



2020

# Urban Water Management Plan

**Submitted by:**

Del Oro Water Company, Paradise Pines District  
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**Adopted by:**

Del Oro Water Company Board of Directors  
July 1, 2021

Del Oro Water Company, Paradise Pines District  
2020 Urban Water Management Plan

Contact Sheet

Date plan submitted to the Department of Water Resources: **July 1, 2021**

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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 (UWMP) 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. UWMPs 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 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 90-08-055, 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 2020 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 2020 Urban Water Management Plan (UWMP) is being completed in 2021 as required by California Water Code (CWC) 10621(d). This plan constitutes an update to the 2015 plan and will be filed no later than July 1, 2021.

The Water Conservation Act of 2009 (Appendix B) required 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 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 and has demonstrated compliance with the 20% reduction. Calculations presented in Chapter 5 of DOWCPP's 2015 UWMP establishing the baseline for compliance have been included as an appendix. 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

<b>CCF</b>	100 cubic feet	1 CCF = Approximately 748 gallons
<b>CDPH</b>	California Department of Public Health	<a href="http://www.cdph.ca.gov">www.cdph.ca.gov</a>
<b>CPUC</b>	California Public Utilities Commission	<a href="http://www.cpuc.ca.gov/PUC/water">www.cpuc.ca.gov/PUC/water</a>
<b>CWC</b>	California Water Code	
<b>DOWC</b>	Del Oro Water Company	<a href="http://www.delorowater.com">www.delorowater.com</a>
<b>DOWCLS</b>	Del Oro Water Company's Lime Saddle District	<a href="http://www.delorowater.com/lime-saddle.html">www.delorowater.com/lime-saddle.html</a>
<b>DOWCPP</b>	Del Oro Water Company's Paradise Pines District	<a href="http://www.delorowater.com/paradise-pines.html">www.delorowater.com/paradise-pines.html</a>
<b>DOWCSB</b>	Del Oro Water Company's Stirling Bluffs District	<a href="http://www.delorowater.com/stirling-bluffs.html">www.delorowater.com/stirling-bluffs.html</a>
<b>DRA</b>	Drought Risk Assessment	<a href="#">See Chapter 7 for additional explanation</a>
<b>DWR</b>	(California) Department of Water Resources	<a href="http://www.water.ca.gov">www.water.ca.gov</a>
<b>GPCD</b>	Gallons Per Capita per Day	<a href="#">See Chapter 5 for additional explanation</a>
<b>PID</b>	Paradise Irrigation District	<a href="http://www.pidwater.com">www.pidwater.com</a>
<b>SB X7-7</b>	Senate Bill X7-7	Also called the <i>Water Conservation Act of 2009</i>
<b>SWRCB</b>	(California) State Water Resources Control Board	<a href="http://www.waterboards.ca.gov">www.waterboards.ca.gov</a>
<b>SWRCB R-GCPD</b>	Residential GPCD, as defined by the SWRCB	<a href="#">See Chapter 5 for additional explanation</a>
<b>UWMP</b>	Urban Water Management Plan	
<b>WSCP</b>	Water Shortage Contingency Plan	<a href="#">See Chapter 8 for additional explanation</a>

## 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 July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.*

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.

#### **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.

<b>Table 2-1 Retail Only: Public Water Systems</b>			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
CA0410011	DEL ORO WATER CO.- PARADISE PINES	4,841	340,584
<b>TOTAL</b>		<b>4,841</b>	<b>340,584</b>

## 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 <i>if applicable</i> <i>drop down list</i>
<input checked="" type="checkbox"/>	<b>Individual UWMP</b>	
	<input type="checkbox"/>	Water Supplier is also a member of a RUWMP
	<input type="checkbox"/>	Water Supplier is also a member of a Regional Alliance
<input type="checkbox"/>	<b>Regional Urban Water Management Plan (RUWMP)</b>	

### 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, efficient water use, and improved local drought resilience.*

**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)	
<input type="checkbox"/>	Supplier is a wholesaler
<input checked="" type="checkbox"/>	Supplier is a retailer
Fiscal or Calendar Year (select one)	
<input checked="" type="checkbox"/>	UWMP Tables Are in Calendar Years
<input type="checkbox"/>	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 2020 UWMP are reported on a calendar year basis.

### 2.4.2 Reporting Complete 2020 Data

Water use and planning data in this UWMP is presented for the entire 2020 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 (h) 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 (f). 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 (f).*

### 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)(3) 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 both the plan and the water shortage contingency 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 April 1, 2021, 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 2020 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 Chico Enterprise-Record 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 via Zoom on Thursday, June 24th, 2021, which satisfies the requirement for handicap accessibility.

DOWCPP actively encourages community participation in its urban water management planning efforts. Public meetings were held for the 2010, 2015, and 2020 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 (a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and 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. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

### 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 twenty (20) water districts located in ten 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:

[https://www.buttecounty.net/Portals/10/Planning/General%20Plan/2018%20Updated%20GP/8\\_Water\\_R esources\\_PRR.pdf](https://www.buttecounty.net/Portals/10/Planning/General%20Plan/2018%20Updated%20GP/8_Water_R esources_PRR.pdf)

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.*

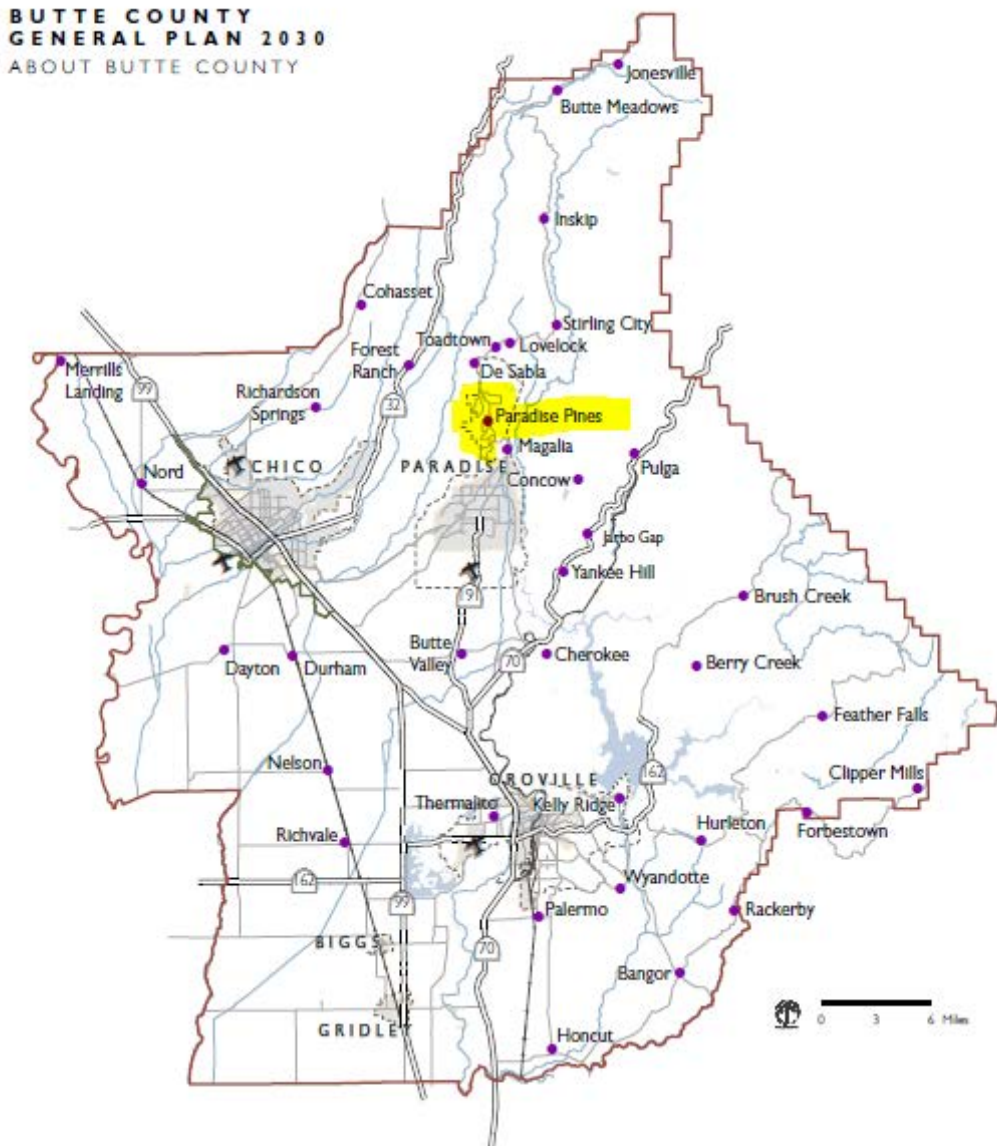
Magalia is a census-designated place (CDP) in Butte County, CA which had a population of 11,310 at the 2010 census. As 2020 census data is not yet available, it is difficult to estimate the population for this UWMP due to the effects of the Camp Fire of 2018. DOWCPP serves the majority, but not all, 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



Source: Butte County GIS, 2009.

- Unincorporated Communities
- ✈ Airports
- Greenlines
- Highways
- + Railroad
- Major Roads
- - - Sphere of Influence
- ▭ City/Town Limits
- ▭ County Boundary

FIGURE BC-2  
BUTTE COUNTY COMMUNITIES

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.

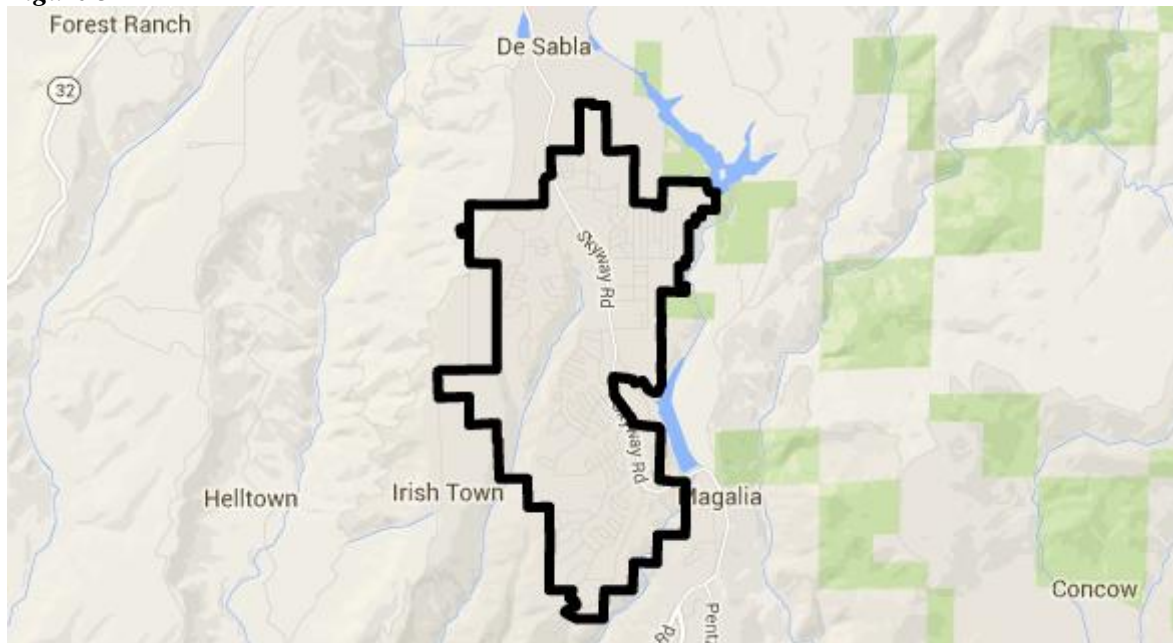
Water is delivered to Paradise Pines customers via a network of 341,338 linear feet (LF) of welded steel, cement-asbestos/transite, and plastic (PVC) distribution pipes ranging in size from 2 ¼” to 14” in diameter. In the last five years, DOWC has replaced a number of the older segments of the mainline with C900 PVC mainline, amounting to 16,181 LF. 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 2021. 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.

