of implementing that measure.

(l) "Process water" means water used for producing a product or product content or water used for research and development, including, but not limited to, continuous manufacturing processes, water used for testing and maintaining equipment used in producing a product or product content, and water used in combined heat and power facilities used in producing a product or product content. Process water does not mean incidental water uses not related to the production of a product or product content, including, but not limited to, water used for restrooms, landscaping, air conditioning, heating, kitchens, and laundry.

(m) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050, that is used to offset potable demand, including recycled water supplied for direct use and indirect potable reuse, that meets the following requirements, where applicable:

(1) For groundwater recharge, including recharge through spreading basins, water supplies that are all of the following:

(A) Metered.

(B) Developed through planned investment by the urban water supplier or a wastewater treatment agency.

(C) Treated to a minimum tertiary level.

(D) Delivered within the service area of an urban retail water supplier or its urban wholesale water supplier that helps an urban retail water supplier meet its urban water use target.

(2) For reservoir augmentation, water supplies that meet the criteria of paragraph (1) and are conveyed through a distribution system constructed specifically for recycled water.

(n) "Regional water resources management" means sources of supply resulting from watershed-based planning for sustainable local water reliability or any of the following alternative sources of water:

(1) The capture and reuse of stormwater or rainwater.

(2) The use of recycled water.

(3) The desalination of brackish groundwater.

(4) The conjunctive use of surface water and groundwater in a manner that is consistent with the safe yield of the groundwater basin.

(o) "Reporting period" means the years for which an urban retail water supplier reports compliance with the urban water use targets.

(p) "Urban retail water supplier" means a water supplier, either publicly or privately owned, that directly provides potable municipal water to more than 3,000 end users or that supplies more than 3,000 acre-feet of potable water annually at retail for municipal purposes.

(q) "Urban water use target" means the urban retail water supplier's targeted future daily per capita water use.

(r) "Urban wholesale water supplier," means a water supplier, either publicly or privately owned, that provides more than 3,000 acre-feet of water annually at wholesale for potable municipal purposes.

CHAPTER 3 URBAN RETAIL WATER SUPPLIERS

10608.16.(a) The state shall achieve a 20-percent reduction in urban per capita water use in California on or before December 31, 2020.

(b) The state shall make incremental progress towards the state target specified in subdivision (a) by reducing urban per capita water use by at least 10 percent on or before December 31, 2015.

10608.20.(a) (1) Each urban retail water supplier shall develop urban water use targets and an interim urban water use target by July 1, 2011. Urban retail water suppliers may elect to determine and report progress toward achieving these targets on an individual or regional basis, as provided in subdivision (a) of Section 10608.28, and may determine the targets on a fiscal year or calendar year basis.

(2) It is the intent of the Legislature that the urban water use targets described in paragraph (1) cumulatively result in a 20-percent reduction from the baseline daily per capita water use by December 31, 2020.

(b) An urban retail water supplier shall adopt one of the following methods for determining its urban water use target pursuant to subdivision (a):

(1) Eighty percent of the urban retail water supplier's baseline per capita daily water use.

(2) The per capita daily water use that is estimated using the sum of the following performance standards:

(A) For indoor residential water use, 55 gallons per capita daily water use as a provisional standard. Upon completion of the department's 2016 report to the Legislature pursuant to Section 10608.42, this standard may be adjusted by the Legislature by statute.

(B) For landscape irrigated through dedicated or residential meters or connections, water efficiency equivalent to the standards of the Model Water Efficient Landscape Ordinance set forth in Chapter 2.7 (commencing with Section 490) of Division 2 of Title 23 of the California Code of Regulations, as in effect the later of the year of the landscape's

installation or 1992. An urban retail water supplier using the approach specified in this subparagraph shall use satellite imagery, site visits, or other best available technology to develop an accurate estimate of landscaped areas.

(C) For commercial, industrial, and institutional uses, a 10-percent reduction in water use from the baseline commercial, industrial, and institutional water use by 2020.

(3) Ninety-five percent of the applicable state hydrologic region target, as set forth in the state's draft 20x2020 Water Conservation Plan (dated April 30, 2009). If the service area of an urban water supplier includes more than one hydrologic region, the supplier shall apportion its service area to each region based on population or area.

(4) A method that shall be identified and developed by the department, through a public process, and reported to the Legislature no later than December 31, 2010. The method developed by the department shall identify per capita targets that cumulatively result in a statewide 20-percent reduction in urban daily per capita water use by December 31, 2020. In developing urban daily per capita water use targets, the department shall do all of the following:

(A) Consider climatic differences within the state.

(B) Consider population density differences within the state.

(C) Provide flexibility to communities and regions in meeting the targets.

(D) Consider different levels of per capita water use according to plant water needs in different regions.

(E) Consider different levels of commercial, industrial, and institutional water use in different regions of the state.

(F) Avoid placing an undue hardship on communities that have implemented conservation measures or taken actions to keep per capita water use low.

(c) If the department adopts a regulation pursuant to paragraph (4) of subdivision (b) that results in a requirement that an urban retail water supplier achieve a reduction in daily per capita water use that is greater than 20 percent by December 31, 2020, an urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may limit its urban water use target to a reduction of not more than 20 percent by December 31, 2020, by adopting the method described in paragraph (1) of subdivision (b).

(d) The department shall update the method described in paragraph (4) of subdivision (b) and report to the Legislature by December 31, 2014. An urban retail water supplier that adopted the method described in paragraph (4) of subdivision (b) may adopt a new urban daily per capita water use target pursuant to this updated method.

(e) An urban retail water supplier shall include in its urban water management plan due in 2010 pursuant to Part 2.6 (commencing with Section 10610) the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.

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

(g) An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan required pursuant to Part 2.6 (commencing with Section 10610).

(h) (1) The department, through a public process and in consultation with the California Urban Water Conservation Council, shall develop technical methodologies and criteria for the consistent implementation of this part, including, but not limited to, both of the following:

(A) Methodologies for calculating base daily per capita water use, baseline commercial, industrial, and institutional water use, compliance daily per capita water use, gross water use, service area population, indoor residential water use, and landscaped area water use.

(B) Criteria for adjustments pursuant to subdivisions (d) and (e) of Section 10608.24.

(2) The department shall post the methodologies and criteria developed pursuant to this subdivision on its Internet Web site, and make written copies available, by October 1, 2010. An urban retail water supplier shall use the methods developed by the department in compliance with this part.

(i) (1) The department shall adopt regulations for implementation of the provisions relating to process water in accordance with subdivision (l) of Section 10608.12, subdivision (e) of Section 10608.24, and subdivision (d) of Section 10608.26.

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

(j) (1) An urban retail water supplier is granted an extension to July 1, 2011, for adoption of an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) due in 2010 to allow the use of technical methodologies developed by the department pursuant to paragraph (4) of subdivision (b) and subdivision (h). An urban retail water supplier that adopts an urban water management plan due in 2010 that does not use the methodologies developed by the department pursuant to subdivision (h) shall amend the plan by July 1, 2011, to comply with this part.

(2) An urban wholesale water supplier whose urban water management plan prepared pursuant to Part 2.6 (commencing with Section 10610) was due and not submitted in 2010 is granted an extension to July 1, 2011, to permit coordination between an urban wholesale water supplier and urban retail water suppliers.

10608.22. Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use as defined in paragraph(3) of subdivision (b) of Section 10608.12. This section does not apply to an urban retail water supplier with a base daily per capita water use at or below 100 gallons per capita per day.

10608.24.(a) Each urban retail water supplier shall meet its interim urban water use target by December 31, 2015.

(b) Each urban retail water supplier shall meet its urban water use target by December 31, 2020.

(c) An urban retail water supplier's compliance daily per capita water use shall be the measure of progress toward achievement of its urban water use target.

(d) (1) When determining compliance daily per capita water use, an urban retail water supplier may consider the following factors:

(A) Differences in evapotranspiration and rainfall in the baseline period compared to the compliance reporting period.

(B) Substantial changes to commercial or industrial water use resulting from increased business output and economic development that have occurred during the reporting period.

(C) Substantial changes to institutional water use resulting from fire suppression services or other extraordinary events, or from new or expanded operations, that have occurred during the reporting period.

(2) If the urban retail water supplier elects to adjust its estimate of compliance daily per capita water use due to one or more of the factors described in paragraph (1), it shall provide the basis for, and data supporting, the adjustment in the report required by Section 10608.40.

(e) When developing the urban water use target pursuant to Section 10608.20, an urban retail water supplier that has a substantial percentage of industrial water use in its service area may exclude process water from the calculation of gross water use to avoid a disproportionate burden on another customer sector.

(f) (1) An urban retail water supplier that includes agricultural water use in an urban water management plan pursuant to Part 2.6 (commencing with Section 10610) may include the agricultural water use in determining gross water use. An urban retail water supplier that includes agricultural water use in determining gross water use and develops its urban water use target pursuant to paragraph (2) of subdivision (b) of Section 10608.20 shall use a water efficient standard for agricultural irrigation of 100 percent of reference evapotranspiration multiplied by the crop coefficient for irrigated acres.

(2) An urban retail water supplier, that is also an agricultural water supplier, is not subject to the requirements of Chapter 4 (commencing with Section 10608.48), if the agricultural water use is incorporated into its urban water use target pursuant to paragraph (1).

10608.26.(a) In complying with this part, an urban retail water supplier shall conduct at least one public hearing to accomplish all of the following:

(1) Allow community input regarding the urban retail water supplier's implementation plan for complying with this part.

(2) Consider the economic impacts of the urban retail water supplier's implementation plan for complying with this part.

(3) Adopt a method, pursuant to subdivision (b) of Section 10608.20, for determining its urban water use target.

(b) In complying with this part, an urban retail water supplier may meet its urban water use target through efficiency improvements in any combination among its customer sectors. An urban retail water supplier shall avoid placing a disproportionate burden on any customer sector.

(c) For an urban retail water supplier that supplies water to a United States Department of Defense military installation, the urban retail water supplier's implementation plan for complying with this part shall consider the conservation of that military installation under federal Executive Order 13514.

(d) (1) Any ordinance or resolution adopted by an urban retail water supplier after the effective date of this section shall not require existing customers as of the effective date of this section, to undertake changes in product formulation, operations, or equipment that would reduce process water use, but may provide technical assistance and financial incentives to those customers to implement efficiency measures for process water. This section shall not limit an ordinance or resolution adopted pursuant to a declaration of drought emergency by an urban retail water supplier.

(2) This part shall not be construed or enforced so as to interfere with the requirements of Chapter 4 (commencing with Section 113980) to Chapter 13 (commencing with Section 114380), inclusive, of Part 7 of Division 104 of the Health and Safety Code, or any requirement or standard for the protection of public health, public safety, or worker safety established by federal, state, or local government or recommended by recognized standard setting organizations or trade associations.

10608.28.(a) An urban retail water supplier may meet its urban water use target within its retail service area, or through mutual agreement, by any of the following:

(1) Through an urban wholesale water supplier.

(2) Through a regional agency authorized to plan and implement water conservation, including, but not limited to, an agency established under the Bay Area Water Supply and Conservation Agency Act (Division 31 (commencing with Section 81300)).

(3) Through a regional water management group as defined in Section 10537.

(4) By an integrated regional water management funding area.

(5) By hydrologic region.

(6) Through other appropriate geographic scales for which computation methods have been developed by the department.

(b) A regional water management group, with the written consent of its member agencies, may undertake any or all planning, reporting, and implementation functions under this chapter for the member agencies that consent to those activities. Any data or reports shall provide information both for the regional water management group and separately for each consenting urban retail water supplier and urban wholesale water supplier.

10608.32. All costs incurred pursuant to this part by a water utility regulated by the Public Utilities Commission may be recoverable in rates subject to review and approval by the Public Utilities Commission, and may be recorded in a memorandum account and reviewed for reasonableness by the Public Utilities Commission.

10608.36. Urban wholesale water suppliers shall include in the urban water management plans required pursuant to Part 2.6 (commencing with Section 10610) an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part.

10608.40. Urban water retail suppliers shall report to the department on their progress in meeting their urban water use targets as part of their urban water management plans submitted pursuant to Section 10631. The data shall be reported using a standardized form developed pursuant to Section 10608.52.

10608.42.(a) The department shall review the 2015 urban water management plans and report to the Legislature by July 1, 2017, on progress towards achieving a 20-percent reduction in urban water use by December 31, 2020. The report shall include recommendations on changes to water efficiency standards or urban water use targets to achieve the 20-percent reduction and to reflect updated efficiency information and technology changes.

(b) A report to be submitted pursuant to subdivision (a) shall be submitted in compliance with Section 9795 of the Government Code.

10608.43. The department, in conjunction with the California Urban Water Conservation Council, by April 1, 2010, shall convene a representative task force consisting of academic experts, urban retail water suppliers, environmental organizations, commercial water users, industrial water users, and institutional water users to develop alternative best management practices for commercial, industrial, and institutional users and an assessment of the potential statewide water use efficiency improvement in the commercial, industrial, and institutional sectors that would result from implementation of these best management practices. The taskforce, in conjunction with the department, shall submit a report to the Legislature by April 1, 2012, that shall include a review of multiple sectors within commercial, industrial, and institutional users and that shall recommend water use efficiency standards for commercial, industrial, and institutional users among various sectors of water use. The report shall include, but not be limited to, the following:

(a) Appropriate metrics for evaluating commercial, industrial, and institutional water use.

(b) Evaluation of water demands for manufacturing processes, goods, and cooling.

(c) Evaluation of public infrastructure necessary for delivery of recycled water to the commercial, industrial, and institutional sectors.

(d) Evaluation of institutional and economic barriers to increased recycled water use within the commercial, industrial, and institutional sectors.

(e) Identification of technical feasibility and cost of the best management practices to achieve more efficient water use statewide in the commercial, industrial, and institutional sectors that is consistent with the public interest and reflects past investments in water use efficiency.

10608.44. Each state agency shall reduce water use at facilities it operates to support urban retail water suppliers in meeting the target identified in Section 10608.16.

CHAPTER 4 AGRICULTURAL WATER SUPPLIERS

10608.48.(a) On or before July 31, 2012, an agricultural water supplier shall implement efficient water management practices pursuant to subdivisions (b) and (c).

(b) Agricultural water suppliers shall implement all of the following critical efficient management practices:

(1) Measure the volume of water delivered to customers with sufficient accuracy to comply with subdivision (a) of Section 531.10 and to implement paragraph (2).

(2) Adopt a pricing structure for water customers based at least in part on quantity delivered.

(c) Agricultural water suppliers shall implement additional efficient management practices, including, but not limited to, practices to accomplish all of the following, if the measures are locally cost effective and technically feasible:

(1) Facilitate alternative land use for lands with exceptionally high water duties or whose irrigation contributes to significant problems, including drainage.

(2) Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not harm crops or soils.

(3) Facilitate the financing of capital improvements for on-farm irrigation systems.

(4) Implement an incentive pricing structure that promotes one or more of the following goals:

(A) More efficient water use at the farm level.

(B) Conjunctive use of groundwater.

(C) Appropriate increase of groundwater recharge.

(D) Reduction in problem drainage.

(E) Improved management of environmental resources.

(F) Effective management of all water sources throughout the year by adjusting seasonal pricing structures based on current conditions.

(5) Expand line or pipe distribution systems, and construct regulatory reservoirs to increase distribution system flexibility and capacity, decrease maintenance, and reduce seepage.

(6) Increase flexibility in water ordering by, and delivery to, water customers within operational limits.

(7) Construct and operate supplier spill and tailwater recovery systems.

(8) Increase planned conjunctive use of surface water and groundwater within the supplier service area.

(9) Automate canal control structures.

(10) Facilitate or promote customer pump testing and evaluation.

(11) Designate a water conservation coordinator who will develop and implement the water management plan and prepare progress reports.

(12) Provide for the availability of water management services to water users.

These services may include, but are not limited to, all of the following:

(A) On-farm irrigation and drainage system evaluations.

(B) Normal year and real-time irrigation scheduling and crop evapotranspiration information.

(C) Surface water, groundwater, and drainage water quantity and quality data.

(D) Agricultural water management educational programs and materials for farmers, staff, and the public.

(13) Evaluate the policies of agencies that provide the supplier with water to identify the potential for institutional changes to allow more flexible water deliveries and storage.

(14) Evaluate and improve the efficiencies of the supplier's pumps.

(d) Agricultural water suppliers shall include in the agricultural water management plans required pursuant to Part 2.8 (commencing with Section 10800) a report on which efficient water management practices have been implemented and are planned to be implemented, an estimate of the water use efficiency improvements that have occurred since the last report, and an estimate of the water use efficiency improvements estimated to occur five and 10 years in the future. If an agricultural water supplier determines that an efficient water management practice is not locally cost effective or technically feasible, the supplier shall submit information documenting that determination.

(e) The data shall be reported using a standardized form developed pursuant to Section 10608.52.

(f) An agricultural water supplier may meet the requirements of subdivisions (d) and (e) by submitting to the department a water conservation plan submitted to the United States Bureau of Reclamation that meets the requirements described in Section 10828.

(g) On or before December 31, 2013, December 31, 2016, and December 31, 2021, the department, in consultation with the board, shall submit to the Legislature a report on the agricultural efficient water management practices that have been implemented and are planned to be implemented and an assessment of the manner in which the implementation of those efficient water management practices has affected and will affect agricultural operations, including estimated water use efficiency improvements, if any.

(h) The department may update the efficient water management practices required pursuant to subdivision (c), in consultation with the Agricultural Water Management Council, the United States Bureau of Reclamation, and the board. All efficient water management practices for agricultural water use pursuant to this chapter shall be adopted or revised by the department only after the department conducts public hearings to allow participation of the diverse geographical areas and interests of the state.

(i) (1) The department shall adopt regulations that provide for a range of options that agricultural water suppliers may use or implement to comply with the measurement requirement in paragraph (1) of subdivision (b).

(2) The initial adoption of a regulation authorized by this subdivision is deemed to address an emergency, for purposes of Sections 11346.1 and 11349.6 of the Government Code, and the department is hereby exempted for that purpose from the requirements of subdivision (b) of Section 11346.1 of the Government Code. After the initial adoption of an emergency regulation pursuant to this subdivision, the department shall not request approval from the Office of Administrative Law to readopt the regulation as an emergency regulation pursuant to Section 11346.1 of the Government Code.

CHAPTER 5 SUSTAINABLE WATER MANAGEMENT

10608.50.(a) The department, in consultation with the board, shall promote implementation of regional water resources management practices through increased incentives and removal of barriers consistent with state and federal law. Potential changes may include, but are not limited to, all of the following:

(1) Revisions to the requirements for urban and agricultural water management plans.

(2) Revisions to the requirements for integrated regional water management plans.

(3) Revisions to the eligibility for state water management grants and loans.

(4) Revisions to state or local permitting requirements that increase water supply opportunities, but do not weaken water quality protection under state and federal law.

(5) Increased funding for research, feasibility studies, and project construction.

(6) Expanding technical and educational support for local land use and water management agencies.

(b) No later than January 1, 2011, and updated as part of the California Water Plan, the department, in consultation with the board, and with public input, shall propose new statewide targets, or review and update existing statewide targets, for regional water resources management practices, including, but not limited to, recycled water, brackish groundwater desalination, and infiltration and direct use of urban stormwater runoff.

CHAPTER 6 STANDARDIZED DATA COLLECTION

10608.52.(a) The department, in consultation with the board, the California Bay-Delta Authority or its successor agency, the State Department of Public Health, and the Public Utilities Commission, shall develop a single standardized water use reporting form to meet the water use information needs of each agency, including the needs of urban water suppliers that elect to determine and report progress toward achieving targets on a regional basis as provided in subdivision (a) of Section 10608.28.

(b) At a minimum, the form shall be developed to accommodate information sufficient to assess an urban water supplier's compliance with conservation targets pursuant to Section 10608.24 and an agricultural water supplier's compliance with implementation of efficient water management practices pursuant to subdivision (a) of Section 10608.48. The form shall accommodate reporting by urban water suppliers on an individual or regional basis as provided in subdivision (a) of Section 10608.28.

CHAPTER 7 FUNDING PROVISIONS

10608.56.(a) On and after July 1, 2016, an urban retail water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(b) On and after July 1, 2013, an agricultural water supplier is not eligible for a water grant or loan awarded or administered by the state unless the supplier complies with this part.

(c) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for achieving the per capita reductions. The supplier may request grant or loan funds to achieve the per capita

reductions to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(d) Notwithstanding subdivision (b), the department shall determine that an agricultural water supplier is eligible for a water grant or loan even though the supplier is not implementing all of the efficient water management practices described in Section 10608.48, if the agricultural water supplier has submitted to the department for approval a schedule, financing plan, and budget, to be included in the grant or loan agreement, for implementation of the efficient water management practices. The supplier may request grant or loan funds to implement the efficient water management practices to the extent the request is consistent with the eligibility requirements applicable to the water funds.

(e) Notwithstanding subdivision (a), the department shall determine that an urban retail water supplier is eligible for a water grant or loan even though the supplier has not met the per capita reductions required pursuant to Section 10608.24, if the urban retail water supplier has submitted to the department for approval documentation demonstrating that its entire service area qualifies as a disadvantaged community.

(f) The department shall not deny eligibility to an urban retail water supplier or agricultural water supplier in compliance with the requirements of this part and Part 2.8 (commencing with Section 10800), that is participating in a multiagency water project, or an integrated regional water management plan, developed pursuant to Section 75026 of the Public Resources Code, solely on the basis that one or more of the agencies participating in the project or plan is not implementing all of the requirements of this part or Part 2.8 (commencing with Section 10800).

10608.60.(a) It is the intent of the Legislature that funds made available by Section 75026 of the Public Resources Code should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for grants to implement this part. In the allocation of funding, it is the intent of the Legislature that the department give consideration to disadvantaged communities to assist in implementing the requirements of this part.

(b) It is the intent of the Legislature that funds made available by Section 75041 of the Public Resources Code, should be expended, consistent with Division 43 (commencing with Section 75001) of the Public Resources Code and upon appropriation by the Legislature, for direct expenditures to implement this part.

CHAPTER 8 QUANTIFYING AGRICULTURAL WATER USE EFFICIENCY

10608.64. The department, in consultation with the Agricultural Water Management Council, academic experts, and other stakeholders, shall develop a methodology for quantifying the efficiency of agricultural water use. Alternatives to be assessed shall include, but not be limited to, determination of efficiency levels based on crop type or irrigation system distribution uniformity. On or before December 31, 2011, the department shall report to the Legislature on a proposed methodology and a plan for implementation. The plan shall include the estimated implementation costs and the types of data needed to support the methodology. Nothing in this section authorizes the department to implement a methodology established pursuant to this section.

APPENDIX C

PUBLIC UTILITIES COMMISSION DECISION 90-08-055

PUBLIC UTILITIES COMMISSION DECISION 90-08-055

Phase II

Need for a Water Management Program

With the present drought conditions and projected long-term water shortages, as shown in Table 1, the record shows that significant conservation programs are necessary not only in the short-term, but possibly continuing through the long-term.