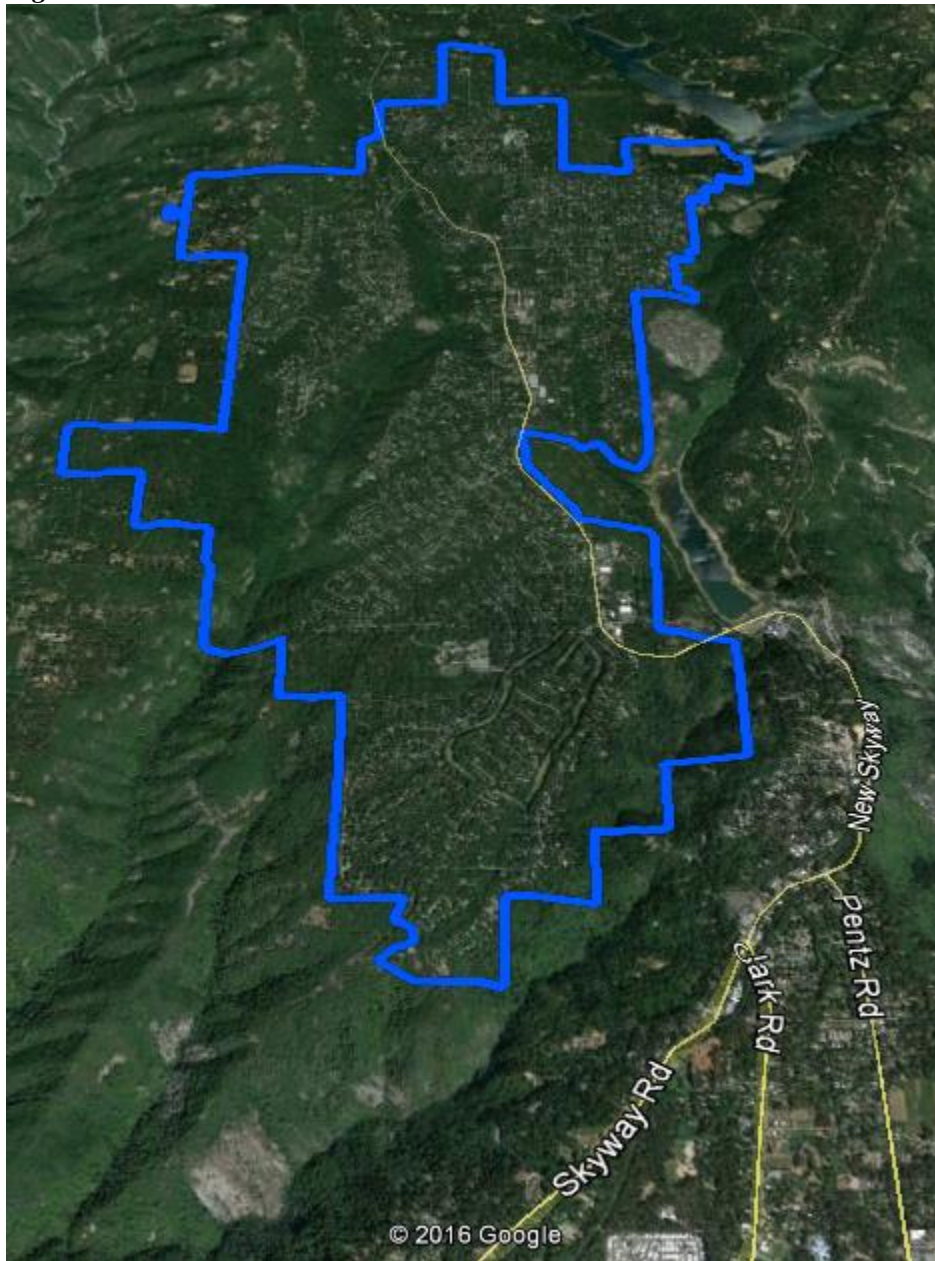
**Figure 3-2**



Source: Google Maps, Butte County LAFCO

*Continued on next page*

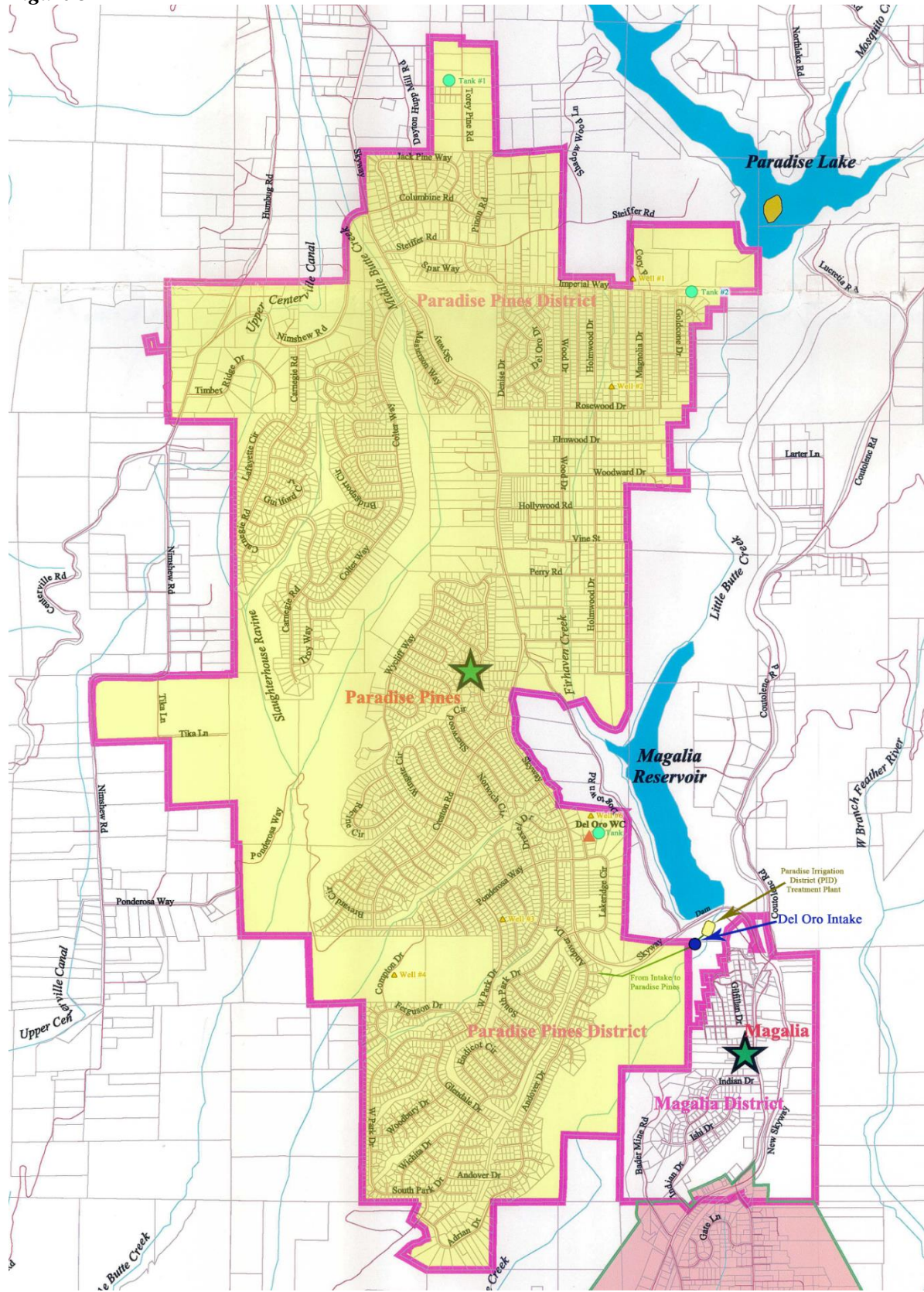
**Figure 3-3**



Source: Google Maps, Butte County LAFCO

*Continued on next page*

Figure 3-4

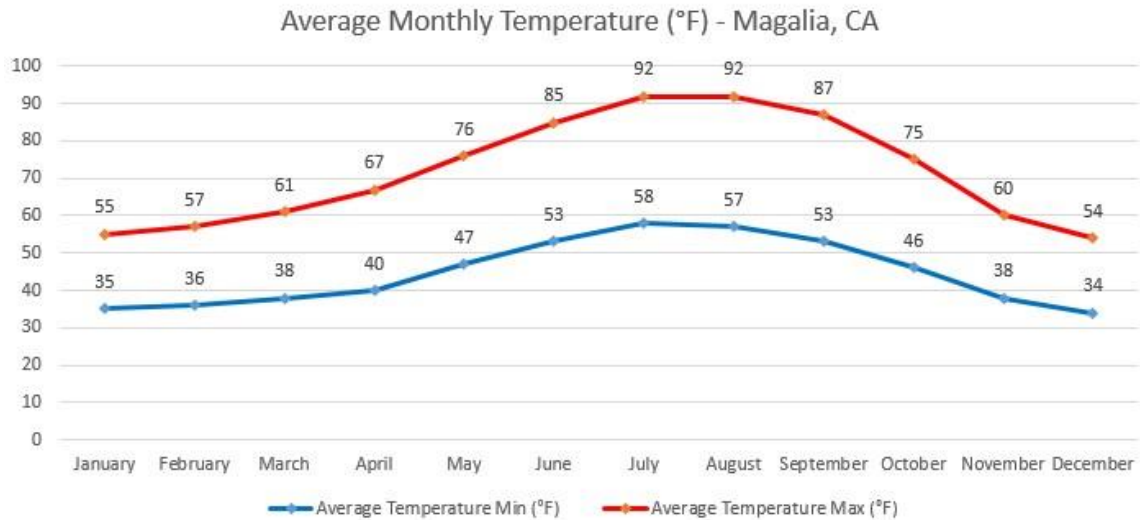


### 3.3 Service Area Climate

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.

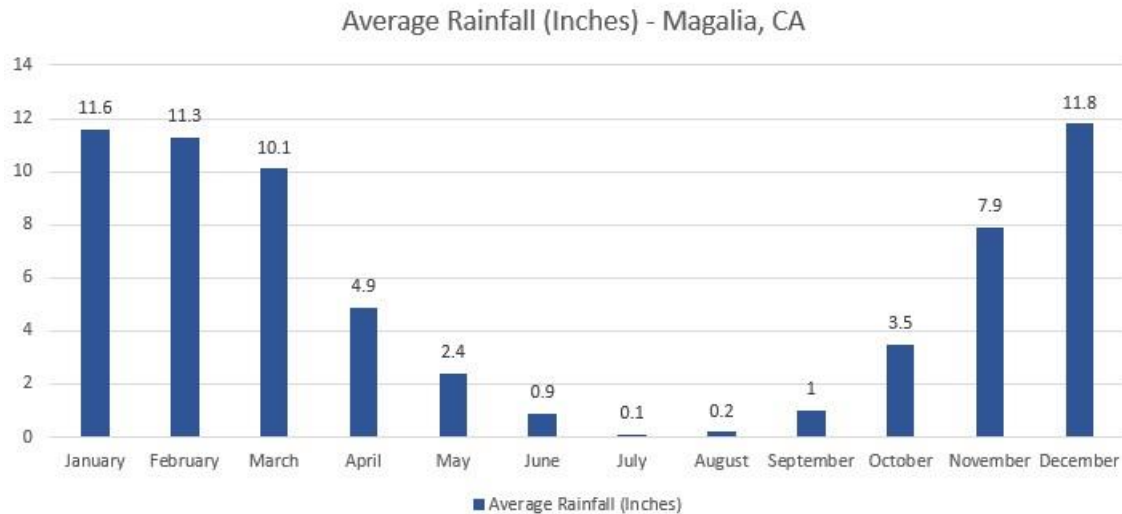
DOWCPP is situated on a ridge rising up into the Sierra Nevada mountain range, and crosses multiple small valleys. As such, the altitude varies significantly from the lowest southern end of the district to the highest northern end; the median altitude is 2,444 feet above sea level. As a result of this 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 data: <https://www.ncdc.noaa.gov/>

**Figure 3-6**

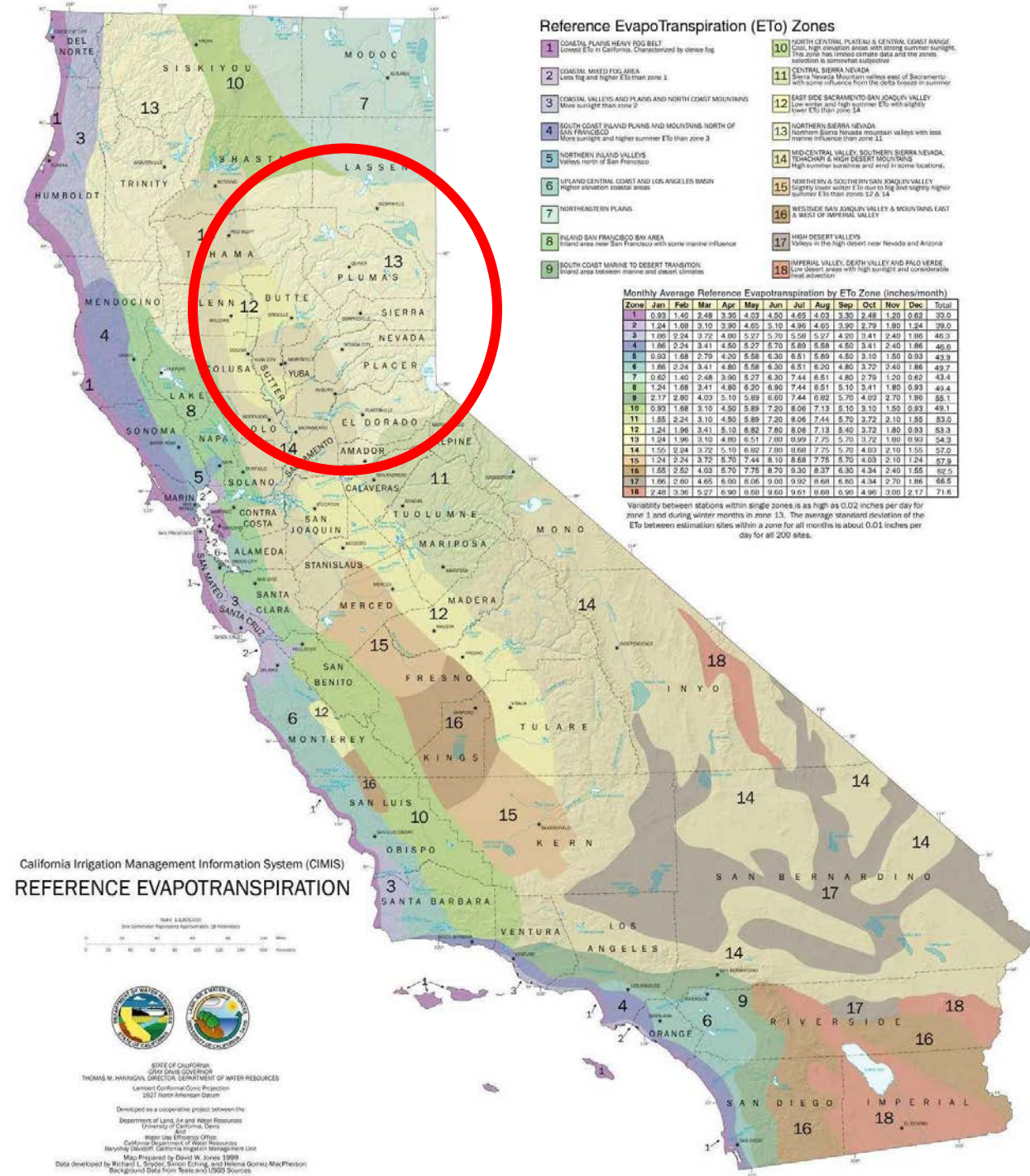


Source data: <https://www.ncdc.noaa.gov/>

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:

[https://cimis.water.ca.gov/App\\_Themes/images/etozonemap.jpg](https://cimis.water.ca.gov/App_Themes/images/etozonemap.jpg)

Figure 3-7



Source: [https://cimis.water.ca.gov/App\\_Themes/images/etozonemap.jpg](https://cimis.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

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.<sup>1</sup>*

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

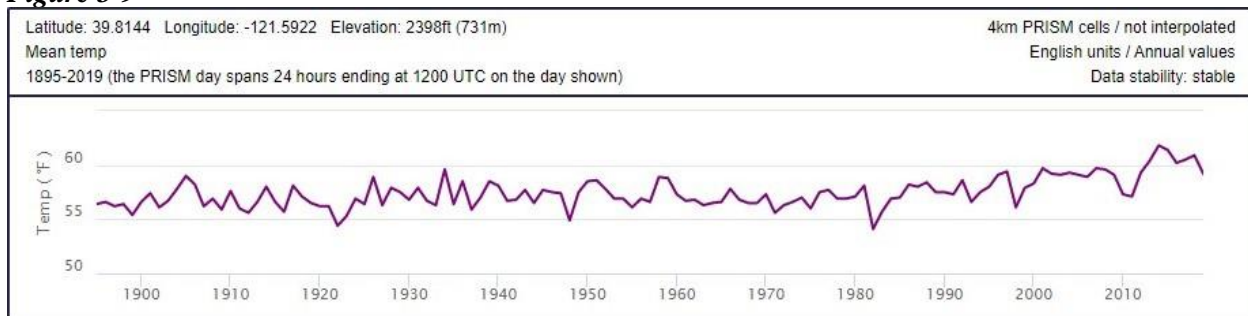


Source: [https://www.sunsetwesterngardencollection.com/images/uploads/Northern\\_Cali\\_full.jpg](https://www.sunsetwesterngardencollection.com/images/uploads/Northern_Cali_full.jpg)

Analyzing data downloaded from the Oregon State PRISM<sup>2</sup> dataset for 1895 to 2019 for the area, rainfall varies significantly year-to-year, which reflects conditions in most of California. The standard deviation in rainfall over that period is 20.15 inches, or about 32% of the average annual rainfall for the period (which was 63.394 inches). Since 1895, several dry periods have been observed. Runs of three or more consecutive years of below average rainfall were observed six times, and runs of five or more consecutive years were seen three times. The longest dry period was from 1928 to 1936, while the year with the lowest rainfall was 2013.

Following global trends, the area’s climate has been warming. The average temperature observed for 1895 to 1904 was 56.56 degrees Fahrenheit. The average temperature recorded from 2010 to 2019 was 59.81 degrees Fahrenheit, an increase of 3.25 degrees Fahrenheit versus 1895 to 1904. This increase is higher than average increases observed at lower elevations.

Figure 3-9



<sup>1</sup><http://www.sunset.com/garden/climate-zones/sunset-climate-zone-northern-california>

<sup>2</sup><https://prism.oregonstate.edu/explorer/>



3.4 Service Area Population and Demographics

<b>Table 3-1 Retail: Population - Current and Projected</b>						
Population Served	2020	2025	2030	2035	2040	2045(opt)
	6,688	8,255	10,189	10,583	10,850	11,123
<b>NOTES:</b> Population numbers have decreased significantly since the 2015 UWMP due to the Camp Fire of November 2018. Rebuild rate and population growth are difficult to predict, but have been projected based on current rate of customer return.						

The 2020 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.

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 2020, 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.

<b>Table 3-A Population 1999-2020</b>				
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	
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	
2016	4690	2.05	9,615	
2017	4697	2.06	9,678	
2018	2972	2.07	6,154	
2019	3072	2.08	6,393	
2020	3198	2.09	6,682	DWR Population Tool (Appendix D)

Due to the drastic effect of the Camp Fire in November 2018, DOWCPP’s active connections decreased dramatically. This also invalidated prior population change estimates put forth in DOWCPP’s 2015 UWMP. For its 2020 UWMP, DOWC calculated the average annual restoration rate at 120 connections or 3.78% based on monthly change from February 2019 to March 2021.

<b>Table 3-B Population change averages</b>			
<b>Month</b>	<b>Number of Connections</b>	<b>Change in Number of Connections</b>	<b>% Change in Number of Connections</b>
Feb-19	2950	2	0.07%
Mar-19	2966	16	0.54%
Apr-19	2985	19	0.64%
May-19	2980	-5	-0.17%
Jun-19	2989	9	0.30%
Jul-19	2999	10	0.33%
Aug-19	3015	16	0.53%
Sep-19	3028	13	0.43%
Oct-19	3049	21	0.69%
Nov-19	3038	-11	-0.36%
Dec-19	3051	13	0.43%
Jan-20	3067	16	0.52%
Feb-20	3076	9	0.29%
Mar-20	3091	15	0.49%
Apr-20	3105	14	0.45%
May-20	3114	9	0.29%
Jun-20	3129	15	0.48%
Jul-20	3150	21	0.67%
Aug-20	3158	8	0.25%
Sep-20	3168	10	0.32%
Oct-20	3169	1	0.03%
Nov-20	3184	15	0.47%
Dec-20	3188	4	0.13%
Jan-21	3189	1	0.03%
Feb-21	3192	3	0.09%
Mar-21	3199	7	0.22%
<b>Annualized Average Change</b>		<b>120</b>	<b>3.78%</b>

DOWC then used these average change figures to project the Number of Connections and Persons per Connection for 2021 through 2032. As this projected restoration rate will see DOWCPP nearly to its pre-fire active connections in the year 2032, the average connections from 2008-2017 were used for the projected connections from 2033-2045. DOWC acknowledges that the actual restoration rate could vary significantly and asks users of this document to bear that in mind. (Previous year’s figure plus average annual change = current year’s figure). The Persons Per Connection numbers are projected based on the trend established using DWR’s Population Tool.

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).

<b>Table 3-C Population Projections</b>			
Baseline Year	Number of Connections	Persons Per Connection	Projected Population
2021	3318	2.10	6974
2022	3438	2.11	7262
2023	3558	2.12	7553
2024	3678	2.13	7847
<b>2025</b>	<b>3798</b>	<b>2.14</b>	<b>8143</b>
2026	3918	2.15	8443
2027	4038	2.17	8745
2028	4158	2.18	9050
2029	4278	2.19	9357
<b>2030</b>	<b>4398</b>	<b>2.20</b>	<b>9668</b>
2031	4518	2.21	9981
2032	4638	2.22	10298
2033	4696	2.23	10478
2034	4696	2.24	10530
<b>2035</b>	<b>4696</b>	<b>2.25</b>	<b>10583</b>
2036	4696	2.26	10636
2037	4696	2.28	10689
2038	4696	2.29	10742
2039	4696	2.30	10796
<b>2040</b>	<b>4696</b>	<b>2.31</b>	<b>10850</b>
2041	4696	2.32	10904
2042	4696	2.33	10958
2043	4696	2.35	11013
2044	4696	2.36	11068
<b>2045</b>	<b>4696</b>	<b>2.37</b>	<b>11123</b>

NOTES:  
 2021-2032 connections calculated using current observed restoration rate. 2033-2045 reflect average connections for 2008-2017 (the ten years prior to the Camp Fire).

As of the 2015 UWMP, DOWCPP was 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 was estimated that DOWCPP would have 5,300 connections. However, based on the trends from 2007 to 2015, DOWCPP projected that full build out would not occur for several decades. Due to the Camp Fire of 2018, the build-out percentage has been revised down to 60%. The current restoration rate should see DOWCPP back to its pre-fire build-out around 2033. It is difficult to estimate whether the current restoration rate will continue, increase, or decrease.

*Continued on next page*

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. (Chapter 3, Section F-County Character)*

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. From 2007 to 2016, DOWCPP observed 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. Trends seen in 2015 showed that the retiree population, which previously fueled DOWCPP's growth, was gradually passing on, and the newly vacant properties were being occupied by new residents more slowly than the vacancies were being created. The Camp Fire in 2018 destroyed approximately 33% of homes in DOWCPP's service area, and drove many retirees out of the district. DOWC expects most of the newly rebuilt homes and remaining homes to be occupied by young families.

#### 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, metered water use in DOWCPP in 2020 was 91.73% 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.

#### 3.5 Land Uses within Service Area

**CWC** *10631(a) The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities...*

DOWCPP's service area is largely built out, with previously established land uses. Current land usage is approximately 94% Single Residential, 3% Commercial and Multi Residential, 2.5% Public Authority and less than .5% Irrigation. DOWC does not anticipate any significant changes in the established land use distribution, even as customers return following the Camp Fire.

## 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 2045. 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 2021 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. This is especially true as DOWCPP cannot predict the future rate of customer restoration following the Camp Fire of 2018.

### 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 Past, Current, and Projected Water Use by Sector

**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 long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive 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.*

*10631(d)(1) For an urban retail water supplier, 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, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:*

- (A) Single-family residential.*
- (B) Multifamily.*
- (C) Commercial.*
- (D) Industrial.*
- (E) Institutional and governmental.*

*(F) Landscape. (if other (i.e. 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).*

*(4)(A) Water use projections, where available, shall 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.*

#### 4.2.1 Water Use Sectors in Addition to Those Listed in Water Code

DOWCPP does not have any water use sectors in addition to those listed in the water code.

##### 4.2.1.1 Exchanges

A water exchange is typically water delivered by one water supplier to another supplier, with the receiving supplier returning the water as a specified timer, or when conditions of agreement are met. Water exchanges can be strictly a return of water on a basis agreed upon or can include payment and the return of water. DOWCPP has an exchange agreement in place with neighboring Paradise Irrigation District (PID).

The water is diverted from DOWC Stirling Bluffs (DOWCSB), at Toadtown by weir into Little Butte Creek / Butte Canal. This water is transported into Paradise Lake, owned by PID. From Paradise Lake it is released by valve into a natural ditch and finally deposited into Magalia Reservoir. Magalia Reservoir acts as a holding tank for PID's water treatment plant. Once water is treated, it is pumped into the DOWCPP system by booster pump. Water is metered going both into and out of the exchange system. DOWCPP pays a fee per acre foot for PID to treat and transport the water. This water acts as a supplement water supply to the DOWCPP system, further discussion of which is found in Chapter 7.

##### 4.2.2 Past Water Use

Since DOWCPP was established in 1963, all water served to customers has been metered. Table 4-A, shown on next page, 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 2014-2017 reflects voluntary and mandatory conservation requirements associated with the existing droughts, up to and including penalties for over-use.

<b>Table 4-A Historical Demand for Potable Water - Actual</b>			
<b>Year</b>	<b>Metered Connections</b>	<b>Total Production</b>	<b>Gross Water Use Per Connection</b>
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
<b>1980</b>	<b>2,719</b>	<b>308,910</b>	<b>114</b>
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
<b>1990</b>	<b>4,047</b>	<b>574,765</b>	<b>142</b>
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
<b>2000</b>	<b>4,483</b>	<b>618,020</b>	<b>138</b>
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
<b>2010</b>	<b>4,701</b>	<b>586,513</b>	<b>125</b>
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
2016	4,690	401,997	86
2017	4,697	451,894	96
2018*	2,972*	455,535*	153* (97 at 2017 connections)
2019	3,072	334,303	109
<b>2020</b>	<b>3,198</b>	<b>340,584</b>	<b>106</b>

\* For 2018, the number of connections given is post-Camp Fire, which occurred November 8, 2018. The water production was for the whole year, so the Gross Water Use per Connection is skewed upwards. If 2017 connections are used, 2018 Gross Water Use per Connection is 97 CCF.

DOWC notes that a redoubling of DOWC’s Conservation Awareness programs from 2007 to present has resulted in reduced water use per service connection. While water use per service connection was at an all-time low in 2016, it was likely due to consumer restriction to avoid incurring drought-related surcharges.

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, were 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.