In his prepared testimony dated June 12, 1989, on page 6, Dr. Timothy H. Quinn, MWD's Administrator of Conservation and Water Management, states:

> Through the early 1970s, Southern California had virtually no chance of experiencing a significant shortage… In contrast, by the early 1990s, water demands could exceed currently available supplies 10% of the time; a degree of risk for economic disruption and inconvenience that would not be acceptable in any other public industry. By 2000, we estimate that supplies from existing sources would be inadequate to meet demand an alarming 80% of the time.

To protect the short and long term interest of both residents and business that consume water, the Commission must consider the serious threats faced by the reliability of the water supplies in the state.

To achieve this long-term strategy, the Commission will require all Class A water utilities to submit a Water Management program. In addition, any Class B, C, or D water utility may file a Water Management program at their option. We are not requiring smaller utilities to file a program because, as seen in an earlier table on utility responses to the drought, they have not been affected by the same magnitude as have been Class A utilities.

Contents of the Water Management Program

The Water Management Program (WMP) must, at a minimum, address the issues listed below. Additional direction is available form the Commission's Water Utilities Branch, and each utility should work closely with the Branch as it develops its plan.

The plan should not be addresses at reducing uses of water. There are many situations in every utility's service territories where water can be saved or used more efficiently. It is not the commission's intent to change the lifestyle or reduce safety, productivity or growth potential of any part of the state by imposing this planning process. There are enough opportunities to reduce waste, change attitudes, and improve utilization to have a significant impact on water use without affecting quality of life.

Each utility should submit an overall company plan. In addition, in recognition of the fact that some utilities have very diverse districts, each utility with more than one district should submit a separate plan for each district.

1. Clear and Specific Goals

Each WMP must include clear and specific goals. The goals should be objective (i.e., a reduction water usage of ten percent over expected usage) and include a timeframe (i.e., by January 1, 1991). This section of the plan should describe how the plan will be advertised and how it will motivate customers to conserve. This part of the plan should also describe how the plan will be coordinated between the utility and municipal, public service and conservation organizations in order to achieve maximum effectiveness.

2. Multiple Approaches

No plan should rely on just one or two programs. If some of the programs are not effective, the overall plan will not be successful. The utility should pan multiple approaches to conservation and describe these approaches succinctly.

This section should be customer specific. Residential customers may need different conservation programs than commercial or industrial customers. Apartment complexes should receive adequate

attention, as should any facility where cost may be separated from usage. The utility should work with the customer to develop programs that meet the needs of each group.

These programs might include residential water audits, water recirculation, and blending for industrial customers, landscape modification and maintenance information, plumbing code changes and maximum use of wastewater. The utility should diligently study this area and develop innovative and creative programs to minimize water use.

The utility must also address its internal program. Each plan must include a section of the utility's effort to eliminate waste. This part of the plan might include procedures to reduce dam leaks and reservoir spills, improve leak detection and responsiveness of leak repair crews, and minimize hydrant and main flushing.

3. Long Term

The Commission is not looking for quick-fixes. The WMP process should be directed at long-term solutions. Changes in building ordinances and retrofitting existing facilities are two examples of long-term programs. The utility should not feel reluctant to work with any and all responsible agencies in developing this plan.

This section should include a discussion of the WMP and how it fits into the utility's resource planning process. The WMP should be an integral part of the utility's plan for meeting customer growth.

4. Cost effective

As with any public program, there will be levels of effectiveness. The utilities should carefully analyze each program for prospective benefits versus costs. Department of Water Resources has provided a computer program called waterPlan to provide this kind of analysis. The utilities should consider use of this and other existing analytical aids to perform true cost benefit analyses.

5. Trackable

The utility should provide a description of the method it will use to evaluate and track the effectiveness of the program. The Commission is looking for truly useful programs, not window dressing. The proposed programs must be open to analysis, both of impact and cost. This part of the report should also include the proposed method that the Company will use to keep the Commission apprised of the progress of the WMP.

6. Incentive-based

In this section the utility should address incentives, both to the customers and to the utility. If the utility develops proposals for incentives that the Commission might want to consider in the future, a description should be provided here. The Commission is looking for fair and equitable incentive programs in all areas of regulation and the utility's conservation plan should be designed with that perspective.

Findings of Fact

1. California faced severe water shortages in 1989 due to limited precipitation during 1987 and 1988.
2. On March 8, 1989, the Commission instituted 1.89-03-005 into measures to mitigate the effects of drought on regulated water utilities.
3. The Commission authorized certain utilities, or districts of utilities, to implement mandatory rationing to establish memorandum accounts to accrue revenue losses due to reduced sales and corresponding changes in water production costs.
4. Branch and Water Companies disagree about the method of calculating revenue losses.
5. Water Companies recommend that revenue losses be defined as the difference between revenues of adopted sales and actual sales.
6. Branch recommends that revenue losses be defined as the difference between revenues at 95% of the adopted sales and actual sales.

7. The staff proposal to limit recovery of revenues to 95% of adopted sales is a disincentive to conservation and is counterproductive to public policy which supports conservation.
8. Adopting Branch's proposal of computing revenue losses due to mandatory rationing, but allowing 100% recovery rather than 95%, will enable utilities to avoid the conservation disincentive.
9. Branch and water Companies believe that revenue losses due to mandatory rationing should be recovered through a surcharge to utilities' commodity rates.
10. Branch and Water Companies disagree regarding the duration for which the surcharge should remain effective.
11. Branch recommends the surcharge be effective for a six-month duration.
12. In the event rationing continues beyond the six-month period, Branch recommends that an additional surcharge rate be established.
13. Water Companies propose that the surcharge rate be based on an annualized sales and continue until the termination of mandatory rationing.
14. Water Companies propose that any over or undercollections in the revenue balancing account at the end of the rationing be offset against utilities' expense balancing account.
15. Water Companies' proposal would prevent ratepayers being overcharged and provide utilities a reasonable opportunity to recover their revenue losses.

APPENDIX D

DEPARTMENT OF WATER RESOURCES (DWR) POPULATION TOOL RESULTS

Del Oro Water Company, Paradise Pines (DOWCPP)

WUEdata - Del Oro Water Company

Sign Out

Please print this page to a PDF and include as part of your UWMP submittal.

Confirmation Information

Generated By	Water Supplier Name	Confirmation #	Generated On
Tara Campbell	Del Oro Water Company	2984235465	6/10/2016 1:29:32 PM

Boundary Information

Census Year	Boundary Filename	Internal Boundary ID
1990	DOWC_Paradise_Pines_District.kml	1181
2000	DOWC_Paradise_Pines_District.kml	1181
2010	DOWC_Paradise_Pines_District.kml	1181

Baseline Period Ranges

10 to 15-year baseline period

Number of years in baseline period:	10
Year beginning baseline period range:	1999
Year ending baseline period range[1]:	2008

5-year baseline period

Year beginning baseline period range:	2003
Year ending baseline period range[2]:	2007

[1] The ending year must be between December 31, 2004 and December 31, 2010.

[2] The ending year must be between December 31, 2007 and December 31, 2010.

Persons per Connection

Year	Census Block Level Total Population	Number of Connections *	Persons per Connection
1990	7,072		1.81
1991	-	-	1.82
1992	-	-	1.83
1993	-	-	1.84
1994	-	-	1.85
1995	-	-	1.86
1996	-	-	1.87
1997	-	-	1.88
1998	-	-	1.89
1999	-	-	1.90
2000	8,536	4483	1.90
2001	-	-	1.91
2002	-	-	1.92
2003	-	-	1.93
2004	-	-	1.94
2005	-	-	1.94
2006	-	-	1.95
2007	-	-	1.96
2008	-	-	1.97
2009	-	-	1.98
2010	9,370	4701	1.99
2015	-	-	2.04 **

Population Using Persons-Per-Connection

Year		Number of Connections *	Persons per Connection	Total Population
10 to 15 Year Baseline Population Calculations				
Year 1	1999	4449	1.90	8,432
Year 2	2000	4483	1.90	8,536
Year 3	2001	4485	1.91	8,562
Year 4	2002	4532	1.92	8,692
Year 5	2003	4628	1.93	8,918
Year 6	2004	4680	1.94	9,060
Year 7	2005	4730	1.94	9,200
Year 8	2006	4742	1.95	9,266
Year 9	2007	4752	1.96	9,328
Year 10	2008	4724	1.97	9,316
5 Year Baseline Population Calculations				
Year 1	2003	4628	1.93	8,918
Year 2	2004	4680	1.94	9,060
Year 3	2005	4730	1.94	9,200
Year 4	2006	4742	1.95	9,266
Year 5	2007	4752	1.96	9,328
2015 Compliance Year Population Calculations				
2015		4676	2.04 **	9,546

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QUESTIONS / ISSUES? CONTACT THE WUEDATA HELP DESK

APPENDIX E

AWWA WATER LOSS AUDIT

Del Oro Water Company, Paradise Pines (DOWCPP)

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

? Click to access definition
+ Click to add a comment

Water Audit Report for: DEL ORO WATER COMPANY
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: MILLION GALLONS (US) 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:	9	241.546	MG/Yr			MG/Yr
Water imported:	8	75.725	MG/Yr			MG/Yr
Water exported:	8	12.975	MG/Yr			MG/Yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 304.296 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

				Pcnt:	Value:	
Billed metered:	8	251.386	MG/Yr			
Billed unmetered:	10	0.003	MG/Yr			
Unbilled metered:	10	7.036	MG/Yr			
Unbilled unmetered:		3.804	MG/Yr	1.25%		MG/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: 262.229 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) 42.067 MG/Yr

Apparent Losses

				Pcnt:	Value:	
Unauthorized consumption:		0.761	MG/Yr	0.25%		MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	8	5.274	MG/Yr	2.00%		MG/Yr
Systematic data handling errors:		0.628	MG/Yr	0.25%		MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 6.663 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 35.403 MG/Yr

WATER LOSSES: 42.067 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 52.907 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	6	64.6	miles
Number of active AND inactive service connections:	8	4,808	
Service connection density:		74	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	65.0	psi

COST DATA

Total annual cost of operating water system:	10	$1,627,525	$/Year	
Customer retail unit cost (applied to Apparent Losses):	10	$3.25	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	8	$1,328.34	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 84 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

APPENDIX F

UNITED STATES CENSUS BUREAU'S
2010-2014 AMERICAN COMMUNITY SURVEY
5-YEAR ESTIMATES

Magalia CDP (Census Designated Place)

DP03

SELECTED ECONOMIC CHARACTERISTICS

2010-2014 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Magalia CDP, California			
	Estimate	Margin of Error	Percent	Percent Margin of Error
EMPLOYMENT STATUS				
Population 16 years and over	9,690	+/-532	9,690	(X)
In labor force	4,212	+/-505	43.5%	+/-4.0
Civilian labor force	4,212	+/-505	43.5%	+/-4.0
Employed	3,302	+/-436	34.1%	+/-3.6
Unemployed	910	+/-300	9.4%	+/-3.0
Armed Forces	0	+/-19	0.0%	+/-0.4
Not in labor force	5,478	+/-412	56.5%	+/-4.0
Civilian labor force	4,212	+/-505	4,212	(X)
Percent Unemployed	(X)	(X)	21.6%	+/-6.3
Females 16 years and over	4,866	+/-328	4,866	(X)
In labor force	2,008	+/-292	41.3%	+/-5.0
Civilian labor force	2,008	+/-292	41.3%	+/-5.0
Employed	1,743	+/-283	35.8%	+/-5.0
Own children under 6 years	465	+/-138	465	(X)
All parents in family in labor force	303	+/-123	65.2%	+/-18.4
Own children 6 to 17 years	1,357	+/-239	1,357	(X)
All parents in family in labor force	857	+/-230	63.2%	+/-11.4
COMMUTING TO WORK				
Workers 16 years and over	3,152	+/-410	3,152	(X)
Car, truck, or van -- drove alone	2,675	+/-378	84.9%	+/-3.9
Car, truck, or van -- carpooled	199	+/-87	6.3%	+/-2.6
Public transportation (excluding taxicab)	54	+/-65	1.7%	+/-2.0
Walked	40	+/-41	1.3%	+/-1.3
Other means	13	+/-22	0.4%	+/-0.7
Worked at home	171	+/-78	5.4%	+/-2.4
Mean travel time to work (minutes)	30.3	+/-4.3	(X)	(X)
OCCUPATION				
Civilian employed population 16 years and over	3,302	+/-436	3,302	(X)

Subject	Magalia CDP, California			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Management, business, science, and arts occupations	864	+/-200	26.2%	+/-5.5
Service occupations	785	+/-162	23.8%	+/-5.0
Sales and office occupations	921	+/-265	27.9%	+/-5.9
Natural resources, construction, and maintenance occupations	299	+/-132	9.1%	+/-3.6
Production, transportation, and material moving occupations	433	+/-141	13.1%	+/-4.1
INDUSTRY				
Civilian employed population 16 years and over	3,302	+/-436	3,302	(X)
Agriculture, forestry, fishing and hunting, and mining	33	+/-48	1.0%	+/-1.4
Construction	178	+/-100	5.4%	+/-3.0
Manufacturing	176	+/-92	5.3%	+/-2.6
Wholesale trade	27	+/-27	0.8%	+/-0.8
Retail trade	497	+/-170	15.1%	+/-4.6
Transportation and warehousing, and utilities	92	+/-56	2.8%	+/-1.7
Information	82	+/-69	2.5%	+/-2.0
Finance and insurance, and real estate and rental and leasing	196	+/-98	5.9%	+/-2.8
Professional, scientific, and management, and administrative and waste management services	276	+/-122	8.4%	+/-3.7
Educational services, and health care and social assistance	1,158	+/-215	35.1%	+/-6.0
Arts, entertainment, and recreation, and accommodation and food services	196	+/-106	5.9%	+/-3.0
Other services, except public administration	249	+/-114	7.5%	+/-3.1
Public administration	142	+/-84	4.3%	+/-2.5
CLASS OF WORKER				
Civilian employed population 16 years and over	3,302	+/-436	3,302	(X)
Private wage and salary workers	2,412	+/-400	73.0%	+/-6.1
Government workers	588	+/-179	17.8%	+/-5.0
Self-employed in own not incorporated business workers	302	+/-119	9.1%	+/-3.6
Unpaid family workers	0	+/-19	0.0%	+/-1.1
INCOME AND BENEFITS (IN 2014 INFLATION-ADJUSTED DOLLARS)				
Total households	4,855	+/-264	4,855	(X)
Less than $10,000	200	+/-92	4.1%	+/-1.9
$10,000 to $14,999	331	+/-132	6.8%	+/-2.7
$15,000 to $24,999	945	+/-202	19.5%	+/-4.2
$25,000 to $34,999	712	+/-188	14.7%	+/-3.7
$35,000 to $49,999	739	+/-168	15.2%	+/-3.3
$50,000 to $74,999	1,067	+/-195	22.0%	+/-3.9
$75,000 to $99,999	457	+/-110	9.4%	+/-2.2
$100,000 to $149,999	329	+/-100	6.8%	+/-2.1
$150,000 to $199,999	69	+/-55	1.4%	+/-1.1
$200,000 or more	6	+/-13	0.1%	+/-0.3
Median household income (dollars)	39,514	+/-4,232	(X)	(X)
Mean household income (dollars)	48,233	+/-3,452	(X)	(X)
With earnings	2,487	+/-265	51.2%	+/-5.2
Mean earnings (dollars)	48,894	+/-5,165	(X)	(X)
With Social Security	2,500	+/-274	51.5%	+/-4.5
Mean Social Security income (dollars)	18,306	+/-1,252	(X)	(X)
With retirement income	1,788	+/-276	36.8%	+/-4.9
Mean retirement income (dollars)	20,378	+/-2,608	(X)	(X)
With Supplemental Security Income	500	+/-151	10.3%	+/-3.0
Mean Supplemental Security Income (dollars)	12,833	+/-3,085	(X)	(X)
With cash public assistance income	282	+/-123	5.8%	+/-2.6

Subject	Magalia CDP, California			
	Estimate	Margin of Error	Percent	Percent Margin of Error
Mean cash public assistance income (dollars)	3,854	+/-1,167	(X)	(X)
With Food Stamp/SNAP benefits in the past 12 months	577	+/-152	11.9%	+/-3.3
Families	3,173	+/-264	3,173	(X)
Less than $10,000	116	+/-65	3.7%	+/-2.1
$10,000 to $14,999	88	+/-54	2.8%	+/-1.7
$15,000 to $24,999	507	+/-154	16.0%	+/-4.9
$25,000 to $34,999	490	+/-170	15.4%	+/-4.8
$35,000 to $49,999	551	+/-141	17.4%	+/-4.3
$50,000 to $74,999	708	+/-162	22.3%	+/-4.6
$75,000 to $99,999	333	+/-99	10.5%	+/-3.2
$100,000 to $149,999	305	+/-95	9.6%	+/-3.0
$150,000 to $199,999	69	+/-55	2.2%	+/-1.7
$200,000 or more	6	+/-13	0.2%	+/-0.4
Median family income (dollars)	43,457	+/-6,626	(X)	(X)
Mean family income (dollars)	54,024	+/-4,514	(X)	(X)
Per capita income (dollars)	20,818	+/-1,436	(X)	(X)
Nonfamily households	1,682	+/-255	1,682	(X)
Median nonfamily income (dollars)	26,714	+/-6,493	(X)	(X)
Mean nonfamily income (dollars)	36,133	+/-4,971	(X)	(X)
Median earnings for workers (dollars)	24,735	+/-4,281	(X)	(X)
Median earnings for male full-time, year-round workers (dollars)	41,361	+/-6,852	(X)	(X)
Median earnings for female full-time, year-round workers (dollars)	37,021	+/-7,533	(X)	(X)
HEALTH INSURANCE COVERAGE				
Civilian noninstitutionalized population	11,453	+/-636	11,453	(X)
With health insurance coverage	9,900	+/-746	86.4%	+/-3.3
With private health insurance	6,256	+/-726	54.6%	+/-5.1
With public coverage	6,159	+/-561	53.8%	+/-4.2
No health insurance coverage	1,553	+/-357	13.6%	+/-3.3
Civilian noninstitutionalized population under 18 years	1,958	+/-286	1,958	(X)
No health insurance coverage	199	+/-136	10.2%	+/-6.7
Civilian noninstitutionalized population 18 to 64 years	6,623	+/-497	6,623	(X)
In labor force:	3,906	+/-471	3,906	(X)
Employed:	3,020	+/-408	3,020	(X)
With health insurance coverage	2,567	+/-425	85.0%	+/-5.7
With private health insurance	2,221	+/-375	73.5%	+/-6.5
With public coverage	457	+/-182	15.1%	+/-5.4
No health insurance coverage	453	+/-167	15.0%	+/-5.7
Unemployed:	886	+/-292	886	(X)
With health insurance coverage	454	+/-253	51.2%	+/-18.9
With private health insurance	66	+/-64	7.4%	+/-7.5
With public coverage	406	+/-253	45.8%	+/-19.8
No health insurance coverage	432	+/-177	48.8%	+/-18.9
Not in labor force:	2,717	+/-345	2,717	(X)
With health insurance coverage	2,248	+/-350	82.7%	+/-6.3
With private health insurance	1,067	+/-279	39.3%	+/-8.2
With public coverage	1,453	+/-276	53.5%	+/-7.7
No health insurance coverage	469	+/-174	17.3%	+/-6.3

Subject	Magalia CDP, California			
	Estimate	Margin of Error	Percent	Percent Margin of Error
PERCENTAGE OF FAMILIES AND PEOPLE WHOSE INCOME IN THE PAST 12 MONTHS IS BELOW THE POVERTY LEVEL				
All families	(X)	(X)	12.4%	+/-3.6
With related children under 18 years	(X)	(X)	20.0%	+/-8.5
With related children under 5 years only	(X)	(X)	14.3%	+/-19.0
Married couple families	(X)	(X)	8.2%	+/-3.7
With related children under 18 years	(X)	(X)	9.0%	+/-7.0
With related children under 5 years only	(X)	(X)	34.9%	+/-38.6
Families with female householder, no husband present	(X)	(X)	31.0%	+/-12.4
With related children under 18 years	(X)	(X)	39.3%	+/-17.7
With related children under 5 years only	(X)	(X)	0.0%	+/-50.6
All people	(X)	(X)	18.1%	+/-3.6
Under 18 years	(X)	(X)	22.5%	+/-9.2
Related children under 18 years	(X)	(X)	22.5%	+/-9.2
Related children under 5 years	(X)	(X)	15.8%	+/-12.9
Related children 5 to 17 years	(X)	(X)	24.3%	+/-10.7
18 years and over	(X)	(X)	17.3%	+/-3.5
18 to 64 years	(X)	(X)	21.9%	+/-4.8
65 years and over	(X)	(X)	6.7%	+/-3.5
People in families	(X)	(X)	14.3%	+/-4.3
Unrelated individuals 15 years and over	(X)	(X)	32.6%	+/-8.8

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

Workers include members of the Armed Forces and civilians who were at work last week.

Occupation codes are 4-digit codes and are based on Standard Occupational Classification 2010.

Industry codes are 4-digit codes and are based on the North American Industry Classification System (NAICS). The Census industry codes for 2013 and later years are based on the 2012 revision of the NAICS. To allow for the creation of 2010-2014 tables, industry data in the multiyear files (2010-2014) were recoded to 2013 Census industry codes. We recommend using caution when comparing data coded using 2013 Census industry codes with data coded using Census industry codes prior to 2013. For more information on the Census industry code changes, please visit our website at http://www.census.gov/people/io/methodology/.

Logical coverage edits applying a rules-based assignment of Medicaid, Medicare and military health coverage were added as of 2009 -- please see http://www.census.gov/hhes/www/hlthins/publications/coverage_edits_final.pdf for more details. The corresponding 2008 data table in American FactFinder does not incorporate these edits and is therefore not comparable to this table in 2009, 2010, 2011, or 2012. Select geographies of 2008 data comparable to the 2009, 2010, 2011, and 2012 tables are accessible at http://www.census.gov/hhes/www/hlthins/data/acs/2008/re-run.html.

The health insurance coverage category names were modified in 2010. See ACS Health Insurance Definitions for a list of the insurance type definitions.

While the 2010-2014 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

APPENDIX G

BUTTE COUNTY GROUNDWATER MANAGEMENT PLAN

Introduction

Section 1
Introduction

1.1 Plan Authority and Administration

On August 26, 2003, the Butte County Board of Supervisors formally approved resolution 03-134 directing the Butte County Department of Water and Resource Conservation (Department) to proceed with the development of a countywide AB 3030 Groundwater Management Plan (GMP). The resolution is included as Appendix A. The County is an authorized groundwater management agency within the meaning of California Water Code (CWC) § 10753[1] (b) as a consequence of the fact that the County provides flood control services in County Service Area 24. The plan does not conflict with existing groundwater ordinances and groundwater management plans, the Department shall endeavor to coordinate this GMP with local agencies that have adopted rules and regulations to implement and enforce their own AB 3030 plans as required by CWC § 10753.9(a).