<b>Table 4-B Historical Demand for Potable Water - Actual</b>							
<b>Use Type</b>	<b>1990</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>
Residential			490,517	501,034	436,045	323,964	256,690
Commercial			12,516	8,265	7,477	6,411	5,618
Institutional/Governmental			10,059	10,360	11,442	4,687	13,540
Landscape			41,778	30,832	23,771	1,012	806
<b>Sub-Total: Demand of Metered Customer Connections</b>	<b>476,336</b>	<b>465,669</b>	<b>554,871</b>	<b>550,492</b>	<b>478,735</b>	<b>336,074</b>	<b>276,654</b>
Sales/Transfers/Exchanges to other agencies			19,412	16,747	14,356	17,345	12,656
Water Losses & Authorized Unbilled/Unmetered (firefighting, flushing, etc)			67,075	262,283	108,317	70,738	63,961
<b>TOTAL</b>	<b>574,765</b>	<b>629,053</b>	<b>637,432</b>	<b>761,819</b>	<b>600,869</b>	<b>424,129</b>	<b>353,271</b>
<b>All Water Use in DOWCPP (Total less Transfers)</b>			<b>618,020</b>	<b>745,072</b>	<b>586,513</b>	<b>406,785</b>	<b>340,615</b>
Total Connections	4,047	4,389	4,483	4,730	4,701	4,676	3,198
<i>Total annual METERED USE Per connection</i>	<i>117.70</i>	<i>106.10</i>	<i>123.77</i>	<i>116.38</i>	<i>101.83</i>	<i>71.87</i>	<i>86.51</i>
<i>Total annual DOWCPP Water Use Per connection</i>	<i>142.02</i>	<i>143.32</i>	<i>137.86</i>	<i>157.52</i>	<i>124.76</i>	<i>86.99*</i>	<i>106.51</i>
NOTES: *See Chapter 5: SB X7-7, All water supplied as shown above was drinking water quality.							

Continued on next page



4.2.3 Distribution System Water Losses

**CWC 10631(d)(1)** For an urban retail water supplier, 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, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses:...

(J) Distribution system water loss

(3)(A) 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, in accordance with rules adopted pursuant to Section 10608.34

(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.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

Table 4-4 below reports the distribution system losses for calendar years 2016-2020, calculated using the American Water Works Association Water Audit methodology. Complete results of the 2016-2020 AWWA Water Loss Audits 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 found in Section 4.2.4 Projected Water Use.

DOWCPP continues to replace aging pipelines to reduce water loss. Since 2016, DOWCPP has replaced a total of 16,181 feet of mainline, as well as replacing or upgrading nine hydrants. As part of rebuilding after the Camp Fire, DOWCPP removed 1,800 meters that were destroyed, damaged, or contaminated. As customers reconnect their services, brand new meters are being installed. These projects contributed to a significant reduction in water loss.

Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss*
01/2016	57,598
01/2017	61,599
01/2018	52,694
01/2019	45,814
01/2020	39,639
* Taken from the field "Water Losses" (a combination of apparent losses and real losses) from the AWWA worksheet.	
NOTES: Figures above are converted from Million Gallons (required on the AWWA worksheets [Appendix E]) to CCF.	

4.2.4 Current Water Use

Table 4-1 Retail: Demands for Potable and Raw Water - Actual			
Use Type	2020 Actual		
<i>Drop down list</i> <i>May select each use multiple times</i> <i>These are the only Use Types that will be recognized</i> <i>by the WUedata online submittal tool</i>	Additional Description (as needed)	Level of Treatment When Delivered <i>Drop down list</i>	Volume
Single Family		Drinking Water	253,764
Multi-Family		Drinking Water	2,926
Commercial		Drinking Water	5,618
Institutional/Governmental		Drinking Water	13,540
Landscape		Drinking Water	806
Sales/Transfers/Exchanges to other agencies	To DOWC's Magalia District	Drinking Water	12,656
Other	Authorized Unbilled/ Unmetered (firefighting, flushing, etc.)	Drinking Water	24,322
Losses	Per AWWA Water Loss Audit	Drinking Water	39,639
<b>TOTAL</b>			<b>353,271</b>
See AWWA Water Loss Audit (Appendix E) and Section 4.3 for more information about Losses			

4.2.5 Projected Water Use

Tables 4-2 and 4-3 show current and projected future water demands. Future demands are projected over a 20-year planning horizon in accordance with Water Code Section 10635 (a). An explanation of how future demands were projected follows, together with Tables 4-C through 4-F. Passive savings resulting from possible future codes, standards, ordinances, and land use plans were not considered in the following projections. While DOWC acknowledges that passive savings will occur as new homes with efficient, modern plumbing and fixtures replace older homes that were lost in the Camp Fire, DOWC is unable to reliably estimate those savings.

*Continued on next page*

Table 4-2 Retail: Demands for Potable and Raw Water - Projected						
Use Type <i>(Add additional rows as needed)</i>	Additional Description <i>(as needed)</i>	Projected Water Use <i>Report To the Extent that Records are Available</i>				
<i>Drop down list</i> <i>May select each use multiple times</i> <i>These are the only Use Types that will be recognized by the WUEdata online submittal tool</i>		2025	2030	2035	2040	2045 -opt
Single Family		312,389	370,865	405,958	416,199	426,698
Multi-Family		3,602	4,276	4,681	4,799	4,920
Commercial		6,916	8,210	8,987	9,214	9,447
Institutional/Governmental		16,668	19,788	21,661	22,207	22,767
Landscape		992	1,178	1,289	1,322	1,355
Sales/Transfers/Exchanges to other Suppliers	To DOWC's Magalia District	18,820	18,820	18,820	18,820	18,820
Other Potable	Authorized Unbilled / Unmetered (firefighting, flushing, etc.)	29,941	35,545	38,909	39,890	40,897
Losses	Per AWWA Water Loss Audit	48,797	57,931	63,413	65,013	66,653
<b>TOTAL</b>		<b>438,125</b>	<b>516,614</b>	<b>563,718</b>	<b>577,464</b>	<b>591,557</b>
<b>NOTES:</b> See AWWA Water Loss Audit (App. E) and Section 4.2.3 for more information about Losses						

Table 4-3 Retail: Total Water Demands						
	2020	2025	2030	2035	2040	2045 (opt)
Potable and Raw Water <i>From Tables 4-1 and 4-2</i>	353,271	438,125	516,614	563,718	577,464	591,557
Recycled Water Demand* <i>From Table 6-4</i>	0	0	0	0	0	0
<b>TOTAL WATER DEMAND</b>	<b>353,271</b>	<b>438,125</b>	<b>516,614</b>	<b>563,718</b>	<b>577,464</b>	<b>591,557</b>

Future demands (year 2025 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 2015-2019, as shown in Tables 4-C and 4-D. 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.

*Continued on next page*

<b>Table 4-C Average Historical GPCD – 2015-2019</b>			
<b>Year</b>	<b>Total Population (from Table 3-C)</b>	<b>Annual Gross Water Use (Less Transfers)</b>	<b>GPCD</b>
<b>2015</b>	9,546	406,785	87
<b>2016</b>	9,615	401,997	86
<b>2017</b>	9,678	451,894	96
<b>2018</b>	6,154	455,535	152
<b>2019</b>	6,688	334,303	107
<b>AVERAGE GPCD 2015-2019</b>			<b>106</b>
<b>NOTES: See Chapter 3 for calculation of Population Estimates &amp; GPCD</b>			

<b>Table 4-D Demand for Potable Water (less transfers) – Projected</b>				
<b>Year</b>	<b>Total Population (from Table 4-B)</b>	<b>AVERAGE GPCD 2015-2019 (from Table 4-B)</b>	<b>Projected Annual Water Use (less transfers) GALLONS</b>	<b>Projected Annual Water Use (less transfers) CCF</b>
<b>2025</b>	8,255	106	317,939,725	<b>425,053</b>
<b>2030</b>	10,189	106	392,423,451	<b>524,630</b>
<b>2035</b>	10,583	106	407,583,540	<b>544,898</b>
<b>2040</b>	10,850	106	417,865,655	<b>558,644</b>
<b>2045</b>	11,123	106	428,407,156	<b>572,737</b>

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 2011 through 2020, 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 2020 transfers. In addition, transfers have been dramatically reduced due to the Camp Fire.

<b>Table 4-E Transfers to Other Districts – Actual</b>			
<b>Year</b>	<b>Transfers (Gallons)</b>	<b>Transfers (CCFs)</b>	
2020	9,467,436	12,656	
2019	5,881,628	7,863	
2018	13,776,664	18,417	
2017	11,151,932	14,908	
2016	14,431,164	19,292	
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	
		<b>18,820</b>	<b>AVERAGE</b>

As shown in Table 4-F, future sector demands were projected proportional to actual sector demands experienced during 2020. Although overall 2020 demand was down dramatically due to the Camp Fire of 2018, sector demands were reasonably proportional to those from the years preceding that event. Since

that event did not appear to significantly skew the use of water by sector, the 2020 distribution of water use by sector was used to project future sector water use.

Table 4-F Demand for Potable Water – Projected							
Sector	2020	%	2025	2030	2035	2040	2045
Single Family	253,764	74.50%	316,672	390,858	405,958	416,199	426,698
Multi-Family	2,926	0.86%	3,651	4,507	4,681	4,799	4,920
Commercial	5,618	1.65%	7,011	8,653	8,987	9,214	9,447
Institutional/Governmental	13,540	3.98%	16,897	20,855	21,661	22,207	22,767
Landscape	806	0.24%	1,006	1,241	1,289	1,322	1,355
Other (Authorized Unbilled / Unmetered )	24,322	7.14%	30,351	37,462	38,909	39,890	40,897
Losses	39,639	11.64%	49,466	61,054	63,413	65,013	66,653
<b>Subtotal</b>	<b>340,615</b>	<b>100.00%</b>	<b>425,053</b>	<b>524,630</b>	<b>544,898</b>	<b>558,644</b>	<b>572,737</b>
Sales/Transfers/Exchanges to other agencies	12,656		18,820	18,820	18,820	18,820	18,820
<b>TOTAL</b>	<b>353,271</b>		<b>443,873</b>	<b>543,450</b>	<b>563,718</b>	<b>577,464</b>	<b>591,557</b>

#### 4.2.6 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. While DOWC acknowledges that passive savings will occur as new homes with efficient, modern plumbing and fixtures replace older homes that were lost in the Camp Fire, DOWC is unable to reliably estimate those savings.

*Continued on next page*

Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) <i>Drop down list (y/n)</i>	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? <i>Drop down list (y/n)</i>	Yes

#### 4.2.7 Characteristic Five-Year Water Use

**CWC 10635 (b)** Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following...

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period. [Emphasis added]

CWC § 10635(b) is a new requirement for 2020 UWMPs. A critical part of this new statutory language is the requirement to prepare a five-year Drought Risk Assessment (see Section 7.2). As a first step, DWR suggests that water suppliers estimate their unconstrained water demand for the next five years (2021 through 2025). Unconstrained water demand is water use in the absence of drought water use restrictions. Drought conditions cause unconstrained demands to increase. The Drought Risk Assessment presented in Section 7.2 accounts for this increase in unconstrained water demand. DOWC’s demand forecast model separately estimates water use for normal, wet, and dry weather conditions. Table 4-G shows unconstrained demands for 2021 through 2025 for normal weather and multiple-dry-year scenarios.

Table 4-G Characteristic Five-Year Water Use – Projected					
Weather Scenario	2021	2022	2023	2024	2025
Multi-Year Dry	398,155	414,615	431,230	448,001	464,929
Normal	359,083	373,928	388,913	404,038	419,305

NOTES: The table shows unconstrained demand (i.e., demand in the absence of drought water use restrictions). Increasing usage reflects estimated service connection restoration (see Chapter 3).

#### 4.3 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 2015-2019 American Community Survey 5-Year Estimates (“ACS-5”) (see Appendix F), as of 2019, the median income for Magalia CDP was \$50,415. By the CHSC definition above, “low-income” would be defined as an annual income of \$40,332 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 \$35,000 to \$49,999 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-H, at least 33.4% of households in the Magalia CDP meet the CHSC definition of low-income, being those households which have an annual income of \$34,999 or less. An additional 15.9% of households fall in the \$35,000 to \$49,999 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 \$40,332 or less.

Annual Income Range	Households	
	Estimate	Margin of Error
Less than \$10,000	5.0%	+/-2.2
\$10,000 to \$14,999	8.3%	+/-3.6
\$15,000 to \$24,999	10.10%	+/-3.3
\$25,000 to \$34,999	10.0%	+/-2.9
<b>Subtotal</b>	<b>33.4%</b>	
\$35,000 to \$49,999	15.9%	+/-4.0
\$50,000 to \$74,999	20.4%	+/-4.7
\$75,000 to \$99,999	17.9%	+/-4.8
\$100,000 to \$149,999	8.6%	+/-3.0
\$150,000 to \$199,999	1.3%	+/-1.2
\$200,000 or more	2.5%	+/-1.9
Median income (dollars)	50,415	+/-3,287

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.

<b>Table 4-I Demand for Potable Water Among Low-Income Households – Projected</b>						
<b>Sector</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>	<b>2040</b>	<b>2045</b>
Single Family	101,506	124,956	148,346	162,383	166,480	170,679
Multi-Family	1,170	1,441	1,710	1,872	1,920	1,968
<b>TOTAL</b>	<b>102,676</b>	<b>126,397</b>	<b>150,056</b>	<b>164,255</b>	<b>168,400</b>	<b>172,647</b>

According to the ACS-5, 13.7% of individuals fall below the federal poverty line, 10.6% of households have Supplemental Security income, 3.2% had cash public assistance income, and 11.1% received Food Stamps/SNAP benefits in the preceding 12 months. In addition, 50.9% 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.

#### 4.4 Climate Change Considerations

*CWC 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, while accounting for impacts from climate change.*

*10635 (b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following...*

*(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.*

DOWC acknowledges that the climate has been warming (as shown in Chapter 3). Climate change can increase the evaporation of surface water, such as that which is transferred from its Stirling Bluffs District via PID’s reservoir. In the short-term, climate change may also decrease the availability of more vulnerable groundwater sources through slower recharge. System supplies are discussed in greater detail in Chapter 6.

Additionally, DOWC expects that hotter temperatures and longer hot seasons will cause increased usage by customers through landscaping, gardens, evaporative coolers, and other uses. DOWC is continually communicating information to its customers, encouraging them to make water conservation a way of life in compliance with Senate Bills 555 and 606.