The Department has been participating in groundwater management activities for multiple years. The Department has focused on helping local users manage groundwater more effectively through several programs. In the last several years, the Department has increased groundwater level and quality monitoring, and has worked with other entities to collect and disseminate water quality and quantity data. Additionally, the Department assists other entities within the County with locally-driven groundwater management activities. The GMP documents the County's existing groundwater management programs, and explains potential future actions to increase the effectiveness of groundwater management.

AB 3030 History

The California Groundwater Management Act, or AB 3030, was adopted by the California legislature in 1992, which created provisions in the California Water Code Sections 10750 et.seq. to manage the safe production, quality and proper storage of groundwater. Though adoption of a Groundwater Management Plan is not required by law it is encouraged. AB 3030 is applicable to local agencies, including counties, to

[1] CWC § 10753(a) Any local agency, whose service area includes a groundwater basin, or a portion of a groundwater basin, that is not subject to groundwater management pursuant to other provisions of law or a court order, judgment, or decree, may, by ordinance, or by resolution if the local agency is not authorized to act by ordinance, adopt and implement a groundwater management plan pursuant to this part within all or a portion of its service area.
(b) Notwithstanding subdivision (a), a local public agency, other than an agency defined in subdivision (g) of Section 10752, that provides flood control, groundwater management, or groundwater replenishment, or a local agency formed pursuant to this code for the principal purpose of providing water service that has not yet provided that service, may exercise the authority of this part within a groundwater basin that is located within its boundaries within areas that are either of the following:
(1) Not served by a local agency.
(2) Served by a local agency whose governing body, by a majority vote, declines to exercise the authority of this part and enters into an agreement with the local public agency pursuant to Section 10750.7 or 10750.8.

develop a county-wide groundwater management plan for portions of the groundwater basin not presently covered by another groundwater management plan. As stated above, in August 2003 the Butte County Board of Supervisors approved Resolution 03-134 (Appendix A) directing the Department of Water and Resource Conservation to proceed with the development of a county-wide AB 3030 Plan.

Per Water Code Section 10750 et.seq., the County's AB 3030 Plan is a stand alone document. According to the State Department of Water Resources (DWR), 149 agencies have adopted AB 3030 plans and others have begun the process. In some basins groundwater is managed by statutory or judicial authority.

One benefit to Butte County's adoption of its AB 3030 Plan is to meet objectives of grant funding opportunities available under the Groundwater Management Assistance Program (AB 303). Last January 2004 Butte County applied for an AB 303 grant in the amount of $236,000 to support the development of a Basin Management Objective (BMO) Information Center, which is a web-based data center with GIS components. The County's grant application was outscored by competing proposals primarily because the County did not have an AB 3030 Plan in place.

The County DW&RC has developed the AB 3030 Plan to remain in context with the proposed County Integrated Water Resources Plan which is anticipated to be considered by the Board in early 2005. The DW&RC desires to perform and evaluate the scientific studies that will be necessary in the future to assist local policy makers.

Section 1.2 discusses the GMP's objectives, and Section 1.3 outlines the area covered by the GMP. The overall plan development process, as required by the CWC, is described in detail in Section 1.4, and the public involvement process is described in Section 1.5

1.2 Plan Objectives

The GMP supports the long-term maintenance of high quality groundwater resources within the Plan Area for agricultural, environmental, rural domestic and urban needs. Specifically, the Butte County Groundwater Management Plan endeavors to:

- Minimize the long-term drawdown of groundwater levels;
- Protect groundwater quality;
- Prevent inelastic land surface subsidence from occurring as a result of groundwater pumping;

- Minimize changes to surface water flows and quality that directly affect groundwater levels or quality;
- Minimize the effect of groundwater pumping on surface water flows and quality; and
- Evaluate groundwater replenishment and cooperative management projects.

1.3 Area Covered by Plan

The Butte County GMP includes those areas overlying a groundwater basin or associated groundwater sub-basin within Butte County not otherwise managed under an existing AB 3030 groundwater management plan (CWC § 10750.2(b)) or regulated by the Public Utilities Commission (CWC § 10750.7(a)). The Sacramento Valley Groundwater Basin resources within Butte County are located in the North Yuba, East Butte, West Butte, and Vina groundwater sub-basins. These sub-basins are shown on Figure 1-1.

The Butte County GMP Plan Area is shown on Figure 1-2. Areas managed under existing AB 3030 Groundwater Management Plans by a local agency (CWC § 10750.2(b)), and therefore excluded from inclusion in this GMP, include those areas within the borders of the Biggs-West Gridley Water District, Butte Water District, Richvale Irrigation District, and Western Canal Water District. Areas overlying the groundwater basin that are regulated by the Public Utilities Commission (CWC § 10750.7(a)), and therefore excluded from inclusion in this GMP, include those areas within the service area of California Water Service Company – Chico and California Water Service Company – Oroville. Additionally, the foothill and mountain areas of the County do not overlie groundwater basins as defined in Department of Water Resources (DWR) Bulletin 118-2003, and are therefore not included under this GMP.

Within Table 1-1, Inventory Units correspond to the above referenced groundwater sub-basins. Inventory Sub-units represent a geographical area that is a subset to an Inventory Unit. Inventory Sub-units generally represent organized water suppliers or other independent water use areas that have common land use and water supply sources. Water resources within Inventory Units and Inventory Sub-units have been characterized in detail in the reports *Butte County Groundwater Inventory Analysis* (DWR, 2000) and *Butte County Water Inventory and Analysis* (CDM, 2001). These reports are available at the Butte County Department of Water and Resource Conservation office library for use by the public.

Table 1-1
Butte County AB 3030 GMP Included Areas

Inventory Units	Inventory Sub-Units	Areas Within Sub-Units	Included in Butte County GMP
East Butte	Biggs-West Gridley	Biggs-West Gridley Water District	
		City of Biggs	*
		City of Gridley	*
	Butte	Butte Water District	
		City of Biggs	*
		City of Gridley	*
	Butte Sink	All	*
	Cherokee	All	*
	Esquon	Durham Mutual Water District	*
		All Other Areas	*
	Pentz	All	*
	Richvale	Richvale Irrigation District	
	Thermalito	Thermalito Irrigation District	*
		All Other Areas	*
	Western Canal	Western Canal Water District	
North Yuba	North Yuba	California Water Service, Oroville	
		All Other Areas	*
Vina	Vina	California Water Service, Chico	
		All Other Areas	*
West Butte	Angel Slough	All	*
	Durham/ Dayton	California Water Service, Chico	
		Dayton Mutual Water District	*
		Durham Irrigation District	*
		All Other Areas	*
	Llano Seco	All	*
	M&T	M&T Ranch	*
	Chico Urban Area	All	*
	Western Canal	Western Canal Water District	

Note that the Chico Urban Area, which may include portions of the West Butte and Vina sub-inventory units, or that portions of that BMO sub-unit that are not presently covered by an AB 3030 Plan by the local water purveyor, are addressed in the Butte County GMP.

Areas overlying the groundwater basin that are regulated by the Public Utilities Commission (CWC Section 10750.7(a)), including the area served by the California

Water Service Company – Chico, are managed under an Urban Water Management Plan and are not included in the Butte County GMP.

1.4 Plan Development Process

There are five main steps in the development of an AB 3030 groundwater management plan, defined under CWC § 10753.2 through 10753.6, as summarized below.

Step 1- Provide public notification of a hearing on whether or not to adopt a resolution of intention to draft a GMP and subsequently complete a hearing on whether or not to adopt a resolution of intention to draft a GMP. Following the hearing, draft a resolution of intention to draft a GMP.

Step 2 - Adopt a resolution of intention to draft a GMP and publish the resolution of intention in accordance with public notification (6066 gov code). Upon written request, provide copy of resolution of intention to interested persons. The Butte County Board of Supervisors adopted the resolution of intention to develop a GMP on August 26, 2003.

Step 3 - Prepare draft GMP within 2 years of resolution of intention adoption. Provide to the public a written statement describing the manner in which interested parties may participate in developing the GMP, as discussed in section 1.5 below. This may also include appointing a Technical Advisory Committee (TAC).

Step 4 - Provide public notification (6066 gov code) of a hearing on whether or not to adopt the GMP, followed by a hearing on whether or not to adopt the GMP.

Step 5 - If Protests are received for less than 50% of the assessed value of property in the county area the plan may be adopted within 35 days after completion of Step 4 above. If Protests are received for greater than 50% of the assessed value of the property in the county area, the plan will not be adopted. Section 10753.6 of the California Water Code (re: writing protest: content; majority protest) states that in order for a majority protest to exist to the adoption of the plan, written protests covering over 50% of the assessed value of the land area (as shown in Section 1, Figure 1-2 of the draft GMP) must be filed and not withdrawn before the conclusion of the second public hearing.

At its September 28, 2004 meeting the Butte County Board of Supervisors conducted a public hearing and approved the County GMP on a unanimous vote. The draft Butte County GMP was prepared in accord with CWC Section 10750 et.seq.. The availability of the draft GMP was announced at the April 6, 2004 meeting of the Butte County Water Commission. The public review draft was posted on the Department's (Department of Water and Resource Conservation – DW&RC) web-site and hard copies of the draft were also placed in local Butte County libraries in April 2004.

In addition to the activities described above the public was notified of the availability to review the draft GWP in its "WaterSolutions" newsletter which includes a mailing list of approximately 200 persons and organizations. Further, public notices were placed in local newspapers (Gridley, Chico, Oroville, Paradise) in May 2004 to inform the community that the draft GMP was available for review and comment. Comments were requested by June 30, 2004, however, many were received by the Department through late August 2004.

At its August 3, 2004 meeting the Butte County Water Commission moved that the draft GMP be taken to the Board and set a public hearing to announce their intention to adopt a GMP. On August 17, 2004 the Board adopted Resolution No. 04-152 (attached in Appendix G) to schedule a public hearing on September 28, 2004 for the purposes of hearing protests and adopting the draft GMP.

The County received numerous helpful comments to the draft GMP but did not receive written protests regarding the plan's adoption. A copy of Resolution No. 04-181 passed by the Board by unanimous vote on September 28, 2004 is included in Appendix G.

1.5 Public Outreach and Education

Public outreach and education is a primary function of the Butte County Department of Water and Resource Conservation. The Department encourages two-way dialogue, characterized by information dissemination and requests for suggestions and feedback on Department activities. In addition to public outreach completed during development of the GMP as required under CWC § 10753.2 through 10753.6, the Department has regularly disseminated information on GMP development as part of its ongoing public outreach effort.

GMP-related information and draft documentation are available to the public on the Department's website (http://www.buttecounty.net/waterandresource/) and have been included in the Department's monthly newsletter, *Water Solutions*, that is distributed in hardcopy and via e-mail to all interested parties. The Department also provides regular updates on plan development to the Butte County Water Commission and Board of Supervisors, with opportunity for the public to provide comment directly to Water Commission and Board of Supervisor members.

The Department has reported on GMP development during meetings with interested stakeholders. Stakeholder groups include the Butte Basin Water Users Association, Upper Ridge Coordinating Committee, Integrated Plan Steering Committee, and the Integrated Watershed Stakeholders Group. Individuals attending these meetings typically represent a wide range of organizations, including watershed groups, water agencies, independent groundwater users, interest groups and the general public.

Future GMP public outreach and education will focus on GMP implementation activities. Following the Board of Supervisors' February 10, 2004 approval of a Basin Management Objective (BMO) ordinance, the Department is supporting local areas pursuing development of BMOs within their respective areas. Butte County Ordinance 3869, describing BMO development and implementation, is included as Appendix B. The Department has developed a Basin Management Objective Development Packet for use by local BMO representatives in each of the 16 areas identified in the approved ordinance. The packets are intended to provide information and guidance necessary to develop BMOs within each area.

In June 2004 the Department facilitated a meeting in Durham, California to educate the community and to initiate development of BMOs and the formation of a Water Advisory Committee (WAC) to support their development. In July 2004 the Department conducted five additional meetings held in Chico, Oroville, Gridley, Durham and Magalia to introduce the draft County Integrated Water Resource Plan, of which BMOs, and the draft AB 3030 Plan, are important components as they regard integrated water resource planning.

1.6 Management Plan Components

The Butte County GMP includes the following required and recommended components:

- CWC § 10750 *et seq.* (seven mandatory components). Recent amendments to the CWC § 10750 *et seq.* require GMPs to include several components to be eligible for award of funding administered by DWR for the implementation of groundwater related studies, construction of groundwater projects and groundwater quality projects. These amendments to the CWC were included in Senate Bill 1938, effective January 1, 2003.

- CWC § 10750 *et seq.* (12 voluntary components). CWC § 10750 *et seq.* includes 12 specific technical issues that could be addressed in GMPs to manage the basin optimally and protect against adverse conditions.

- DWR Bulletin 118-223 components (seven recommended components).

Table 1-2 summarizes the required and recommended components of an AB 3030 plan pursuant to current guidance and the report section where each component is addressed.

1.7 Organization of AB 3030 Groundwater Management Plan

This GMP is organized into four sections:

- Section 1 – Introduction;

- Section 2 – Water Resources Setting;
- Section 3 – Plan implementation; and
- Section 4 – References.

To support the GMP the following appendices have been added:

- Appendix A – Resolutions passed by the Butte County Board of Supervisors
- Appendix B – Butte County Code, Chapter 33A Groundwater Management (BMO Ordinance)
- Appendix C – Butte Basin Water Users Association Groundwater Status Report 2004
- Appendix D – Butte County Code, Chapter 33 Groundwater Conservation
- Appendix E – Butte County Code, Chapter 23B Water Wells
- Appendix F – California Code of Regulations, Title 3 Pesticides and Pest Controls
- Appendix G – Public comments to the draft GMP and DW&RC responses to comments, discussed at the September 28, 2004 public hearing of the Board of Supervisors

Table 1-2
Butte County AB3030 GMP Components

Plan Component Description	Butte County Plan Section
CWC § 10750 *et seq.*, Mandatory Components	
1. Documentation of public involvement statement	1.5
2. Establish basin management objectives	3.2, 3.5.3, 3.6.1
3. Monitoring and management of groundwater elevations, groundwater quality, inelastic land surface subsidence, and changes in surface water flows and quality that directly affect groundwater levels or quality or are caused by pumping.	3.4
4. Plan to involve other agencies located within groundwater basin.	3.7.2
5. Adoption of monitoring protocols by basin stakeholders.	3.4, 3.5.3
6. Map of groundwater basin showing area of agency subject to GMP, other local agency boundaries, and groundwater basin boundary as defined in DWR Bulletin 118.	Figure 1-1 Figure 1-2
7. For agencies not overlying groundwater basins, prepare GMP using appropriate geologic and hydrogeologic principles.	1.3
CWC § 10750 *et seq.*, Voluntary Components	
8. Control of saline intrusion.	3.4.2, 3.6.2
9. Identification and management of wellhead protection areas and recharge areas.	3.5.6
10. Regulation of the migration of contaminated groundwater.	3.5
11. Administration of well abandonment and well destruction program.	3.5.1

12. Mitigation of conditions of overdraft.	3.6.3
13. Replenishment of groundwater extracted by water producers.	3.6.3
14. Monitoring of groundwater levels and storage.	3.4.1
15. Evaluate conjunctive use operations.	3.6.2, 3.6.3
16. Identification of well construction policies.	3.5.1
17. Construction and operation by local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling, and extraction projects.	3.6.3
18. Development of relationships with state and federal regulatory agencies.	3.7.1
19. Review of land use plans and coordination with land use planning agencies to assess activities that create reasonable risk of groundwater contamination.	3.5.5
DWR Bulletin 118 Suggested Components	
20. Manage with Guidance of advisory committee.	3.6.1, 3.7.2
21. Describe area to be managed under GMP.	1.3
22. Create link between BMOs and goals and actions of GMP.	Section 3
23. Describe GMP monitoring program.	3.4
24. Describe integrated water management planning efforts.	3.8
25. Report on implementation of GMP.	3.9.1
26. Evaluate GMP periodically.	3.9.2

APPENDIX H

2015 CONSUMER CONFIDENCE REPORT

Del Oro Water Company, Paradise Pines (DOWCPP)

2015 Water Quality Consumer Confidence Report
Del Oro Water Company – Paradise Pines District
Public Water System Number 0410011

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2015 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Water for the Del Oro Water Co., Paradise Pines District system comes from local water sources described as Wells 1, 2, 3, 4, and 6 in this report. Approximately Fifteen (15%) percent of the water is surface water, transferred from Del Oro Water Co., Stirling Bluffs District, which is conveyed through Paradise Irrigation District facilities. If you would like a copy of the Paradise Irrigation District Consumer Confidence Report you can contact them at (530)-877-4971 or on the web at www.paradiseirrigation.com. You will be notified with your billing of any public meetings concerning your drinking water. For additional information concerning your drinking water, contact Community Relations at P.O. Drawer 5172, Chico, CA 95927, 1-530-717-2502.

TERMS USED IN THIS REPORT:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): 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 Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLG's are set by the U.S. Environmental Protection Agency.

Primary Drinking Water Standards (PDWS): MCLs or MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: Not detectable at testing limit

pCi/L: Picocuries per liter (a measure of radiation

ppm: Parts per million or milligrams per liter (mg/L)

ppb: Parts per billion or micrograms per liter (ug/L)

ppt: Parts per trillion or nanograms per liter (ng/L)

ppq: Parts per quadrillion, or picograms per liter

MFL: Million fibers per liter

NTU: Nephelometric Turbidity Units

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally – occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agriculture livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5 and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA – 2015 – Monthly

Microbiological Contaminants	Highest Number of Detections	Number of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	0	0	No more than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or E. Coli	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or E. Coli	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER - 2014

Lead and Copper	Number of samples collected	90th percentile level detected	Number of sites exceeding AL	AL	MCLG	Typical Source of Contaminant
Lead (ug/L)	30	< 2	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ug/L)	30	550	0	1300	170	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	MCL	Typical Source of Contaminant	Chemical or Constituent (and reporting units)	Sample Date	Level Detected	MCL	Typical Source of Contaminant
Sodium (ppm)					**Hardness** (ppm)				
Well 2	2009	10.6	None	Naturally Occurring	Well 2	2009	100	None	Naturally Occurring
Well 3	2015	5.9	None		Well 3	2009	86	None	
Well 4	2009	7.4	None		Well 4	2009	90	None	
Well 6	2009	5.7	None		Well 6	2009	73	None	

TABLE 4 – DETECTION OF CONTAMINANTS WITH A ***PRIMARY*** DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**MCL**	**Typical Source of Contaminant**
Nitrate as No_3 (ppm) Well 2 Well 3 Well 4 Well 6	2015	 ND ND ND ND	45	Fertilizer, Natural Deposits, Septic Systems
Hexavalent Chromium (ppb) Well 2 Well 3 Well 4 Well 6	2014	 1.1 ND 1.2 ND	10	Naturally Occurring

TABLE 5– DETECTION OF CONTAMINANTS WITH A ***SECONDARY*** DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**MCL**	**Typical Source of Contaminant**	**Chemical or Constituent** (and reporting units)	**Sample Date**	**Level Detected**	**MCL**	**Typical Source of Contaminant**
Sulfate (ppm) Well 2 Well 3 Well 4 Well 6	 2009 2009 2009 2009	 3.6 1.2 1.0 0.6	600	Naturally Occurring	**Specific Conductance** (umhos) Well 2 Well 3 Well 4 Well 6	 2013 2013 2013 2013	 230 200 200 200	2200	Substances that form ions when in water: seawater influence
Chloride (ppm) Well 2 Well 3 Well 4 Well 6	 2015 2015 2006 2014	 3.5 3.5 2.1 1.0	600	Naturally Occurring	**TDS** (ppm) Well 2 Well 3 Well 4 Well 6	 2009 2009 2009 2009	 150 121 125 104	1500	Naturally Occurring

TABLE 6 – DISINFECTION BYPRODUCTS, DISINFECTANT RESIDUALS, and DISINFECTION BYPRODUCT PRECURSORS

Chemical or Constituent (and reporting units)	**Sample Date**	**Highest Level Detected**	**MCL**	**Typical Source of Contaminant**
TTHMs (Total Trihalomethanes) (ppb)	2015	26	80	Byproduct of drinking water chlorination
HAA5 (Haloacetic Acids) (ppb)	2015	55	60	Byproduct of drinking water chlorination
Chlorine Residual (ppm)	12/2015	0.39	40	Byproduct of drinking water chlorination

ADDITIONAL GENERAL INFORMATION ON DRINKING WATER

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly individuals, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The USEPA/Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Del Oro Water Company would like to inform our customers to the safety of lead and copper testing. While Del Oro Water Company does not use lead pipes in the distribution lines that serve our customers, older homes may have been built using lead pipes or lead connectors. For this reason ***Lead and Copper Tap Monitoring*** by Del Oro Water Company is conducted at designated customer's homes and is an important part of a water utilities monitoring schedule.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Del Oro Water Company is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available for the Safe Drinking water Hotline or at http://www.epa.gov/safewater/lead.

PP Mailing Completed by: May 25, 2016

APPENDIX I

RULE 14.1
WATER SHORTAGE CONTINGENCY PLAN

Del Oro Water Company, Paradise Pines (DOWCPP)

N

Rule No. 14.1
(Continued)

WATER SHORTAGE CONTINGENCY PLAN

A. APPLICABILITY

1. This schedule applies to all of Del Oro Water Company's (DOWC) regulated ratemaking areas in California.

B. GENERAL INFORMATION

1. All expenses incurred by utility to implement Rule 14.1, and Schedule 14.1, and requirements of the California State Water Resources Control Board ("Water Board") that have not been considered in a General Rate Case or other proceeding shall be accumulated by DOWC in a separate memorandum account, authorized in Resolution W-4976, for disposition as directed or authorized from time to time by the Commission.

2. To the extent that a Stage of Mandatory Water Use Restrictions in Schedule 14.1 has been activated, and a provision in this Rule is inconsistent with the activated Stage in Schedule 14.1, the provisions of Schedule 14.1 apply.

C. DEFINITIONS

For the purposes of this Rule, the following terms have the meanings set forth in this section.

1. "Commercial nursery" means the use of land, buildings or structures for the growing and/or storing of flowers, fruit trees, ornamental trees, vegetable plants, shrubs, trees and similar vegetation for the purpose of transplanting, for use as stock or grafting, and includes the retail sale or wholesale distribution of such items directly from the premises/lot.

2. "Drip irrigation system" means a non-spray, low-pressure, and low volume irrigation system utilizing emission devices with a precipitation or flow rate measured in gallons per hour (GPH), designed to slowly apply small volumes of water at or near the root zone of plants or other landscaping.

3. "Flow rate" means the rate at which water flows through pipes, valves, and emission devices, measured in gallons per minute (GPM), gallons per hour (GPH), inches per hour (IPH), hundred cubic feet (Ccf), or cubic feet per second (CFS).