Finally, DOWC regularly seeks ways to reduce water loss through capital improvement projects, such as mainline replacement, metering upgrades, and leak detection.



## Chapter 5 - SB X7-7 Baselines, Targets, and 2020 Compliance

The Water Conservation Act of 2009, also known as SB X7-7, (Appendix B) required 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, 2020, DOWCPP has met 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 From SB X7-7 Verification Form				
Baseline Period	Start Year	End Year	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	1999	2008	162	130
5 Year	2003	2007	165	
*All values are in Gallons per Capita per Day (GPCD)				

*Continued on next page*

Table 5-2 2020 Compliance							
Actual 2020 GPCD*	Optional Adjustments to 2020 GPCD Enter "0" if no adjustment is made					2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020?
	Extraordinary Events*	Weather Normalization*	Economic Adjust-ment*	TOTAL Adjust-ments*	Adjusted 2020 GPCD* <i>(Adjusted if applicable)</i>		
104	0	0	0	0	104	130	Yes
<i>*All values are in Gallons per Capita per Day (GPCD)</i>							
NOTES: See SB X7-7 tables for calculations							

### 5.1 Updating Calculations from 2015 UWMP

In DOWCPP’s 2015 UWMP, Method 1 was used to calculate the 2020 Target. While DOWCPP’s overall population has changed significantly due to the Camp Fire of 2018, DOWCPP has not had a contraction or expansion of service area, nor any other situation that would require recalculating its baseline for compliance. Therefore, DOWC will not update its calculations from the 2015 UMWP.

Further information for DOWCPP’s population and baseline calculations may be found in Chapter 5 of its 2015 UWMP, which is included as Appendix N of this 2020 UWMP.

## 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 Water Supply analysis Overview

**CWC** 10631(b) *Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier [in five-year increments to 20 years or as far as data is available]0F1 providing supporting and related information, including all of the following:*

*(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.*

*(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.*

*(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.*

#### 6.1.1 Specific Analysis Applicable to All Water Supply Sources

DOWCPP has 4 wells that supply ground water. This is discussed in further detail in Chapter 7.

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 6.2.7 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 6.2.7.

### 6.2 Water Supply Characterization

#### 6.2.1 Purchased or Imported Water

DOWCPP does not purchase or import water from another supplier at this time. Water exchange information can be found in detail in Section 6.2.7 and Chapter 7.

#### 6.2.2 Groundwater

**CWC** 10631(b)(4) *If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:*

*(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), 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 for basins underlying the urban water supplier's service area.

(B) 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 a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin 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 coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(C) 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.

(D) 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.

DOWCPP uses groundwater as its main source of supply. Between 2016 and 2020, an annual average of 308,968 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.

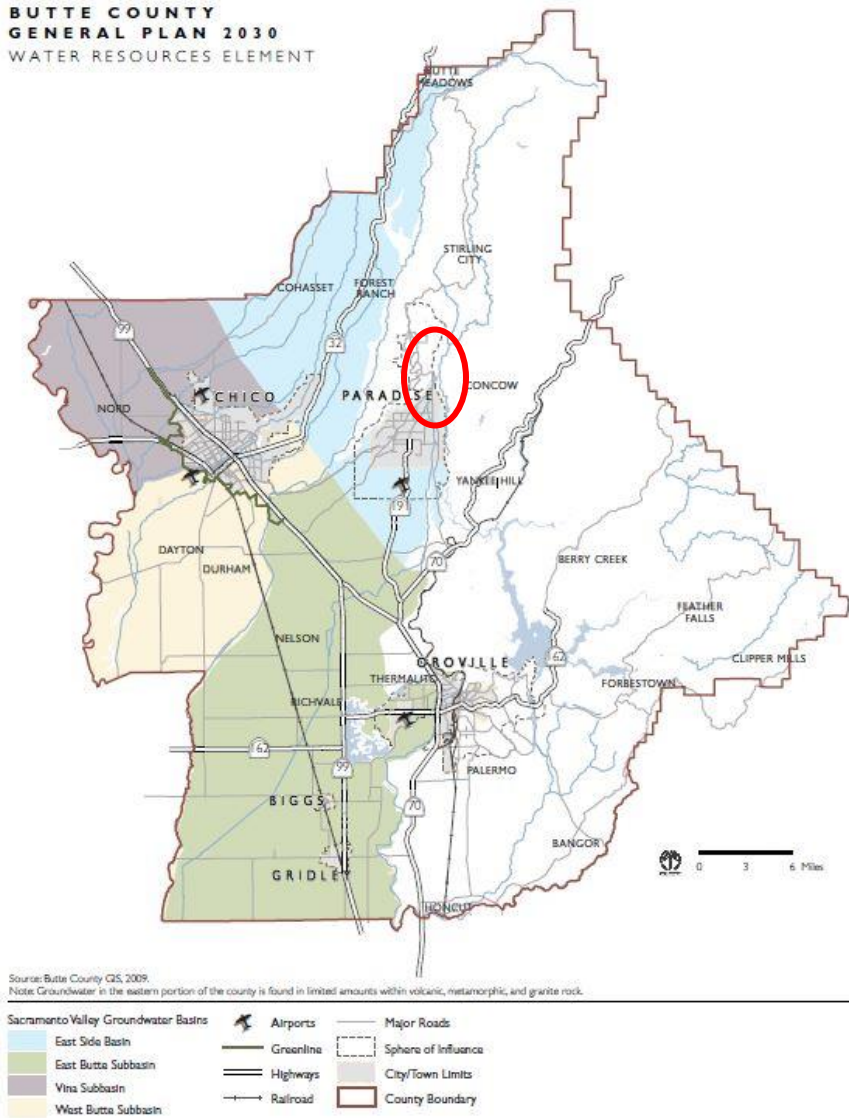
#### 6.2.1.1 Basin Description

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 up-thrust 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 (see next page) 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 6.2.7). 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.

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.

6.2.2.1 Overdraft Conditions

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

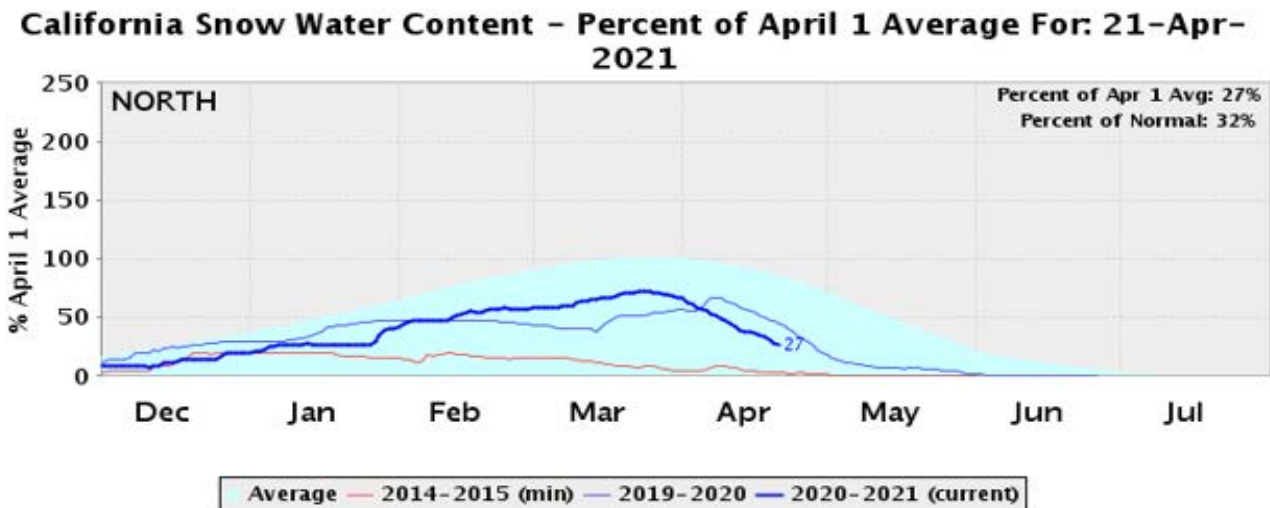
According to our records, DOWCPP did not suffer a water shortage in the 1977-78 drought, primarily due to the stability of the existing wells. Since that time, additional wells have been added to accommodate additional customer connections and the resulting increased demand.

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. 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, in the winters of 2016-2017 and 2018-2019, the snowpack in the northern California region, which serves the Paradise Pines area, had above average levels which helped to recharge the aquifer(s). While in the winters of 2019-2020 and 2020-2021, snowpack levels dropped below average once again, 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.  
<https://cdec.water.ca.gov/snowapp/swcchart.action>

In general, DOWCPP has anticipated, instead of reacted to, the lower yields and changes in 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, as seen in the reduced GPCD during drought years such as 2015-2017 and in general over the last decade (see Table 4-A in Chapter 4). Post Camp Fire rehabilitation is being monitored closely, especially in regards to increased water demands, purchased water needs, and the possible need to rest wells. Water shortage contingency plans, including mandatory conservation, are discussed in Chapter 8. Demand management measures are discussed in greater detail in Chapter 9.

#### 6.2.2.2 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 2020, this well produced 122,949 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 2020, this well produced 25,064 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. It was rehabilitated in 2017. In 2020, this well produced 31,052 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 2020, this well produced 21,437 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 and Well #3 have exceeded their life expectancies, they currently show 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 2016 - 2020 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 2025 – 2045 is shown in Table 6-9, in Section 6.9.

*Continued on next page*

Table 6-1 Retail: Groundwater Volume Pumped						
Groundwater Type <i>Drop Down List</i> <i>May use each category multiple times</i>	Location or Basin Name	2016	2017	2018	2019	2020
<i>Add additional rows as needed</i>						
Fractured Rock	WELL 2 - BRANDY	111,890	143,288	106,938	124,074	122,949
Fractured Rock	WELL 3 - W PARK	68,111	67,485	72,253	45,241	25,064
Fractured Rock	WELL 4 - COMPTON	71,047	54,523	127,146	76,787	31,052
Fractured Rock	WELL 6 - LAKERIDGE	67,221	75,326	78,001	55,008	21,437
<b>TOTAL</b>		<b>318,269</b>	<b>340,622</b>	<b>384,338</b>	<b>301,110</b>	<b>200,502</b>

### 6.2.3 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 6.2.7 for further information regarding transfers.

### 6.2.4 Stormwater

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

### 6.2.5 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) 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 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.

**Table 6-2 Retail: Wastewater Collected Within Service Area in 2020**

<input checked="" type="checkbox"/>	There is no wastewater collection system. The supplier will not complete the table below.
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**Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020**

<input checked="" type="checkbox"/>	No wastewater is treated or disposed of within the UWMP service area. The supplier will not complete the table below.
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**Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area**

<input checked="" type="checkbox"/>	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.
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**Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual**

<input checked="" type="checkbox"/>	Recycled water was not used in 2010 nor projected for use in 2015. The supplier will not complete the table below.
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**Table 6-6 Retail: Methods to Expand Future Recycled Water Use**

<input checked="" type="checkbox"/>	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.
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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.

6.2.6 Desalinated Water Opportunities

**CWC 10631 (g)** 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.

6.2.7 Exchanges or Transfers

**CWC 10631 (c)** 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 102,521 CCFs was transferred annually between 2016 and 2020. 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 completion of the Regional Intertie Project (described in more detail in Chapter 7), has eliminated the need to transfer 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.

6.2.8 Future Water Projects

**CWC 10631 (f)** 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 normal and single dry water years and for a period of drought lasting five consecutive 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	
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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 DeSabra Reservoir, which could then be gravity fed to DOWCPP’s Upper Zone. This would require construction of a treatment plant.

6.2.9 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 (a), providing supporting and related information, including all of the following...

*(b)(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.*

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	2020	
<b>Drop down list</b> <i>May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool</i>		Actual Volume	Water Quality <i>Drop Down List</i>
Groundwater (not desalinated)	WELL 2 - BRANDY	122,949	Drinking Water
Groundwater (not desalinated)	WELL 3 – W PARK	25,064	Drinking Water
Groundwater (not desalinated)	WELL 4 - COMPTON	31,052	Drinking Water
Groundwater (not desalinated)	WELL 6 - LAKERIDGE	21,437	Drinking Water
Transfers	DOWC Stirling Bluffs	152,738	Drinking Water
<b>Total</b>		<b>353,240</b>	

Projected water supplies for years 2025 through 2045 are reported in Table 6-9, below. Groundwater projections are based on the average historical well production during the 20-year period of 2001 through 2020. 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. Over the last ten years, Stirling Bluffs has used 57 AF annually on average, 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 AF. During the same ten-year time frame, an average of 43 AF has been transferred annually to DOWC’s Magalia District. However, as described in Chapter 3, Section 3.1, the population regrowth from the Camp Fire has altered transfer averages. For example, in 2019, only 13 AF were transferred, while in 2020, 30 AF were transferred. We expect to see some fluctuations as rebuilding takes place. DOWC has used the average transfer of 43 AF, or 18,820 CCF, in its Table 4-2 in Chapter 4, which details projected usage by type.