4. "Flow-restricting device" means valves, orifices, or other devices that reduce the flow of potable water through a service line, which are capable of passing a minimum of 3 Ccf per person, per month, based upon the U.S. Census calculation of the average number of people in a household in the area

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5. "High-efficiency sprinkler systems" means an irrigation system with emission devices, such as sprinkler heads or nozzles, with a precipitation or flow rate no greater than one IPH.

6. "Irrigation" means the application of potable water by artificial means to landscape.

7. "Irrigation system" means the components of a system meant to apply water to an area for the purpose of irrigation, including, but not limited to, piping, fittings, sprinkler heads or nozzles, drip tubing, valves, and control wiring.

8. "Landscape" means all of the outdoor planting areas, turf areas, and water features at a particular location.

9. "Measureable rainfall" means any amount of precipitation of more than one-tenth of an inch (0.1").

10. "Micro spray irrigation system" means a low-pressure, low-volume irrigation system utilizing emission devices that spray, mist, sprinkle, or drip with a precipitation or flow rate measured in GPH, designed to slowly apply small volumes of water to a specific area.

11. "Ornamental landscape" means shrubs, bushes, flowers, ground cover, turf, lawns, and grass planted for the purpose of improving the aesthetic appearance of property, but does not include crops or other agricultural products or special landscape areas.

12. "Plumbing fixture" means a receptacle or device that is connected to a water supply system, including, but not limited to, pipes, toilets, urinals, showerheads, faucets, washing machines, water heaters, tubs, and dishwashers.

13. "Potable water" means water supplied by DOWC which conforms to the federal and state standards for human consumption.

14. "Properly programmed" means a smart irrigation controller that has been programmed according to the manufacturer's instructions and site-specific conditions.

15. "Real-time water measurement device" means a device or system that provides regularly updated electronic information regarding the customer's water use.

16. "Runoff" means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape onto other areas.

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17. "Smart irrigation controller" means an automatic device used to remotely control valves that operate an irrigation system that has been tested by an American National Standards Institute accredited third-party certifying body or laboratory in accordance with the Environmental Protection Agency's WaterSense program (or an analogous successor program), and certified by such body or laboratory as meeting the performance and efficiency requirements of such program, or the more stringent performance and efficiency requirements of another similar program.

18. "Special landscape area" means an area of the landscape dedicated solely to edible plants and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

19. "Turf" means a ground cover surface of grass that can be mowed.

20. "Water feature" means a design element where open, artificially supplied water performs an aesthetic or recreation feature, including, but not limited to, ponds, lakes, waterfalls, fountains, and streams.

21. "Water use evaluation" means an evaluation of the efficiency of indoor water-using devices, including, but not limited to, measurement of flow rates for all existing showerheads, faucets, and toilets, inspection for leaks, and providing written recommendations to improve the efficiency of the indoor water-using fixtures and devices and/or an evaluation of the performance of an irrigation system, including, but not limited to, inspection for leaks, reporting of overspray or runoff, and providing written recommendations to improve the performance of the irrigation system.

D. ENFORCEMENT

Each Stage of this Rule establishes certain restrictions on the use of potable water. Violating the restrictions set forth in a particular Stage while it is in effect is declared a non-essential, wasteful use of potable water. Subject to the schedule and conditions outlined below, DOWC is authorized to install a flow-restricting device on the service line of any customer when its personnel verify a customer is using potable water for non-essential, wasteful uses. No person shall have any right or claim in law or in equity, against DOWC because of, or as a result of, any matter or thing done or threatened to be done pursuant to the restrictions on using potable water for non-essential, wasteful uses.

1. FIRST VIOLATION: DOWC shall provide the customer with a written notice of violation.

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2. SECOND VIOLATION: If DOWC verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the first violation, DOWC shall provide the customer with a second written notice of violation and is authorized to install a flow-restricting device on the customer's service line. DOWC shall not be held liable for any injuries, damages, and/or consequences arising from the installation of a flow restricting device.

3. NOTICES OF VIOLATION:

   A. Written notices of violation provided to customers pursuant to this Rule shall document the verified violation and alert the customer to the fact that future violations of the restricted uses of potable water may result in the installation of a flow-restricting device on the customer's service line or the discontinuation of the customer's service.

   B. If DOWC elects to install a flow-restricting device on a customer's service line, the written notice of violation shall explain that a flow-restricting device has or will be installed on the customer's service line, document the steps the customer must take in order for the flow-restricting device to be removed, and explain that after the flow-restricting device is removed, it may be reinstalled, without further notice, if the customer is again verified by DOWC's personnel to be using potable water for non-essential, wasteful uses.

4. FLOW RESTRICTING DEVICE CONDITIONS: The installation of a flow-restricting device on a customer's service line is subject to the following conditions:

   A. The device shall be capable of providing the premise with a minimum of 3 Ccf per person, per month, based upon the U.S. Census calculation of the average number of people in a household in the area.

   B. The device may only be removed by DOWC, and only after a minimum three-day period has elapsed.

   C. Any tampering with the device may result in the discontinuation of the customer's water service and the customer being charged for any damage to DOWC's equipment or facilities and any required service visits.

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WATER SHORTAGE CONTINGENCY PLAN

D. After the removal of the device, if DOWC verifies that the customer is using potable water for non-essential, wasteful uses, DOWC may install another flow-restricting device without prior notice. This device may remain in place until water supply conditions warrant its removal. If, despite the installation of the device, DOWC verifies that the customer is using potable water for non-essential and, unauthorized wasteful uses, then DOWC may discontinue the customer's water service, as provided in its Rule No. 11.

5. FLOW-RESTRICTING DEVICE REMOVAL CHARGES: The charge to customers for removal of a flow-restricting device installed pursuant to this Rule is $100 during normal business hours, and $150 for the device to be removed outside of normal business hours.

E. WASTEFUL USES OF WATER

Except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency, customers are prohibited, at all times, from using potable water for the following actions, as each is declared a non-essential, wasteful use of water:

1. Use of potable water through a broken or defective plumbing fixture or irrigation system when DOWC has notified the customer in writing to repair the broken or defective plumbing fixture or irrigation system, and the customer has failed to effect such repairs within seven (7) business days of receipt of such notice;

2. The application of potable water to landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;

3. The use of a hose that dispenses potable water to wash vehicles, including cars, trucks, buses, boats, aircraft, and trailers, whether motorized or not, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.

F. MANDATORY STAGED RESTRICTIONS OF WATER USE

1. ADOPTION OF STAGED MANDATORY RESTRICTIONS: DOWC may implement the following staged mandatory restrictions of water use, after notifying the Director of the California Public Utilities Commission's (Commission) Division of Water and Audits (DWA), by a Tier 1 advice letter in both hard-copy and emailed formats, of DOWC's intent to implement a particular stage, if

   A. Water supplies are projected to be insufficient to meet normal customer demand by DOWC; or

   B. A water supply shortage or threatened shortage exists; or

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WATER SHORTAGE CONTINGENCY PLAN

C. Water supplies are curtailed by a wholesale water supplier; or

D. Directed to do so under a duly adopted emergency regulation by the Commission or other authorized government agencies.

2. PUBLIC NOTICE: Within 45 days of implementing a mandatory staged reduction in water use, DOWC shall notify its customer of the requirements of the particular stage implemented by DOWC by bill insert, direct mailing, email, or bill message directing the customer to additional information on DOWC's website.

3. STAGE 1 WATER SHORTAGE: A Stage 1 Water Shortage occurs when DOWC, the Commission, a wholesale water supplier, or other authorized government agency determines that measures are needed to reduce water consumption by customers served by public water suppliers. In addition to the prohibitions outlined in Section E, the following restrictions may be imposed by DOWC, except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency:

A. Outdoor Irrigation Restrictions (Stage 1)

i. Irrigating ornamental landscapes with potable water is limited to no more than three (3) days per week, on a schedule established and posted by DOWC on its website or otherwise provided to customers by bill message, bill insert, direct mail, or email, or as follows:

1. Customers with even-numbered addresses may irrigate on Saturdays, Tuesdays, and Thursdays.

2. Customers with odd-numbered addresses may irrigate on Sundays, Wednesdays, and Fridays.

3. Customers without a street address may irrigate on Saturdays, Tuesdays, and Thursdays.

4. Notwithstanding the foregoing restrictions, irrigation of special landscape areas or commercial nurseries may occur as needed, provided that the customer who wishes to irrigate a special landscape area or commercial nursery presents DOWC with a plan to achieve water use reductions commensurate with those that would be achieved by complying with foregoing restrictions.

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5. Notwithstanding the foregoing restrictions, when a city, county, or other local public agency in one of DOWC's service areas duly adopts restrictions on the number of days or hours of the day that customers may irrigate which are different than those adopted by DOWC, DOWC may enforce the city, county, or other local public agency's restrictions.

ii. Irrigating ornamental landscape with potable water is prohibited during the hours between **8:00 a.m. and 6:00 p.m.**

iii. The foregoing restrictions do **not** apply to:

1. Landscape irrigation zones that exclusively use drip irrigation systems and/or micro spray irrigation system;

2. Irrigating ornamental landscapes with the use of a hand-held bucket or similar container, with a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored, or for the express purpose of adjusting or repairing an irrigation system.

B. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing fixture(s) or irrigation system(s) must be repaired within five (5) business days of written notification by DOWC, unless other arrangements are made with DOWC.

C. Prohibited Uses of Water: Customers are prohibited from using potable water for the following actions:

i. The application of potable water to driveways and sidewalks;

ii. The use of potable water in a water feature, except where the water is part of a recirculating system;

iii. The application of potable water to outdoor landscapes during and within forty-eight (48) hours after measurable rainfall.

D. Other duly adopted restrictions on the use potable water as prescribed from time to time by the Commission or other authorized government agencies are incorporated herein by reference.

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WATER SHORTAGE CONTINGENCY PLAN

4. STAGE 2 WATER SHORTAGE: A Stage 2 Water Shortage occurs when the Stage 1 Water Shortage restrictions are deemed insufficient to achieve identified water use goals established by DOWC, the Commission, a wholesale water supplier, or other authorized government agency. In addition to the prohibited wasteful water use practices listed in Section D, the following restrictions may be imposed by DOWC, except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency. Differences from or additions to the previous Stage are underlined.

A. Outdoor Irrigation Restrictions (Stage 2)

i. Irrigating ornamental landscapes with potable water is limited to no more than three (3) days per week, on a schedule established and posted by DOWC on its website or otherwise provided to customers by bill message, bill insert, direct mail, or email, or as follows:

1. Customers with even-numbered addresses may irrigate on Saturdays, Tuesdays, and Thursdays.

2. Customers with odd-numbered addresses may irrigate on Sundays, Wednesdays, and Fridays.

3. Customers without a street address may irrigate on Saturdays, Tuesdays, and Thursdays.

4. Notwithstanding the foregoing restrictions, irrigation of special landscape areas or commercial nurseries may occur as needed, provided that the customer who wishes to irrigate a special landscape area or commercial nursery presents DOWC with a plan to achieve water use reductions commensurate with those that would be achieved by complying with foregoing restrictions.

5. Notwithstanding the foregoing restrictions, when a city, county, or other local public agency in one of DOWC's service areas duly adopts restrictions on the number of days or hours of the day that customers may irrigate which are different than those adopted by DOWC, DOWC may enforce the city, county, or other local public agency's restrictions.

ii. Irrigating ornamental landscape with potable water is prohibited during the hours between **8:00 a.m. and 6:00 p.m.**

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WATER SHORTAGE CONTINGENCY PLAN

iii. The foregoing restrictions do **not** apply to:

1. Landscape irrigation zones that exclusively use drip irrigation systems and/or micro spray irrigation system;

2. Irrigating ornamental landscapes with the use of a hand-held bucket or similar container, a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored, or for the express purpose of adjusting or repairing an irrigation system.

B. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing fixture(s) or irrigation system(s) must be repaired within **three (3) business days** of written notification by DOWC, unless other arrangements are made with DOWC.

C. Prohibited Uses of Water: Customers are prohibited from using potable water for the following actions:

i. The application of potable water to driveways and sidewalks;

ii. The use of potable water in a water feature, except where the water is part of a recirculating system;

iii. The application of potable water to outdoor landscapes during and within forty-eight (48) hours after measurable rainfall;

iv. The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased;

v. Irrigation of ornamental landscape on public street medians;

vi. Irrigation outside of newly constructed homes and buildings with potable water unless the potable water is delivered by a drip irrigation systems and/or micro spray irrigation system.

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WATER SHORTAGE CONTINGENCY PLAN

D. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guest room using clear and easily understood language.

E. Limits on Filling Single-Family Residential Swimming Pools and Spas: Re-filling and initial filling of single-family residential swimming pools or outdoor spas with potable water is prohibited, except to maintain required operating levels of existing pools and spas or as a result of completing structural repairs to the swimming pool or outdoor spa.

F. Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the implementation of any staged mandatory restrictions of water use as described in this Rule.

G. Other duly adopted restrictions on the use of potable water as prescribed from time to time by the Commission or other authorized government agencies are incorporated herein by reference.

DOWC will establish an appeals process for customers that will allow for requests for increased water budgets.

Any customer who seeks a variance from any of the provisions of this voluntary water conservation or mandatory rationing plan shall notify the utility in writing, explaining in detail the reason for such a variation. The utility shall respond to each such request in writing.

If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of the voluntary water conservation or mandatory rationing plan.

5. STAGE 3 WATER SHORTAGE: A Stage 3 Water Shortage occurs when the Stage 2 Water Shortage restrictions are deemed insufficient to achieve identified water use goals established by DOWC, the Commission, a wholesale water supplier, or other authorized government agency. In addition to the prohibited wasteful water use practices listed in Section D, the following restrictions may be imposed by DOWC, except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency. Differences from or additions to the previous Stages are underlined.

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(Continued)

WATER SHORTAGE CONTINGENCY PLAN

A. Outdoor Irrigation Restrictions

i. Irrigating ornamental landscapes with potable water is limited to no more than two (2) days per week, on a schedule established and posted by DOWC on its website or otherwise provided to customers by bill message, bill insert, direct mail, or email, or as follows:

1. Customers with even-numbered addresses may irrigate on Saturdays and Tuesdays (previous Stages allowed Thursdays as well).

2. Customers with odd-numbered addresses may irrigate on Sundays and Wednesdays (previous Stages allowed Fridays as well).

3. Customers without a street address may irrigate on Saturdays and Tuesdays (previous Stages allowed Thursdays as well).

4. Notwithstanding the foregoing restrictions, irrigation of special landscape areas or commercial nurseries may occur as needed, provided that the customer who wishes to irrigate a special landscape area or commercial nursery presents DOWC with a plan to achieve water use reductions commensurate with those that would be achieved by complying with foregoing restrictions.

5. Notwithstanding the foregoing restrictions, when a city, county, or other local public agency in one of DOWC's service areas duly adopts restrictions on the number of days or hours of the day that customers may irrigate which are different than those adopted by DOWC, DOWC may enforce the city, county, or other local public agency's restrictions.

ii. Irrigating ornamental landscape with potable water is prohibited during the hours between **8:00 a.m. and 6:00 p.m.**

iii. The foregoing restrictions do **not** apply to:

1. Landscape irrigation zones that exclusively use drip irrigation systems and/or micro spray irrigation system;

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2. Irrigating ornamental landscapes with the use of a hand-held bucket or similar container, a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored, or for the express purpose of adjusting or repairing an irrigation system.

B. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing fixtures and/or irrigation system must be repaired within **two (2) business days** of written notification by DOWC, unless other arrangements are made with DOWC.

C. Prohibited Uses of Water: Customers are prohibited from using potable water for the following actions:

i. The application of potable water to driveways and sidewalks;

ii. The use of potable water in a water feature, except where the water is part of a recirculating system;

iii. The application of potable water to outdoor landscapes during and within forty-eight (48) hours after measurable rainfall;

iv. The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased;

v. Irrigation of ornamental landscape on public street medians;

vi. Irrigation outside of newly constructed homes and buildings with potable water unless the potable water is delivered by a drip irrigation systems and/or micro spray irrigation system;

vii. Use of potable water for street cleaning with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible);

viii. Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.

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WATER SHORTAGE CONTINGENCY PLAN

D. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guest room using clear and easily understood language.

E. Limits on Filling Residential Swimming Pools and Spas: Re-filling and initial filling of single-family residential swimming pools or outdoor spas with potable water is prohibited (previous Stages allowed certain exceptions).

F. Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the implementation of any staged mandatory restrictions of water use as described in this Rule.

G. Other duly adopted restrictions on the use of potable water as prescribed from time to time by the Commission or other authorized government agencies are incorporated herein by reference.

DOWC will establish an appeals process for customers that will allow for requests for increased water budgets.

Any customer who seeks a variance from any of the provisions of this voluntary water conservation or mandatory rationing plan shall notify the utility in writing, explaining in detail the reason for such a variation. The utility shall respond to each such request in writing.

If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of the voluntary water conservation or mandatory rationing plan.

6. STAGE 4 WATER SHORTAGE: A Stage 4 Water Shortage occurs when the Stage 3 Water Shortage restrictions are deemed insufficient to achieve identified water use goals established by DOWC, the Commission, a wholesale water supplier, or other authorized government agency. In addition to the prohibited wasteful water use practices listed in Section D, the following restrictions may be imposed by DOWC, except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency. Differences from or additions to the previous Stage are underlined.

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WATER SHORTAGE CONTINGENCY PLAN

A. Irrigating ornamental landscape with potable water is prohibited, except when a hand-held bucket or a similar container, or a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored is used to maintain vegetation, including trees and shrubs.

B. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing fixtures or irrigation system must be repaired within **one (1) business day** of written notification by DOWC, unless other arrangements are made with DOWC.

Prohibited Uses of Water: Customers are prohibited from using potable water for the following actions:

i. The application of potable water to driveways and sidewalks;

ii. The use of potable water in a water feature, except where the water is part of a recirculating system;

iii. The application of potable water to outdoor landscapes during and within forty-eight (48) hours after measurable rainfall;

iv. The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased;

Note that items previously identified as (v) and (vi) in Stage 3 have been eliminated.

v. Use of potable water for street cleaning with trucks (the previous Stage allowed certain exceptions);

vi. Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses (the previous Stage allowed certain exceptions).

C. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guest room using clear and easily understood language.

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WATER SHORTAGE CONTINGENCY PLAN

D. Limits on Filling Residential Swimming Pools and Spas: Re-filling and initial filling of residential swimming pools or outdoor spas with potable water is prohibited.

E. Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the implementation of any staged mandatory restrictions of water use as described in this Rule.

F. Other duly adopted restrictions on the use of utility-supplied potable water as prescribed from time to time by the Commission or other authorized government agencies, commissions, or officials are incorporated herein by reference.

DOWC will establish an appeals process for customers that will allow for requests for increased water budgets.

Any customer who seeks a variance from any of the provisions of this voluntary water conservation or mandatory rationing plan shall notify the utility in writing, explaining in detail the reason for such a variation. The utility shall respond to each such request in writing.

If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of the voluntary water conservation or mandatory rationing plan.

G. **ADOPTION OF STAGED MANDATORY WATER USE REDUCTIONS (Schedule 14.1)**

1. ADDITION OF SCHEDULE 14.1: If, in the opinion of DOWC, more stringent water conservation measures are required due to supply conditions or government directive, DOWC may request the addition of a Schedule No. 14.1 – Staged Mandatory Water Use Reductions, via a Tier 2 advice letter.

   A. DOWC may not activate Schedule No. 14.1 until it has been authorized to do so by the California Public Utilities Commission, as delegated to its Division of Water and Audits.

   B. A Schedule No. 14.1 that has been authorized by the California Public Utilities Commission shall remain dormant until triggered by specific conditions detailed in the Schedule 14.1 tariff and DOWC has requested and received authorization for activating a stage by the California Public Utilities Commission.

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C. Notice of the Tier 2 advice letter and associated public participation hearing, if required, shall be provided to customers through a bill insert or a direct mailing, as set forth in Subsection 5 (Public Notice) below.

D. DOWC shall comply with all requirements of Sections 350-358 of the California Water Code.

E. The Tier 2 advice letter requesting the addition of a Schedule No. 14.1 shall include, but not be limited to:

i. A proposed Schedule No. 14.1 tariff, which shall include but not be limited to:

1. Applicability,

2. Territory applicable to,

3. A detailed description of each stage of water budgets (the number of stages requested for a ratemaking area may vary depending on the specifics of the water shortage event),

4. A detailed description of the trigger(s) that activates each stage of water budgets,

5. A detailed description of each water use restriction for each stage of water budgets,

6. Water use violation levels, written warning levels, associated fines, if applicable, and exception procedures,

7. Conditions for installation of a flow restrictor,

8. Charges for removal of flow restrictors, and

9. Special conditions

ii. Justification for, and documentation and calculations in support of the water budgets.

2. Conditions for Activating Schedule No. 14.1: DOWC may file a Tier 2 advice letter to request activation of a particular stage of its Schedule No. 14.1 tariff if:

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WATER SHORTAGE CONTINGENCY PLAN

A. DOWC, the California Public Utilities Commission, wholesale water supplier, or other government agency declares an emergency requiring mandatory water budgets, mandatory water rationing, or mandatory water allocations; or

B. A government agency declares a state of emergency in response to severe drought conditions, earthquake or other catastrophic event that severely reduces DOWC's water supply; or

C. DOWC is unable to achieve water conservation targets set by itself; or

D. Water conservation targets set by itself or a governing agency are insufficient; or

E. DOWC chooses to subsequently activate a different stage of its Schedule No. 14.1 tariff.

3. Activating Schedule No. 14.1: The Tier 2 advice letter requesting activation of a stage of the Schedule 14.1 tariff shall:

A. Include, but not be limited to, a justification for activating the particular stage of mandatory water use reductions, as well as the period during which the particular stage will be in effect.

B. Be accompanied by the customer notification measures detailed in sub-section 5 (Public Notice) below.

4. De-Activating Schedule No. 14.1: When Schedule No. 14.1 is activated and DOWC determines that water supplies are again sufficient to meet normal demands, and mandatory water use reductions are no longer necessary, DOWC shall seek the approval of the California Public Utilities Commission, via a Tier 1 advice letter, to de-activate the particular stage of mandatory water use reductions that had been authorized.

5. Public Notice

A. When DOWC requests the addition of a Schedule 14.1 – Staged Mandatory Water Use Reductions Tariff, via a Tier 2 advice letter, it shall provide notice of the Tier 2 advice letter and associated public hearing provided to customers through bill inserts or direct mailing, and it shall comply with all requirements of Sections 350-358 of the California Water Code (CWC), including but not limited to the following:

i. In order to be in compliance with both the General Order 96-B and CWC, notice shall be provided via both newspaper and bill insert/direct mailing.

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WATER SHORTAGE CONTINGENCY PLAN

ii. One notice shall be provided for each advice letter filed, that includes both notice of the filing of the Tier 2 advice letter as well as the details of the public hearing (date, time, place, etc.).

iii. The public meeting shall be held after the Tier 2 advice letter is filed, and before the Commission authorizes the addition of Schedule 14.1 to the tariff except in cases of emergency water shortages approved by DWA.

iv. DOWC shall consult with Division of Water and Audits staff prior to filing advice letter, in order to determine details of public meeting.