Table 6-9 Retail: Water Supplies — Projected						
Water Supply	Additional Detail on Water Supply	Projected Water Supply <i>Report To the Extent Practicable</i>				
		2025	2030	2035	2040	2045 (opt)
<b>Drop down list</b> <i>May use each category multiple times. These are the only water supply categories that will be recognized by the WUEdata online submittal tool</i>		Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume	Reasonably Available Volume
		Groundwater (not desalinated)	WELL 2 - BRANDY	156,728	170,158	183,588
Groundwater (not desalinated)	WELL 3 - W PARK	73,815	80,140	86,466	92,791	99,116
Groundwater (not desalinated)	WELL 4 - COMPTON	59,637	64,748	69,858	74,968	80,079
Groundwater (not desalinated)	WELL 6 - LAKERIDGE	82,391	89,451	96,511	103,571	110,631
Transfers	DOWC Stirling Bluffs	115,434	115,434	115,434	115,434	115,434
<b>Total</b>		<b>488,005</b>	<b>519,931</b>	<b>551,857</b>	<b>583,781</b>	<b>615,708</b>

6.2.10 Special Conditions

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. Wells in this region of fractured rock are of great risk of “going dry” due to their nature, especially during drought and dry periods, and because climate is not predictive of groundwater availability in the DOWCPP area, DOWC’s well depth and constant monitoring helps alleviate this risk.

#### 6.2.10.1 Climate Change Effects

See Chapter 4, Section 4.4 for a description of climate change effects observed and expected in the region. See Chapter 7 for DOWCPP's Drought Risk Assessment.

#### 6.2.10.2 Regulatory Conditions and Project Development

There are no current projects that need regulatory input. As DOWCPP anticipates large projects such as mainline replacement or well development, it seeks input and approval from the CPUC. DOWCPP is not part of a regulated groundwater basin.

#### 6.2.10.3 Other Locally Applicable Criteria

DOWCPP is not part of a regional water management system, nor is it subject to Butte County's Groundwater Management Plan. As an interested party, DOWC does stay abreast of local ordinances.

### 6.3 Energy Use

**CWC** 10631.2. (a) *In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:*

- (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.*

In 2020 DOWCPP required 2.6 kWh per CCF of water to extract, exchange, store, and provide water to customers. DOWCPP expects this energy intensity to remain consistent barring any major changes.

## Chapter 7 - Water Supply Reliability and Drought Risk Assessment

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 of this 2020 UWMP. 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 Water Service Reliability 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 long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive 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 sections provide DOWCPP’s expected water service reliability for a normal year, single dry year, and five consecutive dry years projected for 2025, 2030, 2035, 2040, and 2045.

#### 7.1.1 Service Reliability - Constraints on Water Sources

**CWC** *10631(b)(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.*

As discussed in Chapter 6, the four wells that make up the groundwater sources for DOWCPP are comprised of fractured rock. This type of aquifer structure leads to variable amounts of water available to the wells. Water fills the space between cracks and fractures, the extent of which can vary the amount of water production. It can take up to seven years for surface water to reach the aquifer(s) accessed by DOWCPP’s wells. This causes variable water levels, even in wells that are nearby. Butte County does not conduct groundwater monitoring in these areas; however, DOWC constantly monitors the water levels in all wells. Wells in this region of fractured rock are of great risk of “going dry” due to their nature, especially during drought and dry periods, and because climate is not predictive of groundwater availability in the DOWCPP area, DOWC’s well depth and constant monitoring helps alleviate this risk.<sup>3</sup>

As supplementation of groundwater usage, DOWCPP has an agreement with neighboring PID, as discussed in Chapter 4 Section, 4.2.1.1. This supplementation historically occurred only during the summer months when demand was the highest. However, in recent years, transfers have occurred in two

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<sup>3</sup> <https://www.buttecounty.net/wrcdocs/Reports/I%26A/2016WI%26AFINAL.pdf> Butte County Water Inventory and Analysis, June 2016, Section 4.3.1

time periods. The first time period is winter to early spring, when surface water is more plentiful, allowing DOWCPP’s wells to rest and recharge. The second period is in summer to early fall to align with increased water demand.

In addition to the transfer discussed in Chapter 4, Section 4.2.1.1, DOWCPP has additional emergency agreements with PID. In 2011, the Regional Intertie Project was completed, which allowed DOWC’s Lime Saddle District (DOWCLS) to become self-sufficient with internal water supplies from groundwater and surface water from Lake Oroville. Prior to this project’s completion, DOWCLS was supplied water through a similar transfer through PID. The existing infrastructure allows for water to pass into PID’s system from DOWCLS and then into DOWCPP. A similar inter-district intertie is set up with PID and DOWC’s Magalia district (DOWCMG). The interties with PID allow for emergency water to be transferred to DOWCPP in the case of wells going dry.

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

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

The 2020 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.

### 7.1.2 Service Reliability - Year Type Characterization

Submittal Table 7-1 is used to report the characteristics of water supplies during the year types required for the water service reliability assessment.

Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)			
Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	Available Supplies if Year Type Repeats	
		<input type="checkbox"/>	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location _____
		<input checked="" type="checkbox"/>	Quantification of available supplies is provided in this table as either volume only, percent only, or both.
		Volume Available	% of Average Supply
Average Year	2017		100%
Single-Dry Year	2013		88%
Consecutive Dry Years 1st Year	2011		93%
Consecutive Dry Years 2nd Year	2012		93%
Consecutive Dry Years 3rd Year	2013		88%
Consecutive Dry Years 4th Year	2014		87%
Consecutive Dry Years 5th Year	2015		93%

7.1.3 Service Reliability - Supply and Demand Comparison

7.1.3.1 Water Service Reliability - Normal Year

A normal hydrologic year represents the water supplies available under normal conditions, this could be an averaged range of years or a single representative year. As described in Section 7.1.1, 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 “normal year”, however, DOWCPP has chosen 2017. Supply projections for average years are shown in Table 7-2.

Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals (autofill from Table 6-9)	488,005	519,931	551,857	583,782	615,708
Demand totals (autofill from Table 4-3)	438,125	516,614	563,718	577,464	591,557
Difference	49,880	3,317	(11,861)	6,318	24,151

7.1.3.2 Single Dry Year

A single dry year represents the lowest available water supply. For this comparison, DOWCPP has chosen 2013 as a 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 actual well production in 2013. 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 7-3.

Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supply totals	551,279	551,279	551,279	551,279	551,279
Demand totals	438,125	516,614	563,718	577,464	591,557
Difference	113,154	34,665	(12,439)	(26,185)	(40,278)



### 7.1.3.3 Water Service Reliability – Five Consecutive Dry Years

A five-consecutive year drought represents the driest five-year period in the historical record. Rain fall levels in the Foothill region are pretty consistent. DOWCPP does not have a strictly dry 5-year period of comparison. In the absence of other predictive information, DOWC has conservatively projected multiple dry years as 2011-2015. This time frame represents the probably effect on recharge rates from lack of rain from 2007-2011. This time period has three years with rainfall levels below average, followed by a year of above average rainfall, and finally a year with below average rainfall.

Supply projections for multiple dry years, 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.

DOWCPP has not yet experienced and drought for longer than three years, thus, only has usage reduction information as stated above.

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.

*Continued on next page*

Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025*	2030*	2035*	2040*	2045* (Opt)
First year	Supply totals	593,786	592,301	590,817	589,333	587,848
	Demand totals	438,125	516,614	563,718	577,464	591,557
	Difference	155,661	75,687	27,099	11,869	(3,709)
Second year	Supply totals	669,986	668,311	666,636	664,961	663,286
	Demand totals	394,313	464,953	507,346	519,718	532,401
	Difference	275,674	203,359	159,290	145,244	130,885
Third year	Supply totals	646,488	644,871	643,255	641,639	640,023
	Demand totals	372,406	439,122	479,160	490,844	502,823
	Difference	274,081	205,749	164,095	150,794	137,199
Fourth year	Supply totals	551,279	549,901	548,523	547,144	545,766
	Demand totals	350,500	413,291	450,974	461,971	473,246
	Difference	200,779	136,610	97,548	85,173	72,521
Fifth year	Supply totals	438,356	437,260	436,164	435,068	433,972
	Demand totals	328,594	387,461	422,789	433,098	443,668
	Difference	109,762	49,799	13,376	1,970	(9,695)

7.2 Drought Risk Assessment

**CWC** *Section 10635(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:*

- (1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.*
- (2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.*
- (3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.*
- (4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.*

7.2.1 DRA Data, Methods, and Basis for Water Shortage Conditions

DOWCPP’s data, methods and basis for water shortage conditions are based on historical well levels, usage and rainfall. For detailed information, see Appendix O.

<b>Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)</b>	
<b>2021</b>	<b>Total</b>
Total Water Use	370,239
Total Supplies	593,786
Surplus/Shortfall w/o WSCP Action	223,547
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	223,547
Resulting % Use Reduction from WSCP action	0%

*Continued on next page*

2022	Total
Total Water Use	387,217
Total Supplies	669,986
Surplus/Shortfall w/o WSCP Action	282,769
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	282,769
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	404,189
Total Supplies	646,488
Surplus/Shortfall w/o WSCP Action	242,299
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	242,299
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	421,157
Total Supplies	551,279
Surplus/Shortfall w/o WSCP Action	130,122
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	130,122
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	438,125
Total Supplies	438,356
Surplus/Shortfall w/o WSCP Action	231
<b>Planned WSCP Actions</b> (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	31,743
Revised Surplus/(shortfall)	31,974
Resulting % Use Reduction from WSCP action	7%

### 7.2.2 DRA Individual Water Source Reliability

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.

Each DOWCPP well is monitored individually. Well levels are reported daily for constant monitoring. However, the fractured rock nature of the wells makes it difficult to gauge long term reliability, since well recharge happens at variable rates. Based on historical monitoring, Wells 2 and 6 have a consistent average level with a very quick recharge. Well 2 and Well 6 levels correspond closely to rainfall levels with recharge of about one year. Well 2 is the most heavily used so levels vary significantly. Well 3 has no observed volatility, but is slower to recharge. Recharge is estimated to lag behind rainfall by about 3 years for Well 3. Finally, Well 4, which also has no volatile changes, is the first to drop below levels that sustain pumping and is the slowest to recharge. Recharge appears to be about 5 years for Well 4, depending on rainfall levels. To combat the inconsistency of recharge rates, DOWC uses constant monitoring to identify low well levels and cease production until the level returns to an acceptable level. The system setup allows for water to be easily moved around the district, causing no interruptions for customers.

All available transfers to DOWCPP, as described in Chapter 4, are from both surface water and ground water sources. Water that is transferred from DOWCSB is from a natural creek. DOWC has never experienced reduced flows from that source. Therefore, water is considered very reliable from DOWCSB to supplement DOWCPP as needed. PID is sourced though surface water having a similar source as DOWCSB, and is supplemented with wells that have a similar composition as DOWCPP's wells. Therefore, it is probable that reliability is high if emergency water is needed from PID. Finally, water from DOWCLS is mainly surface water. Water is drawn in from Lake Oroville until the lake level is too low. The lake level historically drops below usable levels only in very dry or multiple dry years. DOWCLS is supplemented by ground water with wells of similar composition as DOWCPP, with similar reliability.

### 7.2.3 DRA Total Water Supply and Use Comparison

The possible shortage of water in 2035 and beyond emphasizes the importance of DOWC's continuing focus 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.

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

The Water Shortage Contingency Plan (WSCP) for the Del Oro Water Company Paradise Pines district (DOWCPP) is included in the following chapter 8 of this Urban Water Management Plan, and in Appendix Q. The WSCP serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios. The primary objective of the WSCP is to ensure that DOWCPP has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

**CWC** 10632 (3) (A) *Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.*

### 8.1 Water Supply Reliability Analysis

DOWCPP uses groundwater as its main source of supply. This is supplemented with transfers from DOWC's Stirling Bluffs District. Detailed information about this topic is found in Sections 6.2.1.1, 7.1.1 and 7.2.2.

DOWCPP has additional emergency resources available. Detailed information about this topic is found in Sections 4.2.1.1 and 6.2.7.

All available transfers to DOWCPP, are from both surface water and ground water sources, detailed information about the reliability of these sources can be found in 7.2.2.

### 8.2 Annual Water Supply and Demand Assessment Procedures

**CWC** 10632(a)(2) *The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:*

*(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.*

*(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:*

*(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.*

*(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.*

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

## 8.2.1 Decision-Making Process

On a monthly basis, well levels, water usage, and water loss are monitored by DOWCPP’s staff to determine if there is likely to be a water shortage condition. Should water shortage conditions be likely, monitoring is increased to biweekly or weekly. All criteria are assessed by DOWCPP staff, and if warranted, staff will follow DOWCPP’s WSCP to limit water shortages based on these findings.

## 8.2.2 Data and Methodologies

### 1. Evaluation Criteria

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. Wells in this region of fractured rock are of great risk of “going dry” due to their nature, especially during drought and dry periods, and because climate is not predictive of groundwater availability in the DOWCPP area, DOWC’s well depth and constant monitoring helps alleviate this risk.<sup>4</sup> Evaluation of Groundwater Sustainability Act (GSA), local, and state regulatory conditions of mandated drought or water use restrictions.

### 2. Water Supply

The groundwater in the DOWCPP area is within a volcanic setting; it is not an adjudicated basin, discussed in detail in Section 8.1. There are currently no GSA-mandated pumping limitations; however, well level monitoring determines potential constraints on water supply.

### 3. Current Year Unconstrained Customer Demand

Current demand is difficult to gauge correctly, from 2007 to 2016, DOWCPP observed a rise in the number of younger adults and families with children, and a decline in the total number of connections. Trends observed through 2015 showed that the retiree population, which previously fueled DOWCPP’s growth, was gradually passing on, and the newly vacant properties were being occupied by new residents more slowly than the vacancies were being created. The Camp Fire in 2018 destroyed approximately 33% of homes in DOWCPP’s service area, and drove many retirees out of the district. DOWC expects most of the newly rebuilt homes and remaining homes to be occupied by young families. In addition, fear of fire, new building requirements, and warming weather conditions have generally increased water usage per connection. However, passive savings resulting from possible future codes, standards, ordinances, and land use plans were not considered in the following projections. While DOWC acknowledges that passive savings will occur as new homes with efficient, modern plumbing and fixtures replace older homes that were lost in the Camp Fire, DOWC is unable to reliably estimate those savings.

Projected demand can be gauged based on historical information from last year, with an approximate 3% increase for population restoration.

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<sup>4</sup> <https://www.buttecounty.net/wrcdocs/Reports/I%26A/2016WI%26AFINAL.pdf> Butte County Water Inventory and Analysis, June 2016, Section 4.3.1



4. Current Year Available Supply

As discussed in the evaluation criteria above, supply is monitored via well levels plus the full amount of exchange water available from DOWCSB. Barring drastic well level changes which would cause DOWCPP to reduce or cease production from a particular well, supply availability is assumed to be equal the current year unconstrained demand.

5. Infrastructure Considerations

There are no currently planned projects to increase supply. DOWCPP’s infrastructure is fully built out for the current service area, and there are no plans for the service area to be expanded. Infrastructure repairs and maintenance are done on an as-needed basis. Mainline replacements are planned on an every-other-year basis. 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.

6. Other Factors

As identified under the evaluation criteria above, local regulatory conditions could potentially limit the availability of supplies. If such constraints are identified, DOWCPP will modify this WSCP to address these constraints and mitigate potential effects.

8.3 Six Standard Water Shortage Stages

**CWC** 10632(a)(3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers’ water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	Percent Shortage Range	Shortage Response Actions (Narrative description)
1	Up to 10%	Demand Reduction (See Table 8-2)
2	Up to 20%	Demand Reduction (See Table 8-2)
3	Up to 30%	Demand Reduction (See Table 8-2)
4	Up to 40%	Demand Reduction (See Table 8-2)
5	Up to 50%	Demand Reduction (See Table 8-2)
6	>50%	Demand Reduction (See Table 8-2)

8.4 Shortage Response Actions

**CWC** 10632 (a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

8.4.1 Demand Reduction

Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions	Estimated reduction of shortage gap?	Additional Explanation or Reference (optional)	Penalty, Charge, or Other Enforcement?
1	Expand Public Information Campaign	7%		No
	Improve Customer Billing			No
	Landscape - Restrict or prohibit runoff from landscape irrigation			Yes
	Landscape - Limit landscape irrigation to specific times			Yes
	CII - Lodging establishment must offer opt out of linen service			Yes
	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner			Yes
	Other - Prohibit use of potable water for washing hard surfaces			Yes
2	Other	13%	Continue With Stage 1	Yes
	Offer Water Use Surveys			No
	Landscape - Limit landscape irrigation to specific days			Yes
	Landscape - Prohibit certain types of landscape irrigation			Yes
	CII - Restaurants may only serve water upon request			Yes

Table 8-2: Demand Reduction Actions (Continued)				
Shortage Level	Demand Reduction Actions	Estimated reduction of shortage gap?	Additional Explanation or Reference (optional)	Penalty, Charge, or Other Enforcement?
	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water			Yes
3	Other	26%	Continue With Stage 1&2	Yes
	Decrease Line Flushing			No
	Reduce System Water Loss			No
	Increase Water Waste Patrols			No
	Implement or Modify Drought Rate Structure or Surcharge			Yes
4	Other	35%	Continue With Stage 1,2&3	Yes
	Water Features - Restrict water use for decorative water features, such as fountains			Yes
	Other water feature or swimming pool restriction			Yes
	Other - Prohibit use of potable water for construction and dust control			Yes
5	Other	44%	Continue With Stage 1,2,3,&4	Yes
	Moratorium or Net Zero Demand Increase on New Connections			Yes
	Landscape - Prohibit certain types of landscape irrigation			Yes
	Pools - Allow filling of swimming pools only when an appropriate cover is in place.			Yes
	Other		Probit Filling Pools	Yes
6	Other	55%	Continue With Stage 1,2,3,4,&5	Yes
	Landscape - Prohibit all landscape irrigation			Yes
	Pools and Spas - Require covers for pools and spas			Yes

### 8.4.2 Supply Augmentation

For supply augmentation, DOWCPP has an exchange agreement in place with neighboring Paradise Irrigation District (PID), see explanation in Section 8.1 and Table 8-3.

<b>Table 8-3: Supply Augmentation and Other Actions</b>			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?	Additional Explanation or Reference <i>(optional)</i>
Shortage Level 1	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 2	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 3	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 4	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 5	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 6	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.

### 8.4.3 Operational Changes

Primary operational changes will include increased monitoring of well levels and looking for ways to reduce water loss, including capital improvements. Most importantly, DOWCPP emphasizes the importance to DOWC’s customers on everyday conservation and reduction in overall water use.

Possible system improvement ideas to be considered for DOWCPP are detailed in Section 6.2.8.

### 8.4.4 Additional Mandatory Restrictions

The water shortage response actions included in Table 8-2 include a variety of mandatory customer water use restrictions that will be necessary to achieve the targeted demand reductions of the different shortage stages. A detailed listing of the stages is in Appendices I and J.

### 8.4.5 Emergency Response Plan

See Appendix K for DOWCPP’s Emergency Response Plan.

#### 8.4.6 Seismic Risk Assessment and Mitigation Plan

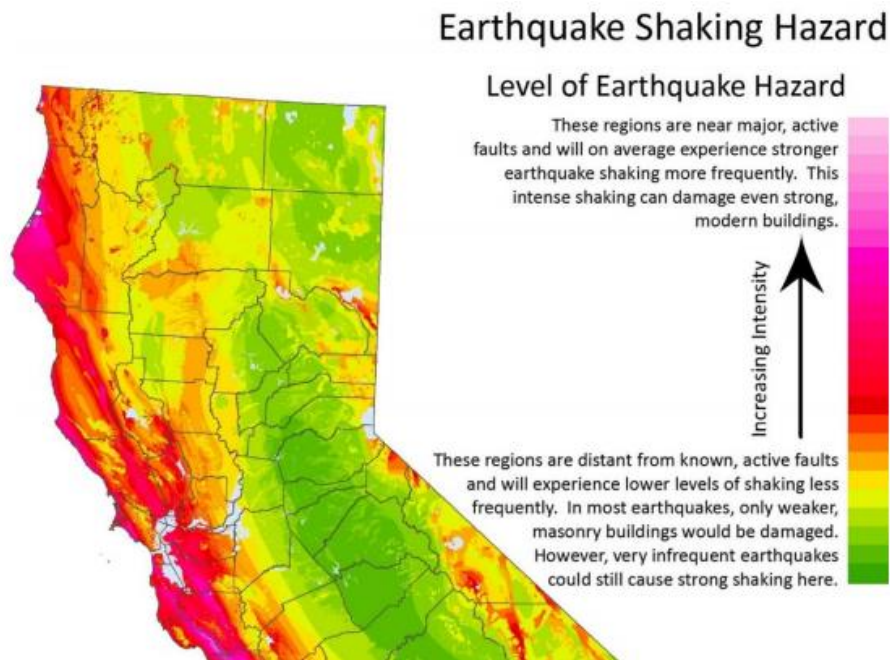
**CWC** 10632.5. (a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

Butte County has a very low risk of seismic activity risk, see Figure 8-1 below. According to the California State Hazard Mitigation Plan of 2018, Butte County had one declared earthquake disaster declared between 1950 and 2017. That declared disaster was in southern Butte County, quite a distance from DOWCPP. Due to this, seismic activity risk is not listed on the DOWCPP Risk and Resilience report for 2020.<sup>5</sup>

Figure 8-1



#### 8.4.7 Shortage Response Action Effectiveness

Table 8-2 shows the effectiveness of the specific demand-reduction actions and implementation levels necessary for DOWCPP to achieve the targeted savings for each water shortage stage.

<sup>5</sup> California State Hazard Mitigation Plan of 2018 Section 6.1  
[https://www.caloes.ca.gov/HazardMitigationSite/Documents/002-2018%20SHMP\\_FINAL\\_ENTIRE%20PLAN.pdf](https://www.caloes.ca.gov/HazardMitigationSite/Documents/002-2018%20SHMP_FINAL_ENTIRE%20PLAN.pdf)

## 8.5 Communication Protocols

**CWC** 10632 (a)(5) *Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:*

*(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.*

*(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.*

*(C) Any other relevant communications*

If DOWCPP anticipates a shortage, it will begin informing customers of voluntary conservation via bill notes or inserts and website messaging. If shortages are observed, DOWCPP will file an Advice Letter with the CPUC requesting to activate its Schedule PP-14.1 to move to mandatory restrictions on water use. As part of the filing, customers will be informed via notices enclosed with their bills or mailed separately if needed in addition to website postings. If the Advice Letter is approved, customers will be notified, with all relevant restrictions, guidance, and penalty information available on DOWC's website.

## 8.6 Compliance and Enforcement

**CWC** 10632 (a)(6) *For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.*

In accordance with Schedule PP-14.1, DOWCPP is currently authorized to take the following actions to enforce the water use restrictions:

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.

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.

DOWCPP along with DOWC plans to submit to the California Public Utilities Commission (CPUC) Updates to both Rule 14.1 and Schedule No. PP-14.1 to align with the restrictions identified in the WSCP. Rule 14.1 is located in appendix I and Schedule PP 14.1 is located in appendix J.

## 8.7 Legal Authorities

**CWC** 10632 (a)(7) (A) *A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.*

(B) *A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1. [see below]*

(C) *A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.*

### **Water Code Section Division 1, Section 350**

*Declaration of water shortage emergency condition. The governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.*

DOWCPP is a privately-held water utility regulated by the CPUC. As such, it does not have the authority to adopt resolutions or ordinances. Rule 14.1, as filed with the CPUC, serves as DOWCPP's WSCP and included Mandatory Staged Restrictions of Water Use. In the event that more stringent measures are required, DOWCPP may request the addition of Schedule PP-14.1 which includes Staged Mandatory Water Use Reductions. DOWCPP coordinates with Butte County for the possible proclamation of a local emergency as defined in Section 8558 of the Government Code and to ensure consistency with local resolutions and ordinances.

On May 28, 2015, DOWCPP filed its current Schedule PP-14.1 with the CPUC. The Schedule lays out the staged mandatory reductions and drought surcharges associated with DOWCPP's WSCP. This filing is consistent with Resolution W-5034, adopted by the Commission on April 9, 2015, ordering compliance with requirements of the State Water Resources Control Board (SWRCB).

Schedule PP-14.1 is an extension of the WSCP provided in Rule 14.1. The compliance and enforcement information presented in this WSCP is based on the current versions of both Rule 14.1 and Schedule PP-14.1, which are based, in part, on the specific SWRCB requirements associated with the Governor's Executive Order B-29-15, which required statewide cutbacks to address the unprecedented 2011-2017 drought, as well as the additional information required pursuant to the CWC.

DOWCPP plans to submit to the California Public Utilities Commission (CPUC) updates to both Rule 14.1 and Schedule PP-14.1 to align with the restrictions identified in the WSCP and the six stage model. Rule 14.1 is located in appendix I and Schedule PP-14.1 is located in appendix J.



## 8.8 Financial Consequences of WSCP Activation

**CWC** 10632(a)(8) *A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:*

*(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*

*(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*

*(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.*

DOWCPP uses a Statewide Lost Revenue Recovery Memorandum Account (SLRRMA) to track all revenue reductions, expense fluctuations, and surcharges billed to customers during a declared drought emergency. The surcharges billed directly to customers for exceeding their allotted water budget are included in their monthly bills; while fines for wasted water, or other egregious violations, range from \$25 to \$400 per occurrence, and may include a termination of services for repeated violations. For a detailed description of the customer surcharges per stage, see appendix J. If DOWCPP can demonstrate that it is not making its allowed rate of return, the balance of the SLRRMA is submitted to the CPUC in an Advice Letter filing for a disposition decision. Customers are notified of the Advice Letter filing and have the right to respond or protest, if desired. If approved by the CPUC, the utility will collect a flat rate surcharge from customers on their monthly bills, which will be credited to the SLRRMA.

For the 2014-2016 drought, the CPUC allowed DOWCPP to collect flat surcharges in addition to drought surcharges incurred by customers who exceeded their water budgets while Schedule PP-14.1 was in effect. The drought caused a 26% revenue reduction and a net decrease of expenses by 10%. DOWCPP was able to recoup 15% of the potential to collect from the surcharges outlined in Schedule No. PP-14.1. Another 24% of the remaining lost revenue was collected through the flat surcharge.

## 8.9 Monitoring and Reporting

**CWC** 10632(a)(9) *For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.*

Reporting is made to all management personnel on a monthly basis. This reporting includes:

- Aggregate customer demand
- Current well and supply levels
- Operations activities (e.g., water flushing activities, leak repairs, etc.)
- Unexplained water loss
- Current and projected water supply conditions
- Customer compliance with water use restrictions
- Customer outreach activities
- Customer service inquiries

As water shortage conditions are identified or anticipated, reporting frequency and depth will be increased commiserate with the conditions.

## 8.10 WSCP Refinement Procedures

**CWC** 10632 (a) (10) *Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.*

DOWCPP will adopt and file any subsequent amendments to this 2020 WSCP as required by law or as needed. The amended WSCP 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.

## 8.11 Special Water Feature Distinction

**CWC** 10632 (b) *For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an 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.*

Per Rule 14.1, “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.

## 8.12 Plan Adoption, Submittal, and Availability

**CWC** 10632 (c) *The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.*

A public hearing was held on June 24, 2021. Information was provided to the public regarding DOWCPP’s Water Shortage Contingency Plan. No changes to the WSCP were suggested.