B. In the event that Schedule No. 14.1- Staged Mandatory Water Use Reductions Tariff is triggered, and DOWC requests activation through the filing of a Tier 2 advice letter, DOWC shall notify its customers and provide each customer with a summary of Schedule No. 14.1 by means of bill insert or direct mailing. Notification shall take place prior to imposing any penalties associated with this plan. If activation of Schedule No. 14.1 occurs one year or more since the public hearing associated with adding Schedule 14.1 to its tariffs, then DOWC shall conduct a public hearing pursuant to California Water Code Section 351 prior to activating a stage of its Mandatory Water Use Reduction Tariff.

C. During the period that a stage of Schedule No. 14.1 is activated, DOWC shall provide customers with updates in at least every other bill, regarding its water supply status and the results of customers' conservation efforts.

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APPENDIX J

SCHEDULE 14.1
STAGED MANDATORY WATER USE REDUCTIONS

Del Oro Water Company, Paradise Pines (DOWCPP)

Schedule No. PP-14.1

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

A. APPLICABILITY

1. This schedule applies to Paradise Pines District of Del Oro Water Company's (DOWC) regulated ratemaking area in Butte County, California.

B. GENERAL INFORMATION

1. All expenses incurred by utility to implement Rule 14.1, and Schedule 14.1, and requirements of the California State Water Resources Control Board ("Water Board") that have not been considered in a General Rate Case or other proceeding shall be accumulated by DOWC in a separate memorandum account, authorized in Resolution W-4976, for disposition as directed or authorized from time to time by the Commission.

2. All monies collected by DOWC through waste of water penalties established in this schedule shall be recorded in the appropriate memorandum account and used to offset the expenses described in Section 1 above.

3. All monies collected by DOWC through drought surcharges, as established by the Mandatory Water Budgets found in Schedule 14.1, shall be recorded in the appropriate DOWC Statewide Lost Revenue Recovery Memorandum Account and used to offset under-collected revenues.

4. To the extent that any provision in this Schedule is inconsistent with Rule 14.1, the provisions of this Schedule apply.

C. DEFINITIONS

For the purposes of this Rule, the following terms have the meanings set forth in this section. (These are the same as in Rule 14.1, unless otherwise specified.)

1. "Commercial nursery" means the use of land, buildings or structures for the growing and/or storing of flowers, fruit trees, ornamental trees, vegetable plants, shrubs, trees and similar vegetation for the purpose of transplanting, for use as stock or grafting, and includes the retail sale or wholesale distribution of such items directly from the premises/lot.

2. "Drip irrigation system" means a non-spray, low-pressure, and low volume irrigation system utilizing emission devices with a precipitation or flow rate measured in gallons per hour (GPH), designed to slowly apply small volumes of water at or near the root zone of plants or other landscaping.

3. "Flow rate" means the rate at which water flows through pipes, valves, and emission devices, measured in gallons per minute (GPM), gallons per hour (GPH), inches per hour (IPH), hundred cubic feet (Ccf), or cubic feet per second (CFS).

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WATER SHORTAGE CONTINGENCY PLAN WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES

(Continues)

4. "Flow-restricting device" means valves, orifices, or other devices that reduce the flow of potable water through a service line, which are capable of passing a minimum of 3 Ccf per person, per month, based upon the U.S. Census calculation of the average number of people in a household in the area.

5. "High-efficiency sprinkler systems" means an irrigation system with emission devices, such as sprinkler heads or nozzles, with a precipitation or flow rate no greater than one IPH.

6. "Irrigation" means the application of potable water by artificial means to landscape.

7. "Irrigation system" means the components of a system meant to apply water to an area for the purpose of irrigation, including, but not limited to, piping, fittings, sprinkler heads or nozzles, drip tubing, valves, and control wiring.

8. "Landscape" means all of the outdoor planting areas, turf areas, and water features at a particular location.

9. "Measureable rainfall" means any amount of precipitation of more than one-tenth of an inch (0.1").

10. "Micro spray irrigation system" means a low-pressure, low-volume irrigation system utilizing emission devices that spray, mist, sprinkle, or drip with a precipitation or flow rate measured in GPH, designed to slowly apply small volumes of water to a specific area.

11. "Ornamental landscape" means shrubs, bushes, flowers, ground cover, turf, lawns, and grass planted for the purpose of improving the aesthetic appearance of property, but does not include crops or other agricultural products or special landscape areas.

12. "Plumbing fixture" means a receptacle or device that is connected to a water supply system, including, but not limited to, pipes, toilets, urinals, showerheads, faucets, washing machines, water heaters, tubs, and dishwashers.

13. "Potable water" means water supplied by DOWC which conforms to the federal and state standards for human consumption.

14. "Properly programmed" means a smart irrigation controller that has been programmed according to the manufacturer's instructions and site-specific conditions.

15. "Real-time water measurement device" means a device or system that provides regularly updated electronic information regarding the customer's water use.

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

16. "Runoff" means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape onto other areas.

17. "Smart irrigation controller" means an automatic device used to remotely control valves that operate an irrigation system that has been tested by an American National Standards Institute accredited third-party certifying body or laboratory in accordance with the Environmental Protection Agency's WaterSense program (or an analogous successor program), and certified by such body or laboratory as meeting the performance and efficiency requirements of such program, or the more stringent performance and efficiency requirements of another similar program.

18. "Special landscape area" means an area of the landscape dedicated solely to edible plants and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

19. "Turf" means a ground cover surface of grass that can be mowed.

20. "Water feature" means a design element where open, artificially supplied water performs an aesthetic or recreation feature, including, but not limited to, ponds, lakes, waterfalls, fountains, and streams.

21. "Water use evaluation" means an evaluation of the efficiency of indoor water-using devices, including, but not limited to, measurement of flow rates for all existing showerheads, faucets, and toilets, inspection for leaks, and providing written recommendations to improve the efficiency of the indoor water-using fixtures and devices and/or an evaluation of the performance of an irrigation system, including, but not limited to, inspection for leaks, reporting of overspray or runoff, and providing written recommendations to improve the performance of the irrigation system.

D. WASTE OF WATER PENALTIES

Each Stage of this Schedule establishes certain restrictions on the use of potable water. Violating the restrictions set forth in a particular Stage while it is in effect is declared a non-essential, wasteful use of potable water. DOWC is authorized to take the following actions when its personnel verify a customer is using potable water for non-essential, wasteful uses. No person shall have any right or claim in law or in equity, against DOWC because of, or as a result of, any matter or thing done or threatened to be done pursuant to the restrictions on using potable water for non-essential, wasteful uses.

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WATER SHORTAGE CONTINGENCY PLAN

WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES

(Continues)

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Note: When a Stage in this Schedule has been activated, Section D in this Schedule supersedes Section D (Enforcement) in Rule 14.1.

1. FIRST VIOLATION: DOWC shall provide the customer with a written notice of violation. In addition, DOWC is authorized to take the following actions:

   A. If the customer currently receives service through a metered connection, install a real-time water measurement device on the customer's service line and provide the customer with access to information from the device. The cost of the device, including installation and ongoing operating costs, shall be billed to the customer, and nonpayment may result in discontinuance of service.

   B. If the customer does not currently receive service through a metered connection, install a water meter on the customer's service line, charge the customer for water use pursuant to DOWC's metered service tariffs and rules.

2. SECOND VIOLATION: If DOWC verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the first violation, DOWC shall provide the customer with a second written notice of violation. In addition to the actions prescribed under the first violation above, DOWC is authorized to take the following actions:

   A. Apply the following waste of water penalties, which are in addition to any other charges authorized by this Schedule or other DOWC tariffs.

      i. If Stage 1 is in effect, $25 (Stage 1 is detailed below in Section E).

      ii. If Stage 2 is in effect, $50 (Stage 2 is detailed below in Section F).

      iii. If Stage 3 is in effect, $100 (Stage 3 is detailed below in Section G).

      iv. If Stage 4 is in effect, $200 (Stage 4 is detailed below in Section H).

   B. At its sole discretion, waive the waste of water penalty if the customer participates in a water use evaluation provided by DOWC and/or provides documentation to DOWC proving that a drip irrigation system, micro spray irrigation system, high-efficiency sprinkler system, or properly programmed smart irrigation controller has been installed, after a notice of violation was delivered, and is in use at the customer's service address.

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

3. THIRD VIOLATION: If DOWC verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the second violation, DOWC shall provide the customer with a third written notice of violation. In addition to the actions prescribed under the first and second violations above, DOWC is authorized to take the following actions:

   A. Apply the following waste of water penalties, which are in addition to any other charges authorized by this Schedule or other DOWC tariffs.

      i. If Stage 1 is in effect, $50 (Stage 1 is detailed below in Section E).

      ii. If Stage 2 is in effect, $100 (Stage 2 is detailed below in Section F).

      iii. If Stage 3 is in effect, $200 (Stage 3 is detailed below in Section G).

      iv. If Stage 4 is in effect, $400 (Stage 4 is detailed below in Section H).

   B. At its sole discretion, waive the waste of water penalty if the customer participates in a water use evaluation provided by DOWC and/or provides documentation to DOWC proving that a drip irrigation system, micro spray irrigation system, high-efficiency sprinkler system, or properly programmed smart irrigation controller has been installed, after a notice of violation was delivered, and is in use at the customer's service address.

4. FOURTH VIOLATION: If DOWC verifies that the customer has used potable water for non-essential, wasteful uses after having been notified of the third violation, DOWC shall provide the customer with a fourth written notice of violation. In addition to actions set forth in previous violations prescribed above, DOWC is authorized to install a flow-restricting device on the customer's service line. DOWC shall not be held liable for any injuries, damages, and/or consequences arising from the installation of a flow restricting device.

5. EGREGIOUS VIOLATIONS: Notwithstanding the foregoing framework for penalties, customers who DOWC has verified are egregiously using potable water for non-essential, wasteful uses are subject to having a flow-restricting device installed on their service line. After providing the customer with one notice of egregious violation, either by direct mail or door hanger, which documents the egregious use of potable water for non-essential, wasteful uses and explains that failure to correct the violation may result in the installation of a flow-restricting device on the customer's service line, DOWC is authorized to install a flow-restricting device on the customer's service line. DOWC shall not be held liable for any injuries, damages, and/or consequences arising from the installation of a flow restricting device.

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

6. NOTICES OF VIOLATION:

   A. Unless otherwise specified, written notices of violation provided to customers pursuant to this Schedule shall document the verified violation and alert the customer to the fact that future violations of the restricted uses of potable water may result in waste of water surcharges being applied to the customer's bill, the installation of a flow-restricting device on the customer's service line, or the discontinuation of the customer's service.

   B. If DOWC elects to install a flow-restricting device on a customer's service line, the written notice of violation shall also explain that a flow-restricting device has or will be installed on the customer's service line, shall document the steps the customer must take in order for the flow-restricting device to be removed, and shall explain that after the flow-restricting device is removed, it may be reinstalled, without further notice, if the customer is again verified by DOWC to be using potable water for non-essential, wasteful uses.

7. FLOW RESTRICTING DEVICE CONDITIONS: The installation of a flow-restricting device on a customer's service line is subject to the following conditions:
   A. The device shall be capable of providing the premise with a minimum of 3 Ccf per person, per month, based upon the U.S. Census calculation of the average number of people in a household in the area.
   B. The device may only be removed by DOWC, and only after a minimum three-day period has elapsed.
   C. Any tampering with the device may result in the discontinuation of the customer's water service and the customer being charged for any damage to DOWC's equipment or facilities and any required service visits.
   D. After the removal of the device, if DOWC verifies that the customer is using potable water for non-essential, wasteful uses, DOWC may install another flow-restricting device without prior notice. This service shall remain in place until water supply conditions warrant its removal.
      If, despite the installation of the device, DOWC verifies that the customer is using potable water for non-essential and, unauthorized wasteful uses, then DOWC may discontinue the customer's water service, as provided in its Rule No. 11.

8. FLOW-RESTRICTING DEVICE REMOVAL CHARGES: The charge to customers for removal of a flow-restricting device installed pursuant to this Schedule is $100 during normal business hours, and $150 for the device to be removed outside of normal business hours.

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

E. STAGE ONE WATER USE RESTRICTIONS

1. WASTEFUL USES OF WATER

The following restrictions may be imposed by DOWC, except where necessary to address an immediate health or safety need, or to comply with a term or condition in a permit issued by a state or federal agency:

A. Outdoor Irrigation Restrictions (Stage 1)

i. Irrigating ornamental landscapes with potable water is limited to no more than **three (3) days per week**, on a schedule established and posted by DOWC on its website or otherwise provided to customers by bill message, bill insert, direct mail, or email, or as follows:

1. Customers with even-numbered addresses may irrigate on Saturdays, Tuesdays, and Thursdays.

2. Customers with odd-numbered addresses may irrigate on Sundays, Wednesdays, and Fridays.

3. Customers without a street address may irrigate on Saturdays, Tuesdays, and Thursdays.

4. Notwithstanding the foregoing restrictions, irrigation of special landscape areas or commercial nurseries may occur as needed, provided that the customer who wishes to irrigate a special landscape area or commercial nursery presents DOWC with a plan to achieve water use reductions commensurate with those that would be achieved by complying with foregoing restrictions.

5. Notwithstanding the foregoing restrictions, when Butte County, or another local public agency in DOWC's Paradise Pines District Service Area duly adopts restrictions on the number of days or hours of the day that customers may irrigate that are different than those adopted by DOWC, DOWC may enforce the county or other local public agency's restrictions.

ii. Irrigating ornamental landscape with potable water is prohibited during the hours between **8:00 a.m. and 6:00 p.m.**

iii. The foregoing restrictions do **not** apply to:

1. Landscape irrigation zones that exclusively use drip irrigation systems and/or micro spray irrigation system;

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

2. Irrigating ornamental landscapes with the use of a hand-held bucket or similar container, with a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored, or for the express purpose of adjusting or repairing an irrigation system.

B. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing fixtures and/or irrigation system must be repaired within **five (5) business days** of written notification by DOWC, unless other arrangements are made with DOWC.

C. Prohibited Uses of Water: Customers are prohibited from using potable water for the following actions:

i. The application of potable water to landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;

ii. The use of a hose that dispenses potable water to wash vehicles, including cars, trucks, buses, boats, aircraft, and trailers, whether motorized or not, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.

iii. The application of potable water to driveways and sidewalks;

iv. The use of potable water in a water feature, except where the water is part of a recirculating system;

v. The application of potable water to outdoor landscapes during and within forty-eight (48) hours after measurable rainfall (see Definitions);

vi. The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased;

vii. Irrigation of ornamental landscape on public street medians with potable water;

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

viii. Irrigation outside of newly constructed homes and buildings with potable water unless the potable water is delivered by a drip irrigation systems and/or micro spray irrigation system.

D. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guest room using clear and easily understood language.

E. Limits on Filling Single-Family Residential Swimming Pools and Spas: Re-filling and initial filling of single-family residential swimming pools or outdoor spas with potable water is prohibited, except to maintain required operating levels of existing pools and spas or as a result of completing structural repairs to the swimming pool or outdoor spa.

F. Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the implementation of any staged mandatory restrictions of water use as described in this Schedule.

G. Other duly adopted restrictions on the use of potable water as prescribed from time to time by the Commission or other authorized government agencies are incorporated herein by reference.

F. STAGE TWO WATER USE RESTRICTIONS

1. MANDATORY WATER BUDGETS (STAGE 2)

Water budgets will be based on a customer's consumption during the 2013 historical base period and will include a percentage reduction designed to meet necessary water-use reductions. DOWC will include provisions such as minimum water budgets for residential metered service to protect the health and safety of customers.

In addition to the normal rate paid for the unit of water, a drought surcharge will be charged to a customer for each unit of water used over the established water budget for the billing period.

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

See Appendix A: Details on minimum water budgets, as well as the drought surcharges that will be applied for exceeding a water budget, are provided in Appendix A. The Stage 2 surcharge is two (2) times the current effective Quantity Rate. DOWC retains the right to increase the surcharges if there are changes to the rates in the future.

DOWC will establish an appeals process for customers that will allow for requests for increased water budgets.

Any customer who seeks a variance from any of the provisions of this voluntary water conservation or mandatory rationing plan shall notify the utility in writing, explaining in detail the reason for such a variation. The utility shall respond to each such request in writing.

If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of the voluntary water conservation or mandatory rationing plan.

2. WASTEFUL USES OF WATER (STAGE 2)

DOWC may continue to impose the restrictions on the wasteful use of water as outlined in Stage One, except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency.

G. STAGE THREE WATER USE RESTRICTIONS

1. MANDATORY WATER BUDGETS (STAGE 3)

Water budgets will be based on a customer's consumption during the 2013 historical base period and will include a percentage reduction designed to meet necessary water-use reductions. DOWC may include provisions such as minimum water budgets to protect the health and safety of customers.

In addition to the normal rate paid for the unit of water, a drought surcharge will be charged to a customer for each unit of water used over the established water budget for the billing period.

DOWC may implement surcharges up to three (3) times the current effective Quantity Rate.

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

DOWC will establish an appeals process for customers that will allow for requests for increased water budgets.

Any customer who seeks a variance from any of the provisions of this voluntary water conservation or mandatory rationing plan shall notify the utility in writing, explaining in detail the reason for such a variation. The utility shall respond to each such request in writing.

If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of the voluntary water conservation or mandatory rationing plan.

2. WASTEFUL USES OF WATER (STAGE 3)

The following restrictions may be imposed by DOWC, except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency. Differences from or additions to previous Stages are underlined. (The following restrictions are the same as those provided in Stage 3 of Rule 14.1.)

A. Outdoor Irrigation Restrictions (Stage 3)

i. Irrigating ornamental landscapes with potable water is limited to no more than **two (2) days per week**, on a schedule established and posted by DOWC on its website or otherwise provided to customers by bill message, bill insert, direct mail, or email, or as follows:

1. Customers with even-numbered addresses may irrigate on Saturdays and Tuesdays (previous Stages allowed Thursdays as well).

2. Customers with odd-numbered addresses may irrigate on Sundays and Wednesdays (previous Stages allowed Fridays as well).

3. Customers without a street address may irrigate on Saturdays and Tuesdays (previous Stages allowed Thursdays as well).

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

4. Notwithstanding the foregoing restrictions, irrigation of special landscape areas or commercial nurseries may occur as needed, provided that the customer who wishes to irrigate a special landscape area or commercial nursery presents DOWC with a plan to achieve water use reductions commensurate with those that would be achieved by complying with foregoing restrictions.

5. Notwithstanding the foregoing restrictions, when a Butte County or another local public agency in DOWC's Paradise Pines District Service Area duly adopts restrictions on the number of days or hours of the day that customers may irrigate which are different than those adopted by DOWC, DOWC may enforce the county or other local public agency's restrictions.

ii. Irrigating ornamental landscape with potable water is prohibited during the hours between **8:00 a.m. and 6:00 p.m.**

iii. The foregoing restrictions do **not** apply to:

1. Landscape irrigation zones that exclusively use drip irrigation systems and/or micro spray irrigation system;

2. Irrigating ornamental landscapes with the use of a hand-held bucket or similar container, a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored, or for the express purpose of adjusting or repairing an irrigation system.

B. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing fixtures and/or irrigation system must be repaired within **two (2) business days** of written notification by DOWC, unless other arrangements are made with DOWC.

C. Prohibited Uses of Water: Customers are prohibited from using potable water for the following actions:

i. The application of potable water to landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures (note: this provision appears under Section E in Rule 14.1);

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

ii. The use of a hose that dispenses potable water to wash vehicles, including cars, trucks, buses, boats, aircraft, and trailers, whether motorized or not, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use (note: this provision appears under Section E in Rule 14.1).

iii. The application of potable water to driveways and sidewalks;

iv. The use of potable water in a water feature, except where the water is part of a recirculating system;

v. The application of potable water to outdoor landscapes during and within forty-eight (48) hours after measurable rainfall;

vi. The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased;

vii. Irrigation of ornamental landscape on public street medians with potable water;

viii. Irrigation outside of newly constructed homes and buildings with potable water unless the potable water is delivered by a drip irrigation systems and/or micro spray irrigation system;

ix. Use of potable water for street cleaning with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible);

x. Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.

D. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guest room using clear and easily understood language.

E. Limits on Filling Residential Swimming Pools and Spas: Re-filling and initial filling of single-family residential swimming pools or outdoor spas with potable water is prohibited (previous Stages allowed certain exceptions).

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

F. Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the implementation of any staged mandatory restrictions of water use as described in this Schedule.

G. Other duly adopted restrictions on the use of potable water as prescribed from time to time by the Commission or other authorized government agencies are incorporated herein by reference.

H. STAGE FOUR WATER USE RESTRICTIONS

1. MANDATORY WATER BUDGETS AND BANKING (STAGE 4)

Water budgets will be based on a customer's consumption during a historical base period and will include a percentage reduction designed to meet necessary water-use reductions. DOWC may include provisions such as minimum water budgets to protect the health and safety of customers.

In addition to the normal rate paid for the unit of water, a drought surcharge will be charged to a customer for each unit of water used over the established water budget for the billing period. For Stage 4, DOWC may implement surcharges up to four (4) times the current effective Quantity Rate. DOWC may require customer consumption reductions of up to 50%.

DOWC will establish an appeals process for customers that will allow for requests for increased water budgets.

Any customer who seeks a variance from any of the provisions of this voluntary water conservation or mandatory rationing plan shall notify the utility in writing, explaining in detail the reason for such a variation. The utility shall respond to each such request in writing.

If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of the voluntary water conservation or mandatory rationing plan.

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WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

2. WASTEFUL USES OF WATER (STAGE 4)

The following restrictions may be imposed by DOWC, except where necessary to address an immediate health or safety need or to comply with a term or condition in a permit issued by a state or federal agency. Differences from or additions to previous Stages are underlined. (The following restrictions are the same as those provided in Stage 4 of Rule 14.1.)

A. Irrigating ornamental landscape with potable water is prohibited, except when a hand-held bucket or a similar container, or a continuously monitored hose which is fitted with an automatic shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use or monitored is used to maintain vegetation, including trees and shrubs.

B. Obligation to Fix Leaks, Breaks or Malfunctions: All leaks, breaks, or other malfunctions in the customer's plumbing fixtures or irrigation system must be repaired within **one (1) business day** of written notification by DOWC, unless other arrangements are made with DOWC.

C. Prohibited Uses of Water: Customers are prohibited from using potable water for the following actions:
   i. The application of potable water to landscapes in a manner that causes runoff such that water flows onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures;
   ii. The use of a hose that dispenses potable water to wash vehicles, including cars, trucks, buses, boats, aircraft, and trailers, whether motorized or not, except where the hose is fitted with a shut-off nozzle or device attached to it that causes it to cease dispensing water immediately when not in use.
   iii. The application of potable water to driveways and sidewalks;
   iv. The use of potable water in a water feature, except where the water is part of a recirculating system;
   v. The application of potable water to outdoor landscapes during and within forty-eight (48) hours after measurable rainfall;
   vi. The serving of drinking water other than upon request in eating or drinking establishments, including but not limited to restaurants, hotels, cafes, cafeterias, bars, or other public places where food or drink are served and/or purchased;

N

N

Schedule No. PP-14.1

WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

Note that items previously identified as (ix) and (x) in Stage 3 have been eliminated.

vii. Use of potable water for street cleaning with trucks (previous Stage allowed certain exceptions);

viii. Use of potable water for construction purposes, such as consolidation of backfill, dust control, or other uses (previous Stage allowed certain exceptions).

D. Operators of hotels and motels shall provide guests with the option of choosing not to have towels and linens laundered daily. The hotel or motel shall prominently display notice of this option in each guest room using clear and easily understood language.

E. Limits on Filling Residential Swimming Pools and Spas: Re-filling and initial filling of single-family residential swimming pools or outdoor spas with potable water is prohibited.

F. Limits on Filling Ornamental Lakes or Ponds: Filling or re-filling ornamental lakes or ponds with potable water is prohibited, except to the extent needed to sustain aquatic life, provided that such animals are of significant value and have been actively managed within the water feature prior to the implementation of any staged mandatory restrictions of water use as described in this Schedule.

G. Other duly adopted restrictions on the use of potable water as prescribed from time to time by the Commission or other authorized government agencies are incorporated herein by reference.

N

N

Schedule No. PP-14.1

WATER SHORTAGE CONTINGENCY PLAN
WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES
(Continues)

APPENDIX A

Drought Surcharges for Exceeding Water Budgets			
Stage	**Drought Surcharge Multiplier**	**Drought Surcharge**	**Minimum Water Budget (cf)**
Stage 1	N/A	N/A	N/A
Stage 2	2	$ 6.50	474
Stage 3	3	$ 9.75	474
Stage 4	4	$ 13.00	474

(a) The Drought Surcharge is equal to the Quantity Rate (subject to CPUC authorized adjustments) times the Drought Surcharge Multiplier.
(b) The Minimum Water Budget (allocation) is set at 55 gpcd (gallons per capita per day) multiplied by two persons per household for this area in the U.S. Census (population: 9,615), rounded.
(c) Drought Surcharges are subject to revision whenever the Quantity Rate changes.

N

APPENDIX K

EMERGENCY RESPONSE PLAN

Del Oro Water Company, Paradise Pines (DOWCPP)

EMERGENCY RESPONSE PLAN

Paradise Pines District

DRAWER 5172 CHICO, CALIFORNIA 95927 – WWW.DELOROWATER.COM

PARADISE PINES – LIME SADDLE – MAGALIA – STIRLING BLUFFS – FERNDALE – JOHNSON PARK – COUNTRY ESTATES
WALNUT RANCH – BLACK BUTTE – CALIFORNIA PINES – ARBUCKLE – STRAWBERRY – MT. LASSEN – RIVER ISLAND
TULARE – METROPOLITAN – TRAVER – BUZZTAIL

Water System Name: **Del Oro Water Co., Paradise Pines District**

Water System ID No: **0410011**

Number of Service Connections: **4,908**

Population Served: **9,546**

To continue minimum service levels and mitigate the public health risks from drinking water contamination that may occur during a disaster or other emergency events and in order to provide reliable water service and minimize public health risks from unsafe drinking water during those events, the Del Oro Water Co., Paradise Pines District (DOWCPP) water system proposes the following plan that defines how it will respond to emergencies and/or disasters that could possibly affect its operation.

For the purpose of this plan, factors that may prompt DOWCPP to declare an emergency include, but are not limited to:

1. Severe Weather Conditions and other Metrological Phenomenon
2. Fire
3. Terrorism and Sabotage
4. Water Contamination
5. Drought and Water Shortage
6. Earthquakes
7. Floods
8. Extended Power Outages
9. Unplanned Downtime of the Automated Telemetry Control System
10. Accidental Release of Hazardous Materials

Assess for Injury and Damages

- Assess personnel accountability and check for injury to staff
- Inspect all structures for obvious damage
- Assess condition of all electrical power feeds and switchgear
- Pressure in the distribution system, and operation of pumps and other equipment
- If buildings have any sign of damage, such as cracked walls, broken windows, downed power lines, do not enter, wait for trained personnel
- If buildings appear safe, cautiously inspect condition of interiors for damaged equipment, leaks, chemical spills, etc.
- Communicate all findings to Executive Staff

Any of the situations listed may arise as a single independent emergency, or because of other emergencies. It is important to realize a direct relationship exists between many of the listed situations. Manage each situation in a manner to prevent the indirect creation of other emergencies.

John O'Farrell, State Superintendent will make the determination of a State of Emergency and at that time he will notify the Chief Executive Officer, Chief Financial Officer and Vice President. The State of Emergency will then be announced immediately.

During normal business hours, one of the Executive Staff will be available to issue the declaration. After hours, the "on-duty" Staff will contact one of the Executive Staff to inform of the emergency situation(s). The individual contacted can declare an official State of Emergency based on the relayed information.

The Three (3) State of Emergency levels are as follows:

Level 1 State of Emergency

Declare a Level 1 State of Emergency when an emergency has occurred in the greater Magalia area. All employees will be on call and subject to 24-hour assignments for the duration of the emergency.

Level 2 State of Emergency

Declare a Level 2 State of Emergency when an emergency exists that impacts only one section of the system. All employees will be on call and subject to 24-hour assignments. Some routine assignments are to be suspended.

Level 3 State of Emergency

Declare a Level 3 State of Emergency when an emergency exists that directly affects all facilities. All employees will be on call and subject to 24-hour assignments. Suspend most routine job functions.

Expectations and Reporting Requirements of Personnel

Following an official declaration of emergency, all employees are to report as assigned at the time. Under certain circumstances, notification will not be possible, yet a disaster situation will be obvious, such as following a large magnitude earthquake. Under these conditions, employees will adhere to the following procedures without notification.

During Normal Working Hours

1. Field employees will contact the office
2. If contact is not possible, field employees should proceed to the office for assignment

After Hours

Once it becomes obvious, an emergency has occurred after normal working hours, employees will adhere to the following procedure.

1. The employee will attempt to contact his/her supervisor by land-based telephone or by cell phone, if a supervisor has not contacted him/her.
2. Employees are to first secure their home and address immediate family concerns before proceeding to the office.
3. The first available personal will monitor local news broadcasts until the Executive Staff arrives. The Executive Staff or his designee will also monitor internal activities.

Notification of Employees

During normal working hours of the State of Emergency, initially, the "on-call" employee will begin the process of notification to Executive Staff and other employees.

The "on-call" employee will begin notification of personnel during after-hours situations by any means including:

1. Telephone
2. Cell Phone
3. Messenger (for critical personnel located in the immediate area)

Facility Inspections

Some emergencies, particularly those related to regional disasters will create problems at pumping and transmission facilities that may not be immediately obvious. Perform physical, post-disaster inspections of these facilities to provide the necessary information for emergency management decisions. Following the event of a regional disaster, do not commit resources (including materials, equipment of labor) to activities until the operation status of **ALL** critical facilities is known.

Critical System Facilities

Wells 1, 2, 3, 4 and 6
Storage Tanks 1, 2 and 3

Inspection Equipment

No resources can be committed to repair activities until the Emergency Operation Center has sufficient information on critical facilities to establish priorities. Available personnel will perform the collection of necessary data. All field personnel will have the following minimum equipment and tool requirements:

1. Valve Wrench
2. Spark-proof Flashlight
3. First Aid Kit
4. Facility Keys
5. Low Range Chlorine Residual Test Kit
6. Assorted Hand Tools
7. Hard Hat
8. Clear Sample Bottle

Facility Inspections Procedure

All Employees

1. Respond to office and set up Emergency Operations Center
2. Notify all Personnel
3. Initiate Emergency Procedures for Facilities Inspection

Executive Staff

Assistant Superintendent, Jim Roberts is responsible for the inspections of Wells 1, 2, 3, 4 and 6: Storage Tanks 1, 2, and 3

Emergency Operations Center

1. Inspection routes and inspectors assignment information must be maintained in the Emergency Operations Center.
2. Inspectors are to follow assigned routes and **complete** the appropriate inspection for each assignment of facilities.
3. After completion of the assigned inspection route, the inspector will inform the dispatcher by cell phone and proceed immediately to the Emergency Operations Center for further assignments.

Available Personnel Roster

Employees are the single most important resource to emergency response. All employees available for emergency assignments are as follows:

Chief Executive Officer, 530-809-3958 Chief Financial Officer, 480-515-1223 Vice President, 530-809-3961

John O'Farrell, State Superintendent
530-873-0326 Direct Line
530-521-6132 Cell Phone

Tara Campbell, Information Technology Administrator
530-809-3966 Direct Line
530-519-1697 Cell Phone

Jim Roberts, Assistant Superintendent
530-521-8215 Cell Phone

Jake Kevwitch, Field Technician
530-521-8219 Cell Phone

Richard McDonald, Field Technician
530-518-4655 Cell Phone

Materials and Equipment from Vendors

While supplies from all vendors may not be readily available following a disaster, some vendors will continue to operate in some capacity. The following is a list of parts and equipment on hand, and vendors:

1. Miscellaneous pipes and fittings, 2", 4", 6" & 8", approximately 100 count 20 of each.
2. Backhoe
3. Emergency Generator

List of emergency supplier/equipment phone numbers:

	Name	Phone (Day)	Phone (After-hours)
Electrician	Agri Electric	1-530-342-4203	1-530-342-4203
Laboratory	Cranmer Engineering	1-530-273-7284	Hallie Smith: 1-530-263-5440
Electric & Pump (repair service)	North State Electric Pump Durham Pump	1-530-891-5545 1-530-561-4821	530-891-5545 Steve Kampfen 1-530-521-2212
Chemical Disinfectant Supplier	Nalco Chemical	1-800-856-6128	Fax: 1-866-260-7923
Other Water Agency (equipment support)	Paradise Irrigation District California Water Service	1-530-877-4971 1-530-893-6300	Fax: 1-530-876-0483 1-530-893-6300
Parts: Pumps, Pipes, Valves	USA Blue Book	1-800-548-1234	1-800-548-1234
Tank Parts and Supply	PBM	1-530-345-1334	1-800-688-1334
Water Analysis	HACH	1-800-227-4224	1-800-227-4224
Plumbing, Pipe, Fittings	R & B Company	1-530-899-1729	1-530-966-5821
Chemicals	Nalco Chemical	1-800-856-6128	1-800-856-6128
Chemicals	Chem Quip	1-800-821-1678	1-800-821-1678
Emergency Asphalt Paving	Franklin Construction	1-530-343-9600	1-530-343-9600
Electricity	Pacific Gas & Electric	1-800-743-5000	1-800-743-5000

Establishing Priorities and Committing Resources

Three factors should dictate DOWCPP's response and repair activities following a disaster that effect the operation:

1. The extent of damage to critical facilities
2. The resources i.e. labor, equipment and materials available following a disaster
3. The projected time necessary to restore damaged facilities to operational status

In smaller scale disaster situations that impact localized areas, repair activities can begin immediately following the damage assessment. In larger scale, regional disasters such as a major earthquake prioritize repair activities before proceeding.

Suspend some activities to devote the needed resources to initial response priorities.

Initially in regional disasters significant distribution damage, as well as indefinite power outages are likely. In such cases the first two priorities are:

1. Conserve water in aboveground storage facilities. These reservoirs may drain by gravity from downstream distribution system damage. This activity may require temporary isolation of facilities
2. Preserve water quality in isolated storage facilities. Use of portable chlorination unit will be used as required

NOTE: Immediately document any reservoir isolation measures taken, (include any specifics such as valves shut etc.).

Priority 1 – Chlorination

Adjust free chlorine residual of storage facilities to a concentration of not less than 3.0 ppm. Test the existing free chlorine residual by using a color meter or a pool test kit. Check free chlorine residual daily and make necessary adjustments.

Priority 2 – Public Notification

Notify customers of any of the following situations:

- Emergency Supply Sources
- Necessary health protection/water disinfection measures
- Conservation measures
- Status of water supply (repair, restoration of service etc.)

Use a direct communication via truck mounted public address system or megaphone. The service area, which is largely residential is close quarters, will take no more than three hours to complete notification. The sound truck will notify both English and Spanish speaking customers where necessary.

Alternate Sources

- During a disaster, use alternate sources **after** coordination and written or verbal approval from the appropriate health agency.
- When using alternate sources not meeting primary drinking water standards issue a "Boil Water Order" BWO or "Unsafe Water Alert" UWA. This is to advise users of water quality problems and necessary remedies.
- The priority use of alternate sources must be in the order insuring the least health hazards to the water user.

1. Source exceeding Secondary Drinking Water Standards.
2. Source exceeding Primary Standards that only pose long term or chronic threats to health, less than 5 times the MCL.
3. Source exceeding primary standards that pose long term or chronic health threats with greater than 5 times to 10 times the MCL.
4. Sources exceeding primary standards that pose a short term or acute risk are not allowed without Office of Drinking Water (ODW) approval and the issuance of an UWA.

When activating alternate sources DOWCPP will implement the following:

1. Water conservation and rationing
2. Emergency tie-in with adjacent systems if applicable
3. Temporary water treatment i.e. blending, disinfection, filtration, etc. to the alternate sources exceeding primary standards to a practical extent.
4. Cease use of the alternate source as soon as possible.
5. If alternate source provides a microbial risk, accompany its use with a BWO. If there is an acute risk to any portion of the population, the use must be accompanied by a UWA.
6. Issue a BWO or UWA with authorization from the following agencies:
    - State Water Resources Control Board – Division of Drinking Water
    - Local Environmental Health Jurisdiction
    - Affected Water Purveyors
7. Issue these orders by the most rapid means possible i.e.
    - Loud speaker announcements
    - Post at public locations
    - Door to door distribution
8. A BWO or UWA can be cancelled only by authorization of the appropriate health agency.

Committing and Documenting Resources for Emergency Repairs

After prioritizing repair activities:

1. Estimate minimum resources and time necessary to restore to operational status.
2. Schedule emergency repair crews to the activities.
3. Make notations of materials and labor committed to the specific emergency repair sites.

System Mapping

None Available

Schematic Diagrams of Water Source or Well Sites

None Available

Backup Chlorination

All Wells are equipped to inject chlorine. Chlorination is done as needed.

DOWCPP Certified Water Treatment Plant Operators

- Jim Roberts T-2 – Operator # 13963 D-3 – Operator # 20597
- Jake Kevwitch T-2 – Operator # 31539 D-2 – Operator # 36018
- Richard McDonald T-3 – Operator # 34495 D-4 – Operator # 40246

Chlorination Testing Equipment

- HACH Test Kit

Chlorine Residual Recording

- Readings will be verified and recorded using a HACH Test Kit as a bench test
- Residual is also recorded on pump-house logs

Chlorine Storage

14147 Lakeridge Court, Magalia, CA

Safety Equipment

- Each field technician's truck has safety goggles.

Testing Schedule of Equipment

- Water source/production well site chlorination equipment is tested three (3) times per week by field technician to insure proper operation and chlorine residual.
- Cleaning and calibration of the HACH pocket chlorine analyzer is performed using the procedures described in the appropriate manufacturer calibration manual. A log with records of adjusted calibration settings and date calibration was performed is kept onsite by the operator. Readings are verified once a day.

Description of Water Quality

All wells are equipped to inject chlorine. Each well has a 50 gallon a day tank and a LMI (model P041-358si) chemical injecting pump. Chlorine solution is prepared by mixing 1 gallon of 12.5% chlorine to 4 gallons of water. With the pumps at 60% stroke the dosage of chlorine ranges from .15 to .28 mg/L.

Each pump is checked daily. A record of hours ran and water produced is entered into the daily log sheet. Any noise or vibration that is abnormal is recorded also into the log sheet. Turbine pump motors oil reservoirs are topped off daily. Each motor and pump is serviced annually per manufacturers' recommendations.

Water testing is performed by personnel following the Division of Drinking Water monitoring schedule. All samples are collected and then sent via courier to Cranmer Engineering of Grass Valley for analysis.

System locations, Fire and Law Enforcement Agencies

Agency	Address, City	Phone #	FAX #
Water System Del Oro Water Co.	Drawer 5172 Chico, CA 95927	1-877-335-6764	530-894-7645
Local Water System Paradise Pines District	14147 Lakeridge Court Magalia, CA 95954	530-873-0326	530-873-0605
Fire Department Butte Co. (Cal-Fire) Fire	176 Nelson Avenue Oroville, CA 95965	530-538-7111	
Law Enforcement Butte Co. Sheriff	14166 Skyway Magalia, CA 95954	530-538-7321	

In addition, should telephone communication be lost, the water system has made arrangements with the above Fire and Law Enforcement Agencies, along with use of loud speaker and door to door communications to provide emergency communications with emergency response agencies.

Other Agency Coordination

Coordination procedures with governmental agencies for health and safety protection; technical, legal, and financial assistance, and public notification procedures are continually being developed and updated through regulation and experience and will be added as necessary to this plan.

Response Procedures

Personnel will, as quickly as possible, determine the status of other employees, assess damage to water system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts, communicate with health officials and water users according to the "Water Quality Emergency Notification Plan" on file with the regulatory agency (i.e., State Water Resource Control Board, Division of Drinking Water (SWRCB) or Local Primacy Agency (LPA)), and document damage and repairs. A copy of the approved "Water Quality Emergency Notification Plan" (WQENP) and user notification templates is attached.

Public Notification Procedures

Public notice procedures should be developed before a disaster and not during the event. Public notices are a significant part of communicating with customers. Standard public notifications have been developed by SWRCB for use during an emergency such as: 1) precautions during a water outage or low pressure problem; 2) Boil Water Notices (BWN); 3) Unsafe Water Alert (UWA)-Do Not Drink Notices (DND), or; 4) UWA-Do Not Use (DNU) Notices, Each utility will need to modify the standard forms with specific contact information and guidance to customers depending on the nature of the emergency event. In addition, water systems need to have copies of public notices in the appropriate languages for use by non-English language speaking customers in their service

A BWN, UWA-DND or UWA-DNU Notices can be issued by one, or a combination of the following agencies:

- SWRCB – Division of Drinking Water (Designated personnel-District Engineer, Regional Engineer or Branch Chief).
- Local County Health Department or local Environmental Health Agency (Designated personnel-County Health Officer or Director of Environmental Health Department for small water systems under county jurisdiction).
- Affected Water System (Designated personnel-responsible person in charge of the affected water system, i.e., Manager, Owner, Operator, etc. The water systems ERP should identify the designated personnel in their ERP).

All public notifications (BWN, UWA-DND or UWA-DNU Notices) should be coordinated with the SWRCB District Engineer, County Environmental Health Department and the County Health Officer prior to issuing a public notice. However, any one of the three agencies can act in an emergency to immediately issue a BWN or UWA, if delays would jeopardize public health and safety. The SWRCB District Engineer or the water system must notify the County Health Department and the County Health Officer prior to or immediately after issuing a public notice. Notice must be given directly to a person, and a message left on voicemail or answering machine is not sufficient to meet this requirement. Details of the person responsible for completing this notification and the method that will be utilized is contained in the ERP, and is attached to this plan.

The following standard public notices are provided in the Appendix of this report.

Consumer Alert during a Water Outages or Periods of Low Pressure

If a water system is experiencing power outages, water outages or low pressure problems, consumer alert may be issued to the public. The notice provides consumers information on conserving water and how to treat the water with household bleach if the water quality is questionable.

Boil Water Notice (BWN)

A BWN should be issued when minimum bacteriological water quality standards cannot be reasonably assured. To assure public health protection a BWN should be issued as soon as it is concluded by the designated personnel that the water supply is or may be biologically unsafe.

Examples of these situations include:

1. Biological contamination of water supply system, including but not limited to:
   - Positive total or fecal coliform bacteriological samples;
   - Prolonged water outages in areas of ruptured sewer and/or water mains;
   - Failed septic tank systems in close proximity to ruptured water mains;
   - Ruptured water treatment, storage, and/or distribution facilities in areas of known sewage spills
   - Known biological contamination;
   - Cross-connection contamination problems;
   - Illness attributed to water supply.
2. Unusual system characteristics, including but not limited to:
   - Prolonged loss of pressure;
   - Sudden loss of chlorine residual;
   - Severe discoloration and odor;
   - Inability to implement emergency chlorination.
3. Implemented due to treatment inadequacies.

A BWN is not appropriate in response to most types of chemical contamination. A BWN may also be inappropriate in cases where boiling the water may tend to concentrate regulated contaminants that are known to be in the water and that are just below an MCL (e.g. Nitrates or Nitrites that are over 50 percent of the MCL).

Unsafe Water Alert (UWA)/"Do Not Drink"

In the event a water quality emergency due to known or suspected chemical (non-bacteriological) contamination to a water system a UWA or "Do Not Drink" should be issued. Water should not be used for drinking and cooking, but may be used for sanitation purposes (e.g. toilet flushing, clothes washing, etc.).

Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to:
   - Ruptured water distribution system (storage tanks, mains) in area of known chemical spill coupled with loss of pressure;
   - Severe odor and discoloration;
   - Loss of chlorine residual;
   - Inability of existing water treatment process to neutralize chemical contaminants prior to entering the distribution system.
2. Threatened or suspected acts of sabotage confirmed by analytical results, including but not limited to:
   - Suspected contamination triggered by acts of sabotage or vandalism
3. Emergency use of an unapproved source to provide a supplemental water supply.

Unsafe Water Alert (UWA)/"Do Not Use"

In the event a known or suspected contamination event to a water system, where contaminate may be chemical, biological or radiological a UWA or "Do Not Use" should be issued. Water should not be used for drinking, cooking, or sanitation purposes. Examples of these situations include:

1. Known or suspected widespread chemical or hazardous contamination in water supply distribution, including but not limited to
   - Terrorist contamination event.

Cancellation of Public Notification

Once a BWN/UWA is issued, the only agency that can rescind the public notice is the drinking water primacy agency. SWRCB or the LPA will not lift the BWN for a microbial contaminant until two rounds of samples, collected one day apart, for coliform bacteria samples have been analyzed and the results are negative. The two sets of sample results should be faxed to the SWRCB District Office

or LPA office for final approval before rescinding the BWN. Special chemical sampling may be required to get approval to rescind an UWA, please contact the SWRCB District Office or LPA to determine what sampling will be required.

Resume Normal Operations

The steps that will be taken to resume normal operations and to prepare and submit reports to appropriate agencies will include identifying the nature of the emergency (e.g., earthquake-causing water outage/leaks, fire or power outage causing water shortage/outage, sabotage resulting in facility destruction or water contamination).

a. Leaks (Result of earthquake, etc.)

i. Immediately increase system disinfectant residual as a precaution, until normal service is resumed. Determine the locations of leaks and make temporary repairs using clamps and other pipe repair devices that will allow for repairs to be made while system pressure is maintained. If this is not possible, isolate leaks by turning off power or flow, to repair or replace the pipe. Repair or isolate major breaks to allow service to the maximum system population possible.
ii. Disinfect all repairs as per attached AWWA Standards[1];
iii. Reestablish normal service.

b. Low pressure or service interruption (Result of earthquake, fire, storm, water source outage, power outage, etc.) – See also section on Leaks, above.

i. Increase production, if possible, to provide maximum system output.
ii. Increase disinfectant residual as a precaution against potential contamination.

If any customers have experienced low pressure or a water outage as a result of an earthquake, fire, storm, water source outage, power outage or any other event or failure, immediately contact your SWRCB or the LPA to determine if a Boil Water Notice (BWN) must be issued to users. ***Note: Whether issued by the water system or a regulatory agency, the BWN can only be rescinded or lifted by SWRCB or the LPA. Normally the regulatory agency will consider rescinding a BWN after total coliform sampling on two consecutive days show an absence of total and fecal coliform organisms.***

c. Power outage

i. Place emergency generator on line to provide minimum water pressure to system.
ii. Increase disinfectant residual as precaution to potential contamination.
iii. See also water outages, above.

d. Contamination

i. Immediately, contact SWRCB or LPA in accordance with the Water Quality Emergency Notification Plan. Follow the directions of SWRCB or the LPA regarding steps to be taken, emergency notification of users, and public notification.
ii. Identify location and source of contamination.
iii. If contamination is from system source, isolate or treat source.
iv. If contamination is an act of sabotage, take appropriate action based on nature of contamination. Immediately contact local law enforcement and your regulatory agency (SWRCB or LPA). Actions should be taken in consultation with the regulatory agency and could include shutting off water until all contaminants are identified.

e. Physical destruction of facility or evidence of tampering (sabotage)

i. Immediately contact local law enforcement and regulatory agency for consultation.
ii. Consider the steps necessary to isolate the facilities or portions of the system that may be affected (close valves, turn off pumps, etc.).

All emergencies will be documented along with action taken, and kept in the files of the water system office. Acts of sabotage will be reported to the local law enforcement agency.

Water System <u>Emergency/Disaster Personnel and Responsibilities</u>

Name **Title**	**Telephone No. (Work)** **Telephone No. (Home)**	**Role**
John O'Farrell State Superintendent	530-873-0326 530-521-6132	State Superintendent for Paradise Pines District, will assign responsibilities to staff as needed. Assists with all duties.
Chief Executive Officer 	530-717-2500 	CEO
Chief Financial Officer 	530-717-2500 	CFO
Vice President of Operations 	530-717-2500 	Assists State Superintendent in assigning responsibilities to staff. Assists with all duties.
Tara Campbell Director of Community Relations Information Technology Administrator	530-809-3966 	Provides Community Relations and IT services.
Plan B Pro Answering Services	530-566-0370	Assists in handling incoming phone calls

External Emergency Contact List

Agency/Department	**Telephone No. (Day)** **Telephone No. (After Hours)**
Other Water Agency Paradise Irrigation District, 6332 Clark Road, Paradise, CA 95969 California Water Service, 2222 Dr. MLK Jr. Parkway, Chico, CA 95928	 530-877-4971 530-893-6300
Fire Department Butte County Fire, 176 Nelson Ave., Oroville, CA 95965	 911 or 530-538-7111
Local Law Enforcement Butte County Sheriff, 14166 Skyway, Magalia, CA 95954	 911 or 530-538-7321
Butte County Office of Emergency Services	530-538-7373
FBI Office (terrorism or sabotage) (Also notify local law enforcement.)	911 or 916-481-9110
California Office of Emergency Services — Warning Center (24-hr. number)—*Note: Ask for referral to SWRCB Duty Officer-Division of Drinking Water*	(800) 852-7550 or (916) 845-8911
California Dept. of Fish and Wildlife – Central Region	530-225-2316 530-225-2300
SWRCB District Office District 21 - Valley	Reese Crenshaw, District Engineer 530-244-4861 / 530-547-5147
Local Environmental Health Agency Butte County Environmental Health	Cathy A. Ravesky, Director 530-538-7581

Water system contact information:
Name: Del Oro Water Company, Paradise Pines District
Address: Drawer 5172, Chico, CA 95927
Phone: 530-717-2500 and 530-717-2502 FAX: 530-894-7546

Index of Notices and Forms Available during an Emergency

Notices:

- Water Quality Emergency Notification Plan
- Consumer Alert during a Water Outage or Periods of Low Pressure
- Boil Water Notice
- Boil Water Notice Cancellation
- Cancellation of "Do Not Use Water" Notice
- Do Not Drink Notice
- Do Not Use Notice

Forms:

- Emergency Event Log
- Supplies, Material & Equipment Tracking Log
- Emergency Shutdown Notes
- Emergency Event Daily Pump Sheet
- Emergency & Risk Communications Response Checklist
- Immediate actions to take when Securing Facilities

WATER QUALITY EMERGENCY NOTIFICATION PLAN

System No. 0410011

Name of Utility: **Del Oro Water Company, Paradise Pines District**

Physical Location Address: 14147 Lakeridge Court, Magalia, CA 95954

The following persons have been designated to implement the plan upon notification by the Division of Drinking Water
that an imminent danger to the health of the water users exists:

	Water Utility: Contact Name & Title	Email Address	Telephone Day	Evening	Cell
1.	John O'Farrell, Superintendent	johnofarrell@delorowater.com	530-873-0326	530-521-6132	530-521-6132
2.	Jim Roberts, Asst. Super	jimroberts@delorowater.com	530-873-0326	530-521-8215	530-521-8215
3.	Jake Kevwitch, Field Technician	jakekevwitch@delorowater.com	530-873-0326	530-521-8219	530-521-8219

The implementation of the plan will be carried out with the following Division of Drinking Water and County Health personnel:

	Contact Name & Title	Telephone Day	Evening
1.	Reese Crenshaw, Senior Sanitary Engineer	530-224-4861	530-547-5147
2.	Ray Bruun, Associate Sanitary Engineer	530-224-3252	530-474-4559
3.	Dan Cikuth, Associate Sanitary Engineer	530-224-3271	530-638-5486
4.	Jim Reade, Associate Sanitary Engineer	530-224-2485	530-339-1991
5.	Paul Rowe, Sanitary Engineer	530-224-4866	530-242-0322

If the above personnel cannot be reached, contact:

Office of Emergency Services (24 Hrs.) **Ask for "*Division of Drinking of Water, Duty Officer*"**	(800) 852-7550 or (916) 845-8911

NOTIFICATION PLAN

✓ STANDARD PLAN: Please check if you agree to notify customers by door-to-door contact or written handout sheets. It is important that the people going door-to-door are coordinated and trained so they distribute copies to the designated areas of the water system. Maps of the specific areas that the notices are to be distributed should be provided to the customers.

✓ ALTERNATE PLAN: Please check if you propose to use another method, and **attach** the alternate plan to this form.

Report prepared by:

Signature and Title Date

Del Oro Water Company, Inc.
Paradise Pines District

PLAN I (Medium Community)

During regular working hours DOWC employees will contract the news media at television station KHSL to broadcast the necessary warning. The local radio stations will also be contacted. The television and radio personnel are available at all hours. As a follow-up measure, DOWC will also contact the Paradise Post, local newspapers that serve the Magalia/Paradise area.

The warnings will be issued in both English and Spanish to cover all members of the community. Outlying areas of the water service area (such as Fir Haven subdivision) will also be notified by sound truck and/or handbills distributed to their respective areas. Both of these areas are very small and this can be done quite quickly.

A special telephone answering service can also be quickly set up at the utility headquarters (using regular company numbers) to answer questions that will come in from consumers.

It is anticipated that the time for notification to the television and radio audiences will be very short. The areas served by handbill and sound truck will also be notified with an hour. For notification to be issued in other than normal hours the same media will be contacted and an announcement will be scheduled for as long as is necessary. A sound truck(s) will be used in the early morning hours to quickly alert the people not listening to their radio or television.

PUBLIC NOTICE

CONSUMER ALERT DURING WATER OUTAGES OR PERIODS OF LOW PRESSURE

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

1. If you are experiencing water outages or low water pressure, immediately discontinue any non-essential water use. This includes all outdoor irrigation and car washing. Minimizing use will reduce the potential for the water system to lose pressure or run out of water. Please notify your water system if you experience an outage of low pressure.

2. If the water looks cloudy or dirty, you should not drink it. Upon return of normal water service, you should flush the hot and cold water lines until the water appears clear and the water quality returns to normal.

3. If you are concerned about the water quality or are uncertain of its safety, you may add eight drops of household bleach to one gallon of water and let it sit for 30 minutes or alternatively, if you are able, water can be boiled for one minute at a rolling boil to ensure it is safe for consumption.

4. Use of home treatment devices does not guarantee the water supply is safe after low pressure situations.

5. Do not be alarmed if you experience higher than normal chlorine concentrations in your water supply since the State Water Resources Control Board is advising public water utilities to increase chlorine residuals in areas subject to low pressure or outages.

6. The State Water Resources Control Board has also advised public water systems to increase the bacteriological water quality monitoring of the distribution system in areas subject to low pressure. This may include collecting samples in your area to confirm that the water remains safe for consumption. You will be promptly advised if the sample reveals a water quality problem.

7. Your water system is committed to ensuring that an adequate quantity of clean, wholesome, and potable water is delivered to you. We recommend that you discuss the information in the notice with members of your family to assure that all family members are prepared should water outages or low water pressure occur.

Del Oro Water Company

Paradise Pines District

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

BOIL WATER ORDER NOTICE

BOIL YOUR WATER BEFORE USING

Failure to follow this advisory could result in stomach or intestinal illness
Falta de seguir este aviso podría tener resultados estómago o enfermedad intestinal

Due to the recent water outages, the State Water Resources Control Board, Division of Drinking Water (SWRCB) in conjunction with the Del Oro Water Company's Paradise Pines District (DOWCPP) are advising residents residing within DOWCPP to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution.

This Boil Water Order is a precautionary measure in response to a potential imminent health risk due to recent water outages within the water system.

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST

Bring all water to a boil **Let it boil for one (1) minute**. Let it cool before using, or use bottle water. Boiled or bottled water should be used for drinking and food preparation until further notice. Boiling the water rapidly for at least 1 minute kills bacteria and other organisms in the water that could result in stomach or intestinal illness. This is the preferred method to assure that the water is safe to drink.

An alternative method of purification for residents that do not have gas or electricity available is to use fresh liquid household bleach (Clorox, Purex, etc) to do so add 8 drops or 1/4 teaspoon of bleach per gallon of clear water or 16 drops or 1/2 teaspoon per gallon of cloudy water. Mix thoroughly and allow to stand for 30 minutes before using. Chlorine like taste and odor will result from this purification procedure and is an indication that adequate disinfection has taken place.

Water purification tablets may also be used by following the manufactures instructions.

DOWC will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem within _____.

For more information call:

Del Oro Water Company Regional Service Center:	1-877-335-6764
State Water Resources Control Board, Division of Drinking Water:	1-530-224-4800

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Date Issued: _____

Del Oro Water Company
Paradise Pines District

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

CANCELLATION OF BOIL WATER ORDER NOTICE

On _____ DOWCPP notified you of the need to boil/disinfect all tap water used for drinking and cooking purposes. The DOWCPP system in conjunction with SWRCB-Division of Drinking Water, and or the Butte County Environmental Health Department has determined that through abatement of the health hazard and comprehensive testing of the water, your water is safe to drink. It is no longer necessary to boil your tap water or for you to use bottled water.

For more information call:	Del Oro Water Company
	530-717-2500
State Water Resources Control Board	
Division of Drinking Water:	530-224-4800
Butte County Environmental Health:	530-538-7581
Cathy Raevsky, Director	530-538-7581

Del Oro Water Company
Paradise Pines District

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

CANCELLATION OF DO NOT USE WATER ORDER

On _____ DOWCPP notified you not to use the water provided to your home for drinking or cooking purposes. The DOWCPP system in conjunction with SWRCB-Division of Drinking Water, and or the Butte County Environmental Health Department has determined that through abatement of the health hazard and comprehensive testing of the water, your water is safe to drink. It is no longer necessary to consume bottled water.

For more information call:	Del Oro Water Company 530-717-2500
State Water Resources Control Board Division of Drinking Water:	530-224-4800
Butte County Environmental Health:	530-538-7581
Cathy Raevsky, Director	530-538-7581

UNSAFE WATER ALERT

Del Oro Water Company

Paradise Pines District

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

Del Oro Water Co., Paradise Pines District (DOWCPP) water is possibly contaminated with _____

DO NOT **DRINK** YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the DOWCPP due to a recent _____ at (Wells 1, 2, 3, 4 and 6; Storage Tanks 1, 2 and 3). The State Water Resources Control Board, Division of Drinking Water (SWRCB), Butte County Health Department, and DOWCPP Water System are advising residents of Magalia, California to NOT USE THE TAP WATER FOR DRINKING AND COOKING UNTIL FURTHER NOTICE.

What should I do?

- **DO NOT DRINK YOUR TAP WATER---USE ONLY BOTTLED WATER.** Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice and food preparation **until further notice**.

- **DO NOT TRY AND TREAT THE WATER YOURSELF.** Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.

- Optional: Potable water is available at the following locations: _____
  Please bring a clean water container (5 gallons maximum capacity).

We will inform you when tests show that the water is safe again. We expect to resolve the problem within _____.

For more information call: 1-877-335-6764
Water Utility contact: John O'Farrell, 530-873-0326 or 530-521-6132
Assistant Superintendent: Jim Roberts, 530-521-8215
SWRCB at: Reese Crenshaw, 530-224-4800
Butte County Health Department: Cathy Raevsky, Director: 530-538-581

This notice is being sent to you by DOWCPP. SWRCB System ID # **0410011**.

Date Distributed: _____

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

UNSAFE WATER ALERT

Del Oro Water Company

Paradise Pines District

Este informe contiene información muy importante sobre su agua potable.
Tradúzcalo o hable con alguien que lo entienda bien.

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DO NOT **USE** YOUR WATER

Failure to follow this advisory could result in illness.

An unknown substance has been added to the drinking water supplied by the DOWCPP due to a recent _____ at (Wells 1, 2, 3, 4 and 6; Storage Tanks 1, 2, 3). The State Water Resources Control Board, Division of Drinking Water (SWRCB), Butte County Health Department, and DOWCPP Water System are advising residents of Magalia, California to NOT USE THE TAP WATER FOR DRINKING AND COOKING, HAND WASHING, OR BATHING UNTIL FURTHER NOTICE.

What should I do?

- **DO NOT USE YOUR TAP WATER---USE ONLY BOTTLED WATER.** Bottled water should be used for all drinking (including baby formula and juice), brushing teeth, washing dishes, making ice and food preparation **until further notice**.

- **DO NOT TRY AND TREAT THE WATER YOURSELF.** Boiling, freezing, filtering, adding chlorine or other disinfectants, or letting water stand will not make the water safe.

- Optional: Potable water is available at the following locations: _____
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For more information call: 1-877-335-6764
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: Cathy Raevsky, Director: 530-538-7581

Date Distributed: _____

Please share this information with all other people who receive this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

Del Oro Water Company
Paradise Pines District

Emergency Event Log

Event: _____

Date: _____

Time Occurred: _____

Notes: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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_____

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_____

_____

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_____

Del Oro Water Company

Paradise Pines District

Supplies, Material & Equipment Tracking Log

Date	Vendor	Material	Equipment	Hours of Use

Del Oro Water Company

Paradise Pines District

Emergency Shutdown Notes

Date	Reason	What was Shutdown	Time of Shutdown	Time of Re-open	Notes

Del Oro Water Company
Paradise Pines District

Emergency Event Daily Pump Sheets

Date	Time + AM/PM	Meter Read	Acre Feet	Elect. Read	Chlorine Added	Notes

Del Oro Water Company
Paradise Pines District

Emergency and Risk Communications Response Checklist

Within Thirty (30) Minutes after Start of Emergency:
Information Gathering

1. Verify the Situation
   - ____ Get the facts from your water system personnel
   - ____ Obtain information from additional sources such as, local public health, law enforcement, fire departments, hospitals or SWRCB – Division of Drinking Water to put the incident in perspective.
   - ____ Ascertain information origination and determine credibility
   - ____ Review and critically judge all information
   - ____ Determine whether the information is consistent with other sources in other markets
   - ____ Determine whether the characterization of the event is plausible
   - ____ Clarify information through subject matter experts
   - ____ Attempt to verify the magnitude of the event and human impact

2. Conduct Notification
   - ____ Follow established communication protocol
     - Make sure your Executive Staff or emergency management chain of command is aware of the situation. Get his or her authorization to proceed
     - Contact key personnel and provide briefing on issue
     - Contact your SWRCB – Division of Drinking Water District Engineer

3. Identify Staffing and Resources Needed
   - ____ Assemble your emergency communication team
   - ____ Secure an appropriate space, equipment and supplies for the course of the event
   - ____ Ensure emergency information is being communicated to all staff members

4. Conduct Assessment/Activate Emergency Communication Plan
   - ____ Continue to gather and check the facts
   - ____ Determine who is being affected by the emergency. What are their perceptions? What do they want and need to know?
   - ____ Determine what the public should be doing
   - ____ Activate plan to join Joint Information Center (JIC) or begin emergency communication operation
   - ____ Activate your communication team with a call down list
   - ____ Determine stakeholders and partners
   - ____ Activate spokesperson(s)
   - ____ Monitor what is being reported about the emergency. Is the information accurate?

5. Organize Assignments
   - ____ Determine the current priorities
   - ____ Identify subject matter experts and spokespersons
   - ____ Decide whether communication should operate 10, 12, 20 or 24 hours a day
   - ____ Decide whether communication should operate 5, 6 or 7 days a week

Thirty Minutes to One Hour after Start of Emergency
Initial Release of Information

6. Prepare Information and Obtain Approvals
   - ____ Determine special populations
   - ____ Prepare key messages and initial media statement
   - ____ Develop incident Q & A
   - ____ Draft and obtain approval on initial news release
     - Provide only information that has been approved by the appropriate agencies. Do not speculate
     - Repeat the facts about the emergency
     - Describe the data collection and investigation process
     - Describe what the water system is doing about the emergency
     - Explain what the public should be doing
     - Describe how to obtain more information about the emergency and what is being done
   - ____ Confirm media contact list

7. Release Initial Information to Media, Public and Partners through Arranged Channels
   - ____ Distribute news release to media contacts
   - ____ Ensure spokesperson(s) are standing by for potential media inquiries
   - ____ Distribute media materials to partner/stakeholder organizations. Establish regular briefing schedule and protocols with them
   - ____ Establish regular briefing schedule and protocols for working with the media

One to Two Hours after Start of Emergency:
Follow-up Information

8. Update Media with New Information
   - ____ Send follow-up release with additional incident information and details of any scheduled news conferences/media briefings
   - ____ Create additional materials including fact sheet and media advisory for news conference and media briefings, as necessary

Two to Four Hours after Start of Emergency:
News Conference

9. News Conference
   - ____ Notify media of scheduled news conference
   - ____ Conduct news conference
   - ____ Gather information addressing unanswered journalist questions
   - ____ Notify media when next update will occur

Four to 36 Hours after Emergency:
Media Follow-Up

10. Disseminate Additional Information
    - ____ Send additional information to media, as available

36 Hours to TBD after Emergency:
Conduct Evaluation

11. Obtain Feedback and Conduct Emergency Evaluation
    - ____ As soon as it is feasible following an emergency, conduct an evaluation of the organization's response
    - ____ Compile and analyze media coverage
    - ____ Share results within your agency
    - ____ Determine need for changes to the crisis and emergency risk communication plan
    - ____ Determine need to improve policies and processes
    - ____ Institutionalize changes with appropriate training
    - ____ Revise emergency plan policies and procedures based on lessons learned

12. Conduct Public Education
    - ____ Once the emergency has subsided, your water system may need to carry out additional public education activities
        - Determine the public's perceptions and information needs related to the crisis
        - Focus on "worried well" (psychosomatic) individuals and other mental health messages
        - Update your community on the emergency status through town hall meetings, flyers or other outreach activities

Del Oro Water Company
Paradise Pines District

Immediate action to take to Secure Facilities

- At the Office, Well Houses, Treatment Plants, Storage Tanks, make it a rule that doors are locked and alarms set
- Tell employees to ask questions of strangers in or around your Facilities
- Limit access to Facilities. Post signs indicating restricted areas, including "Employees Only" or "Restricted Access".
- Increase Lighting in Parking Lots, Treatment Plants and other areas with limited staffing
- DO NOT Leave Keys in Equipment at any time
- Invite local Law Enforcement to become Familiar with Facilities and Establish a Protocol for Reporting and Responding to Emergencies
- Discuss Detection, Response and Notification Issues with Public Health Officials and Establish a Protocol
- Establish a Chain of Command and Emergency Call list
- Provide copies of Operational Procedures to Law Enforcement and Emergency Management Personnel
- Limit access to Water Supply
- Fence and Lock Vulnerable Areas

APPENDIX L

WATER CONSERVATION LITERATURE

Conservation Literature

The following documents are available on DOWC's website (www.delorowater.com) and are also mailed to customers as needed.

1. Monthly Conservation Guide
   http://www.delorowater.com/deloro/water-information/monthly-h2o-tips.html

2. Water Conservation Strategies
   http://www.delorowater.com/deloro/water-information/h2o-conservation.html and
   http://www.delorowater.com/deloro/files/handouts/Water-Conservation-Strategies-DOWC.pdf

3. Water Trivia
   http://www.delorowater.com/deloro/water-information/h2o-trivia.html

4. Facts About Water
   http://www.delorowater.com/deloro/water-information/faqs.html

5. How to Read Your Meter *and* How to Test for Leaks
   http://www.delorowater.com/deloro/water-information/how-to-read-your-meter.html and
   http://www.delorowater.com/deloro/files/handouts/HOW%20to%20READ%20your%20METER.pdf

6. Rule 14.1
   http://www.delorowater.com/deloro/water-information/rule-14-1.html and
   http://www.delorowater.com/deloro/images/files/districts/Advice%20Letter%20No.%20408;%20ALL%20Modifications%20of%20Rule%2014%201.pdf

7. Schedule 14.1
   http://www.delorowater.com/images/files/districts/paradisepines/Advice%20Letter%20No.%20409;%20PP%20Schedule%2014.1.pdf

8. Frozen Water Pipes
   http://www.delorowater.com/deloro/water-information/faqs.html

9. Residential Landscapes – Water Use Efficiency Ideas
   http://www.delorowater.com/deloro/files/handouts/Residential-Landscape-Efficiency.pdf

10. Native/Drought Tolerant Plants
    http://www.delorowater.com/deloro/files/handouts/Drought%20Tolerant%20Plants.pdf

11. Get Smarter About Water
    http://www.delorowater.com/deloro/files/handouts/Get%20Smarter%20About%20Water.pdf

12. How to Construct A Multi-Barrel Rain Barrel System
    http://www.delorowater.com/deloro/files/handouts/Rain%20Barrels.pdf

13. Gray Water Guide Book *and* Link to the Graywater Guide Website
    http://www.delorowater.com/deloro/files/handouts/graywater_guide_book.pdf
    http://www.thegreywaterguide.com/california.html

14. Dealing with Drought
    http://www.delorowater.com/deloro/files/handouts/Dealing%20with%20Drought%20Western%20Water%20Nov-Dec%202008.pdf

15. Living With Drought
    http://www.delorowater.com/deloro/files/handouts/Living_w_drought-Sunset_June_2014.pdf

16. Ultra Low-Flow Toilets
    http://www.delorowater.com/deloro/files/handouts/Ultra%20Low%20Flow%20Toilets.pdf

17. Simple Toilet Repairs
    http://www.delorowater.com/deloro/files/handouts/How%20to%20Repair%20a%20Toilet.pdf

18. Links to conservation resources:
    a. http://www.saveourwater.com/
    b. http://www.saveourwaterrebates.com/
    c. http://www.thewaterpage.com/water-conservation.htm
    d. http://www.planetnatural.com/composting-101/what-to-use/

APPENDIX M

RECORD OF PUBLIC NOTIFICATION & SUBMISSION

M-1 Notification to Intent to Update UWMP

M-2 Notification of UWMP Public Meeting

M-3 Announcement of Hearing: Proof of Publication

M-4 Adoption of 2015 UWMP by DOWC Board of Directors

APPENDIX M-1

NOTIFICATION TO INTENT TO UPDATE UWMP

Butte County - Water and Resource Conservation

Neighboring Water Provider - Paradise Irrigation District

Neighboring Town - Town of Paradise, Community Development/Planning Director

November 30, 2015

Butte County Water and Resource Conservation
Vickie Newlin
308 Nelson Avenue
Oroville, CA 95965

To Whom It May Concern:

This letter constitutes notification that Del Oro Water Company will be reviewing and considering amendments to the Urban Water Management Plan (UWMP).

The current UWMP covers Paradise Pines District, which provides water to customers in Magalia, Butte County, California.

Notification will be provided prior to a public hearing, which will precede adoption of the UWMP. The draft UWMP will be available prior to the hearing, and comments are invited at that time.

Tara Campbell
Accountant/IT
Del Oro Water Company
(530) 809-3966
Tara@delorowater.com

November 30, 2015

Paradise Irrigation District
6332 Clark Rd.
Paradise CA 95969

To Whom It May Concern:

This letter constitutes notification that Del Oro Water Company will be reviewing and considering amendments to the Urban Water Management Plan (UWMP).

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Tara Campbell
Accountant/IT
Del Oro Water Company
(530) 809-3966
Tara@delorowater.com

November 30, 2015

Community Development/Planning Director
Town of Paradise
5555 Skyway
Paradise, CA 95969

To Whom It May Concern:

This letter constitutes notification that Del Oro Water Company will be reviewing and considering amendments to the Urban Water Management Plan (UWMP).

The current UWMP covers Paradise Pines District, which provides water to customers in Magalia, Butte County, California.

Notification will be provided prior to a public hearing, which will precede adoption of the UWMP. The draft UWMP will be available prior to the hearing, and comments are invited at that time.

Tara Campbell
Accountant/IT
Del Oro Water Company
(530) 809-3966
Tara@delorowater.com

APPENDIX M-2

NOTIFICATION OF UWMP PUBLIC MEETING

Butte County - Water and Resource Conservation

Butte County - Local Agency Formation Commission (LAFCo)

Neighboring Water Provider - Paradise Irrigation District

Neighboring Town - Town of Paradise, Community Development/Planning Director

June 10, 2016

Butte County Water and Resource Conservation
Vickie Newlin
308 Nelson Avenue
Oroville, CA 95965

RE: Urban Water Management Plan – Del Oro Water Company, Paradise Pines District

To Whom It May Concern:

Del Oro Water Company (DOWC) has prepared an Urban Water Management Plan (UWMP) for its Paradise Pines District in compliance with the requirements of the California Urban Water Management Act.

The Draft UWMP is being made available for review and comment. A draft copy of DOWCPP's Urban Water Management Plan may be reviewed by appointment only after June 20, 2016, at the Del Oro Magalia Service Center: *14147 Lakeridge Court, Magalia, California 95954*. Please call 530-809-3966 to arrange an appointment. Alternatively, you may email *Tara@delorowater.com* to request that the draft copy be emailed to you after June 20, 2016.

Comments on the Draft UWMP may be made at the scheduled public hearing to be held at the **Paradise Pines Property Owners' Association, Racine Center, 14211 Wycliff Way, Magalia, California 95954 on Thursday, June 30, 2016 at 6:30 p.m.**

For accuracy of record, written comments are most desirable and strongly encouraged. Comments should be supported by factual information whenever possible. Each agency or organization submitting comments is requested to include contact information. Comments and/or questions should be directed to Tara Campbell at: *Del Oro Water Company, Drawer 5172, Chico, CA, 95927-5172.*

Sincerely,

Tara Campbell
Accountant
Del Oro Water Company
www.delorowater.com

June 10, 2016

Paradise Irrigation District
6332 Clark Rd.
Paradise CA 95969

RE: Urban Water Management Plan – Del Oro Water Company, Paradise Pines District

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Sincerely,

Tara Campbell
Accountant
Del Oro Water Company
www.delorowater.com

June 10, 2016

Community Development/Planning Director
Town of Paradise
5555 Skyway
Paradise, CA 95969

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Comments on the Draft UWMP may be made at the scheduled public hearing to be held at the **Paradise Pines Property Owners' Association, Racine Center, 14211 Wycliff Way, Magalia, California 95954 on Thursday, June 30, 2016 at 6:30 p.m.**

For accuracy of record, written comments are most desirable and strongly encouraged. Comments should be supported by factual information whenever possible. Each agency or organization submitting comments is requested to include contact information. Comments and/or questions should be directed to Tara Campbell at: *Del Oro Water Company, Drawer 5172, Chico, CA, 95927-5172.*

Sincerely,

Tara Campbell
Accountant
Del Oro Water Company
www.delorowater.com

June 10, 2016

Stephen Lucas, Executive Director
Butte Local Agency Formation Commission
1453 Downer Street, Suite C
Oroville, CA 95965-4950

RE: Urban Water Management Plan – Del Oro Water Company, Paradise Pines District

To Whom It May Concern:

Del Oro Water Company (DOWC) has prepared an Urban Water Management Plan (UWMP) for its Paradise Pines District in compliance with the requirements of the California Urban Water Management Act.

The Draft UWMP is being made available for review and comment. A draft copy of DOWCPP's Urban Water Management Plan may be reviewed by appointment only after June 20, 2016, at the Del Oro Magalia Service Center: *14147 Lakeridge Court, Magalia, California 95954*. Please call 530-809-3966 to arrange an appointment. Alternatively, you may email *Tara@delorowater.com* to request that the draft copy be emailed to you after June 20, 2016.

Comments on the Draft UWMP may be made at the scheduled public hearing to be held at the **Paradise Pines Property Owners' Association, Racine Center, 14211 Wycliff Way, Magalia, California 95954 on Thursday, June 30, 2016 at 6:30 p.m.**

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Sincerely,

Tara Campbell
Accountant
Del Oro Water Company
www.delorowater.com

APPENDIX M-3

ANNOUNCEMENT OF PUBLIC MEETING
PROOF OF PUBLICATION

Paradise Post Newspaper

PARADISE POST
PO Drawer 70
Paradise, CA 95967
530-877-4413
legals@paradisepost.com
2121217

DEL ORO WATER COMPANY
426 BROADWAY ST
CHICO, CA 95928

Declaration of Publication

State of California
County of Butte

That at all times herein mentioned Declarant is and was a resident of said county of Butte over the age of twenty-one years; not a party to nor interested in the within matter; that Declarant is now and was at all times herein mentioned the Legal Clerk of the Paradise Post, a newspaper published twice a week, which said newspaper was adjudged a newspaper of general circulation on November 12, 1946, by Superior Court Order No. 22262 as entered in Book 30 Page 223 of said Court; and that said newspaper is printed and published every Wednesday and Saturday.

GENERAL LEGAL

06/15/2016, 06/22/2016

and such publications was made in the regular issues of said paper (and not in any supplemental edition or extra thereof).

06/15/2016

Donna Tyrrell

Signature

Legal No. **0005752936**

DEL ORO WATER COMPANY
PARADISE PINES DISTRICT CUSTOMERS
(Account Numbers Beginning with "002")
AND OTHER INTERESTED PARTIES

URBAN WATER MANAGEMENT PLAN MEETING

Del Oro Water Company, on behalf of its Paradise Pines District (DOWCPP), hereby notifies the public that it has scheduled a meeting regarding the 2015 Updated Urban Water Management Plan to be held at the **Paradise Pines Property Owners' Association, Racine Center, 14211 Wycliff Way, Magalia, California 95954 on Thursday, June 30, 2016 at 6:30 p.m.**

DOWCPP will be filing with the California Public Utilities Commission (CPUC) its 2015 Updated Paradise Pines Urban Water Management Plan. This plan, which was previously filed in 2000, 2005, & 2010, contains both updates to the existing information and new information related to the Water Conservation Act of 2009 (also called "SBx7-7" and "20x2020"). At the public meeting, an overview of the plan will be provided, including information on the following topics:

- Water Conservation History
- The Future of Conservation
- Capital Improvements to the System
- Water Demand and Supply Forecasts
- Water Shortage Contingency Plans
- The Water Conservation Act of 2009, which requires meeting twenty percent (20%) water reduction by the year 2020.

The purpose of this meeting is both to inform the public about the Urban Water Management Plan and to solicit input from the public, county, and other relevant water groups.

A draft copy of **DOWCPP's Urban Water Management Plan may be reviewed by appointment ONLY after June 20, 2016, at the Del Oro Service Center:** 14147 Lakeridge Court, Magalia, California 95954, or by requesting a copy be mailed to you at the cost of $0.10 per page. A final copy of the plan will be made available online after comments have been received and any appropriate amendments have been made. To make an appointment to view the plan, call 530-717-2502.

This meeting is NOT about rates and tariffs, and the adoption of the 2015 Updated Paradise Pines Urban Water Management Plan does not increase or decrease present rates. The plan does not propose any rate changes.

You may contact Del Oro regarding the 2015 Updated Paradise Pines Urban Water Management Plan in one of two ways:

Attend the Public Meeting:

An opportunity will be provided at the meeting on June 30, 2016 to ask questions and make comments or suggestions about the plan. Attendees will also be able to leave written comments for Del Oro.

Submit Written Comments:

Written comments may be submitted directly to Del Oro. They will be reviewed and integrated into the report as appropriate. Please do NOT include comments with your payments as they are handled by separate departments. Comments may be mailed directly to Del Oro at the address below, faxed, emailed, or placed in the Magalia drop box located at the Del Oro Service Center behind the Magalia Post Office.

Del Oro Water Company
Director of Community Relations
Post Office Drawer 5172
Chico, CA 95927
Fax: 530-894-7645
E-Mail: communityrelations@corporatecenter.us

Comments should mention that they pertain to **Del Oro Water Company, Paradise Pines District 2015 Updated Urban Water Management Plan** and must be received by Del Oro no later than July 18th, 2016.

The Public Meeting is being held at a handicap accessible location.
Publish: June 15, 22, 2016

vidual. This statement was filed in the office of CANDACE J. GRUBBS, County Clerk of Butte County, on June 15, 2016 , **By: M. Morais, Deputy.**
FBN Number: 2016-0000769
Publish: 6/22, 6/29; 7/6, 7/13/16

property situated in said County, California describing the land therein as: AS MORE FULLY DESCRIBED IN SAID DEED OF TRUST The property heretofore described is being sold "as is". The street address and other com-

cash, the Trustee will accept a cashier's check drawn on a state or national bank, a check drawn by a state or federal credit union or a check drawn by a state or federal savings and loan association, savings association or savings bank

or may be responsible for paying off all liens senior to the lien being auctioned off, before you can receive clear title to the property. You are encouraged to investigate the existence, priority, and size of outstanding liens

postponements that are very short in duration or that occur close in time to the scheduled sale may not immediately be reflected in the telephone information or on the Internet Web site. The best way to verify postponement information is to attend the scheduled sale. Date: May 25, 2016 MTC Financial Inc. dba Trustee Corps TS No. CA05000127-16-1 17100 Gillette Ave Irvine, CA 92614 949-252-8300 TDD: 866-660-4288 Miguel Ochoa, Authorized Signatory SALE INFORMATION CAN BE OBTAINED ON LINE AT www.insourcelogic.com FOR AUTOMATED SALES INFORMATION PLEASE CALL: In Source Logic AT 702-659-7766 MTC Financial Inc. dba Trustee Corps MAY BE ACTING AS A DEBT COLLECTOR ATTEMPTING TO COLLECT A DEBT. ANY INFORMATION OBTAINED MAY BE USED FOR THAT PURPOSE. ORDER NO. CA16-001849-1, PUB DATES: 06/08/2016, 06/15/2016, 06/22/2016

NOTICE OF TRUSTEE'S SALE TS No. CA-16-700276-RY Order No.: 160015973-CA-VOI NOTE: THERE IS A SUMMARY OF THE INFORMATION IN THIS DOCUMENT ATTACHED TO THE COPY PROVIDED TO THE MORTGAGOR OR TRUSTOR (Pursuant to Cal. Civ. Code 2923.3) YOU ARE IN DEFAULT UNDER A DEED OF TRUST DATED 11/9/2005. UNLESS YOU TAKE ACTION TO PROTECT YOUR PROPERTY, IT MAY BE SOLD AT A PUBLIC SALE. IF YOU NEED AN EXPLANATION OF THE NATURE OF THE PRO-

SEPHI TARTE HUSBA WIFE TENAN ed: 11 Instru 2005-0 Officia in the the R BUTTE Califor Sale: 7 3:30PM Sale: A entran County house, 1 Co Oroville nia 959 of unpa and ot es: $2 The propert is: 1261 RD, PAR 95969-5 sor's P 054-163 TICE T TIAL B you are ing bi this pro you sho stand are risk in bidd trustee You wi ding on on the itself. P highest trustee does n matically you to clear of the You sh be awar lien be tioned o a junio you are est bidd auction, or may sponsibl ing off senior t being off, bef can rece title to erty. Yo couraged vestigate istence, and size standing that may this prop contactin county re office or surance ny, eit which charge y for this tion. If sult eit these re

DEL ORO WATER COMPANY
PARADISE PINES DISTRICT CUSTOMERS
(Account Numbers Beginning with "002")
AND OTHER INTERESTED PARTIES

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The Public Meeting is being held at a handicap accessible location.
Publish: June 15, 22, 2016

APPENDIX M-4

ADOPTION OF 2015 UWMP
BY DOWC BOARD OF DIRECTORS

Del Oro Water Company, Paradise Pines (DOWCPP)

WRITTEN CONSENT OF DIRECTORS

TO ACTION WITHOUT A MEETING

Under the provisions of the By-Laws of the DEL ORO WATER COMPANY, a corporation organized and existing under the laws of the State of California, by unanimous consent of the undersigned, being all the members of the Board of Directors, the following action is authorized and approved:

RESOLVED that in accordance with California Water Code Section 10642, the 2015 Urban Water Management Plan Update has been adopted as modified after the public hearing on the evening of June 30, 2016. A copy of the plan is to be filed with the Paradise Pines District of Del Oro Water Company corporate documents.

This authorization is given pursuant to the authority of section 307(b) of the Corporation Code.

DATED: July 1, 2016

ROBERT S. FORTINO, Director

BRYAN M. FORTINO, Director

PAUL J. MATULICH, Director

Filed with the minutes of the proceedings of the Board of Directors:

JANICE HANNA, Secretary

APPENDIX N

UWMP CHECKLIST - 2015

Del Oro Water Company, Paradise Pines (DOWCPP)

UWMP Checklist

This checklist is developed directly from the Urban Water Management Planning Act and SB X7-7. It is provided to support water suppliers during preparation of their UWMPs. Two versions of the UWMP Checklist are provided – the first one is organized according to the California Water Code and the second checklist according to subject matter. The two checklists contain duplicate information and the water supplier should use whichever checklist is more convenient. In the event that information or recommendations in these tables are inconsistent with, conflict with, or omit the requirements of the Act or applicable laws, the Act or other laws shall prevail.

Each water supplier submitting an UWMP can also provide DWR with the UWMP location of the required element by completing the last column of either checklist. This will support DWR in its review of these UWMPs. The completed form can be included with the UWMP.

If an item does not pertain to a water supplier, then state the UWMP requirement and note that it does not apply to the agency. For example, if a water supplier does not use groundwater as a water supply source, then there should be a statement in the UWMP that groundwater is not a water supply source.

Checklist Arranged by Subject

CWC Section	UWMP Requirement	Subject	Guidebook Location	UWMP Location *(Optional Column for Agency Use)*
10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1	**3**
10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.5.2	**6-7**
10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan.	Plan Preparation	Section 2.5.2	**7**
10631(a)	Describe the water supplier service area.	System Description	Section 3.1	**8-12**
10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.3	**13-15**
10631(a)	Provide population projections for 2020, 2025, 2030, and 2035.	System Description	Section 3.4	**15**
10631(a)	Describe other demographic factors affecting the supplier's water management planning.	System Description	Section 3.4	**18**
10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.4 and 5.4	**15, 31**
10631(e)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2	**19-24**
10631(e)(3)(A)	Report the distribution system water loss for the most recent 12-month period available.	System Water Use	Section 4.3	**25**

10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5	**26-27**
10608.20(b)	Retail suppliers shall adopt a 2020 water use target using one of four methods.	Baselines and Targets	Section 5.7 and App E	**39**
10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5 and App E	**28-42**
10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5 year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.7.2	**40**
10608.24(a)	Retail suppliers shall meet their interim target by December 31, 2015.	Baselines and Targets	Section 5.8 and App E	**41**
10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	Section 5.8.2	**N/A**
10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	Section 5.1	**N/A**
10608.40	Retail suppliers shall report on their progress in meeting their water use targets. The data shall be reported using a standardized form.	Baselines and Targets	Section 5.8 and App E	**40-41**
10631(b)	Identify and quantify the existing and planned sources of water available for 2015, 2020, 2025, 2030, and 2035.	System Supplies	Chapter 6	**43-52**
10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2	**43**
10631(b)(1)	Indicate whether a groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2	**45**

10631(b)(2)	Describe the groundwater basin.	System Supplies	Section 6.2.1	**43-44**
10631(b)(2)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2	**43**
10631(b)(2)	For unadjudicated basins, indicate whether or not the department has identified the basin as overdrafted, or projected to become overdrafted. Describe efforts by the supplier to eliminate the long-term overdraft condition.	System Supplies	Section 6.2.3	**45**
10631(b)(3)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.4	**46-47**
10631(b)(4)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Sections 6.2 and 6.9	**43-47, 51-52**
10631(d)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	Section 6.7	**50**
10631(g)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and multiple-dry years.	System Supplies	Section 6.8	**50-51, 55-58**
10631(h)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.6	**49**
10631(j)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) – if any - with water use projections from that source.	System Supplies	Section 2.5.1	**N/A**
10631(j)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Section 2.5.1	**N/A**
10633	For wastewater and recycled water, coordinate with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.1	**47-49**

10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area. Include quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.	System Supplies (Recycled Water)	Section 6.5.2	**47-49**
10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.5.2.2	**47-49**
10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.3 and 6.5.4	**47-49**
10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.5.4	**49**
10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.5.4	**49**
10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.5.5	**49**
10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.5.5	**49**
10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.4	**58**
10631(c)(1)	Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage.	Water Supply Reliability Assessment	Section 7.1	**53-54**
10631(c)(1)	Provide data for an average water year, a single dry water year, and multiple dry water years	Water Supply Reliability Assessment	Section 7.2	**54-55**
10631(c)(2)	For any water source that may not be available at a consistent level of use, describe plans to supplement or replace that source.	Water Supply Reliability Assessment	Section 7.1	**N/A**

10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1	**53**
10635(a)	Assess the water supply reliability during normal, dry, and multiple dry water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.3	**55-57**
10632(a) and 10632(a)(1)	Provide an urban water shortage contingency analysis that specifies stages of action and an outline of specific water supply conditions at each stage.	Water Shortage Contingency Planning	Section 8.1	**61, Appendix I, Appendix J**
10632(a)(2)	Provide an estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency.	Water Shortage Contingency Planning	Section 8.9	**73**
10632(a)(3)	Identify actions to be undertaken by the urban water supplier in case of a catastrophic interruption of water supplies.	Water Shortage Contingency Planning	Section 8.8	**71-72, Appendix K**
10632(a)(4)	Identify mandatory prohibitions against specific water use practices during water shortages.	Water Shortage Contingency Planning	Section 8.2	**62-64, Appendix I, Appendix J**
10632(a)(5)	Specify consumption reduction methods in the most restrictive stages.	Water Shortage Contingency Planning	Section 8.4	**62-64, Appendix I, Appendix J**
10632(a)(6)	Indicated penalties or charges for excessive use, where applicable.	Water Shortage Contingency Planning	Section 8.3	**64-69, Appendix I, Appendix J**
10632(a)(7)	Provide an analysis of the impacts of each of the actions and conditions in the water shortage contingency analysis on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts.	Water Shortage Contingency Planning	Section 8.6	**70-71**
10632(a)(8)	Provide a draft water shortage contingency resolution or ordinance.	Water Shortage Contingency Planning	Section 8.7	**71, Appendix I, Appendix J**
10632(a)(9)	Indicate a mechanism for determining actual reductions in water use pursuant to the water shortage contingency analysis.	Water Shortage Contingency Planning	Section 8.5	**70**

10631(f)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.2 and 9.3	**74-79**
10631(f)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	Sections 9.1 and 9.3	**N/A**
10631(i)	CUWCC members may submit their 2013-2014 CUWCC BMP annual reports in lieu of, or in addition to, describing the DMM implementation in their UWMPs. This option is only allowable if the supplier has been found to be in full compliance with the CUWCC MOU.	Demand Management Measures	Section 9.5	**79**
10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets.	Plan Adoption, Submittal, and Implementation	Section 10.3	**81**
10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan.	Plan Adoption, Submittal, and Implementation	Section 10.2.1	**80**
10621(d)	Each urban water supplier shall update and submit its 2015 plan to the department by July 1, 2016.	Plan Adoption, Submittal, and Implementation	Sections 10.3.1 and 10.4	**81**
10635(b)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 60 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**80**
10642	Provide supporting documentation that the urban water supplier made the plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2, 10.3, and 10.5	**80-81, Appendix M**
10642	The water supplier is to provide the time and place of the hearing to any city or	Plan Adoption, Submittal, and Implementation	Sections 10.2.1	**80**

	county within which the supplier provides water.			
10642	Provide supporting documentation that the plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.1	**81, Appendix M**
10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4.3	**81**
10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4.4	**81**
10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4.1 and 10.4.2	**81-82**
10645	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5	**81-82**