The 2020 WSCP was formally adopted by the Del Oro Water Company Board of Directors following the public meeting (see Appendix M-4).

This 2020 update to the Del Oro Water Company, Paradise Pines District, Water Shortage Contingency Plan was submitted to the California Department of Water Resources via the WUE Data Portal and the California State Library via mail on July 1, 2021. A copy of the WSCP was also transmitted to Butte County on that date.

As of July 8, 2021, the WSCP is available on DOWC’s website, at <http://www.delorowater.com/2020wscp>

## Chapter 9 - Demand Management Measures

**CWC** 10631(e) 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 (2016 through 2020). 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 2014-2016 period. Schedule 14.1 was deactivated in 2016 following the expiration of drought restrictions required in the Governor’s Executive Order B-29-15.

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 2014-2016 drought. As shown in Table 4-A, the gross annual water use per customer has decreased significantly since 2004. In addition, during the drought in 2014-2016, 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 were 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 5 years prior to the 2015 UWMP, DOWC staff replaced all standard 5/8” meters installed before 1991. Following the Camp Fire of 2018, DOWC removed all meters in the fire zone, replacing those where homes remained and continues to install new meters as customers restore service to burned lots. Therefore, a significant portion of the system has new meters. DOWC also upgraded its billing software in 2018, allowing more effective tracking of meter age, meter history, and meter testing. Proactive meter maintenance 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. During the declared drought emergency of 2015-2017, DOWCPP implemented drought surcharges per Schedule 14.1. These surcharges were very effective in encouraging customers to conserve. Allowances were based on a reduction of the customers’ usage in 2013 where history was available, or on established gallons per capita day guidelines.

## 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](http://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](http://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 \$256.13.

Figure 9-1

**Drought communication**



**55 YEARS**  
Serving California  
1963

**Important Customer Message**

On May 10, 2021, the Governor declared a drought emergency for most of the state. The declaration asks all Californians to eliminate wasteful water practices and conserve water.

Del Oro requests customers continue observing prohibited uses of water, including: over-watering causing runoff; watering during or within 48 hours of rainfall; washing vehicles, unless using a shutoff nozzle; and washing sidewalks and driveways.

Additional ways to save water include checking for leaks, especially irrigation systems; using faucet aerators and low-flow shower heads; and running only full loads of laundry and dishes. Visit us online for more water conservation tips: [www.delorowater.com/water-conservation.html](http://www.delorowater.com/water-conservation.html)

**Account Overview** 05/12/2021

**DEL ORO WATER COMPANY - PARADISE PINES DISTRICT**

Customer [REDACTED]  
 Service Address [REDACTED]  
 Account Number [REDACTED]  
 Meter ID [REDACTED]  
 Meter Size 5/8"

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

Description of Activity	Amount
Balance from Prior Bill	(5.29)
Payment Received ( 04/21/2021 ) - Thank you	(30.00)
<b>Balance Forward</b>	<b>(35.29)</b>

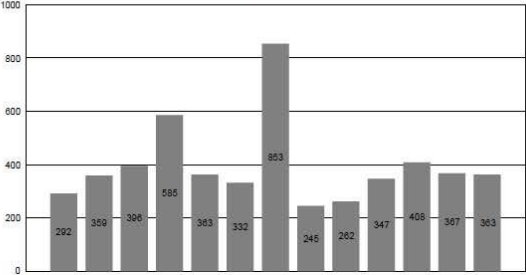
**Usage Detail**

Service from	4/1/21 - 5/3/21
Current Read	7342
Prior Read	6979
Usage Cubic Ft	363

**Account Detail**

WATER QTY	12.90
RE TO SERVE	34.05
SRF SURCHARGE	4.33
INTERIM RATE SURCHARGE	2.52
PUC	0.77

**Water Usage History**



Month	Usage (Cubic Feet)
May 2020	292
Jun 2020	350
Jul 2020	386
Aug 2020	588
Sep 2020	383
Oct 2020	332
Nov 2020	853
Dec 2020	245
Jan 2021	282
Feb 2021	347
Mar 2021	408
Apr 2021	397
May 2021	363

2020 May Jun Jul Aug Sep Oct Nov Dec Dec Feb Mar Apr May 2021

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 Guideline: 474 cubic feet  
 July Water Usage Guideline: 474 cubic feet

**Current Charges Due By 5/31/21** \$54.57

**Total Account Balance** \$19.28

**Del Oro Water Company**

	<b>Web Address</b> <i>Visit us online to review your account, make your payment or update your personal information</i>	<a href="http://www.DelOroWater.com">www.DelOroWater.com</a>		<b>Customer Care Center</b> Hours of Operation 530-717-2502 Mon-Fri 8am - 4:30pm
	<b>Payment Mailing Address</b>	DRAWER 5172 CHICO, CA 95927-5172		<b>Emergency Call Center</b> Hours of Operation 530-717-2502 24 / 7 / 365
				<b>Toll Free</b> 877-DEL-ORO-H2O

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

Account Number [REDACTED]  
 Current Charges Due By **05/31/2021**  
 Total Amount Due **\$19.28**  
 Auto Pay Status **Inactive: Sign up today**

Total Amount Paid \$

**To enroll in Bankdraft AutoPay sign here and complete authorization on the reverse**

**Address change?**  
*Check box and note changes*

DEL ORO WATER COMPANY  
 PARADISE PINES DISTRICT  
 DRAWER 5172  
 CHICO, CA 95927-5172

\*\*\*\*\*AUTO\*\*5-DIGIT 95954      158 0 5000 AV 0 398      2 1 1

[REDACTED]

#### 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.

### 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 2015, DOWCPP has replaced a total of 16,181 linear feet (LF) of mainline, as well as replacing or upgrading 10 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; in the West Park Dr. area, which was completed in 2016; and on Andover Dr. and in other areas, which were completed in 2019. As of June 2021, the total estimated water saved by the repair of these leaks is over 3 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](http://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)<sup>6</sup> and the Butte Creek Watershed Conservancy<sup>7</sup>.

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.

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<sup>6</sup> Butte Environmental Council (BEC) website: <http://www.becnet.org>

<sup>7</sup> Butte Creek Watershed Conservancy website: <http://buttecreekwatershed.org>



## 9.8 Reporting Implementation

### 9.8.1 Implementation Over the Past Five Years

**CWC** *10631(e) 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, ...a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years...*

Over the past five years, DOWCPP has implemented or increased its usage of the aforementioned DMMs. During the drought period, field technicians actively monitored the district, identifying leaks as they surfaced, and looking for customer water waste violations. In addition, many meters have been replaced following the Camp Fire and as a result of additional meter testing.

DOWCPP also replaced large sections of mainline in the West Park Dr. area and on Andover Dr. in 2016 and 2019, respectively. Since 2015, DOWCPP has replaced a total of 16,181 linear feet (LF) of mainline, as well as replacing or upgrading 10 hydrants.

During the declared drought emergency of 2015-2017, DOWCPP implemented drought surcharges per Schedule 14.1. These surcharges were very effective in encouraging customers to conserve. DOWC continues to place conservation messaging on all bills, encouraging customers to make conservation a way of life.

### 9.8.2 Implementation to Achieve Water Use Targets

**CWC** *10631(e) 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.*

DOWC plans to continue using the above described DMMs, which have already proven effective as seen in DOWCPP’s SB X7-7 compliant GPCD for 2020. 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 Water Use Objectives (Future Requirements)

Water Code requires that Suppliers develop new water use objectives that are based on specific standards for certain water use sectors. These water use objectives will not be developed until 2023, and the first report will require information on what DMMs Suppliers will implement to meet their objectives. As such, each Supplier is encouraged to consider aligning conservation management actions and the changing urban use patterns in order to consider these future obligations.

DOWC will incorporate future requirements as they are developed.

## Chapter 10 - Plan Adoption, Submittal, and Implementation

### 10.1 Inclusion of all 2020 Data

2020 data included throughout this UWMP has been provided for the calendar year 2020.

### 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. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area...*

*...Prior to adopting either [the plan or water shortage contingency plan], the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code [see below]. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies.*

#### **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.*

#### **Government Code Section 7291**

*...every local public agency... serving a substantial number of non-English-Speaking people, shall employ a sufficient number of qualified bilingual persons in public contact positions or as interpreters to assist those in such positions, to ensure provision of information and services in the language of the non-English-speaking person."*

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 April 1, 2021. Copies of the letters are included in Appendix M-1.

A public meeting was scheduled for June 24, 2021 to solicit public input. The above referenced agencies were provided notice by mail, on June 8, 2021, 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 Chico Enterprise-Record, which includes the Paradise Post, in both print and online formats, 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. In addition, customers of DOWCPP were notified via bill notes from May 26, 2021 to June 16, 2021. Notice was also posted on Del Oro’s website on May 24, 2021.

Del Oro acknowledges the requirements of the Dymally-Alatorre Bilingual Services Act set forth in Government Code Section 7291; however, DOWCPP does not serve a significant portion of non-English speaking people and is therefore not required to provide interpretive services at the Public Hearing per Government Code Section 7293.

### 10.3 Public Hearing and Adoption

**CWC** 10642 ...Prior to adopting either, the [plan or water shortage contingency plan], the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing thereon.  
 ...After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

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 24, 2021. 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 or WSCP were suggested.

The 2020 UWMP and the WSCP were formally adopted by the Del Oro Water Company Board of Directors following the public meeting (see Appendix M-4).

#### 10.4 Plan Submittal

**CWC** *10621(e) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021...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(c) 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.*

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

This 2020 update to the Del Oro Water Company, Paradise Pines District, Urban Water Management Plan was submitted to the California Department of Water Resources via the WUE Data Portal and the California State Library via mail on July 1, 2021. A copy of the UWMP was also transmitted to Butte County on that date.

#### 10.5 Public Availability

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

*10645 (b) Not later than 30 days after filing a copy of its water shortage contingency 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 8, 2021, this UWMP and the WSCP are available on DOWC's website, at <http://www.delorowater.com/paradise-pines.html>.

#### 10.6 Notification to Public Utilities Commission

**CWC** *10621 (c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.*

As Del Oro Water Company is regulated by the California Public Utilities Commission, this UWMP and WSCP will be submitted with future general rate case filings for DOWCPP.

#### 10.7 Amending an Adopted UWMP

**CWC** *10621(d) 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 2020 UWMP or WSCP as required by law. The amended UWMP and/or WSCP 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 §10610-10610.4

**Chapter 2.** Definitions §10611-10618

**Chapter 3.** Urban Water Management Plans

Article 1. General Provisions §10620-10621

Article 2. Contents of Plans §10630-10634

Article 2.5. Water Service Reliability §10635

Article 3. Adoption and Implementation of Plans §10640-10645

**Chapter 4.** Miscellaneous Provisions §10650-10657

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, and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.

(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 now and into the foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.

(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.

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(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 achieve the efficient use of available supplies and strengthen local drought planning.

### CHAPTER 2. DEFINITIONS

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

**10611.3.** "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

**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.** "Drought risk assessment" means a method that examines water shortage risks based on the driest five-year historic sequence for the agency's water supply, as described in subdivision (b) of Section 10635.

**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



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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.

**10617.5.** "Water shortage contingency plan" means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.

**10618.** "Water supply and demand assessment" means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.

### 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, efficient water use, and improved local drought resilience.

(2) Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities

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participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.

(3) 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 July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.

(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) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.

(d) 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).

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

(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.

### 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, while accounting for impacts from climate change.

**10630.5.** Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

**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 social, economic, and 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. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

(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), providing supporting and related information, including all of the following:

(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

(A) The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), 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 for basins underlying the urban water supplier's service area.

(B) 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 a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin 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 coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a

groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(C) 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. (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.

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

(d) (1) For an urban retail water supplier, 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, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:

(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).

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(3) (A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

(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.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

(4) (A) Water use projections, where available, shall 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.

(e) 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.

(f) 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 normal and single-dry water years and for a period of drought lasting five consecutive 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.

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

(h) 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 (f). 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 (f).

**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 shall include any of the following information that the urban water supplier can readily obtain:

- (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.

(c) The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.

**10632.** (a) Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

- (1) The analysis of water supply reliability conducted pursuant to Section 10635.
- (2) The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:
  - (A) The written decision making process that an urban water supplier will use each year to determine its water supply reliability.
  - (B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:
    - (i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.
    - (ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand

assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

(3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions.

(B) Locally appropriate demand reduction actions to adequately respond to shortages.

(C) Locally appropriate operational changes.

(D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

(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.



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- (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.
- (5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:
- (A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.
  - (B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.
  - (C) Any other relevant communications.
- (6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.
- (7)
- (A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.
  - (B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.
  - (C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.
- (8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:
- (A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).
  - (B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).
  - (C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

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(9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

(10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

(b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an 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.

(c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

**10632.1.** An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before July 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by July 1 of each year, whichever is later.

**10632.2.** An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision (a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section 10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

**10632.3.** It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

**10632.5.** (a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation

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plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

**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 long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive

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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) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

(c) 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.

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

(e) 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.** (a) 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.

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 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 both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the 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 a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

**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) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

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

(B) The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.

(C) The department shall submit the report to the Legislature for the 2015 plans by July 1, 2017, and the report to the Legislature for the 2020 plans and water shortage contingency plans by July 1, 2022.

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

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

**10645.** (a) 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.

(b) Not later than 30 days after filing a copy of its water shortage contingency 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 or a water shortage contingency 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 water shortage contingency plan, or action taken pursuant to either, does not comply with this part shall be commenced within 90 days after filing of the plan or water shortage contingency plan or an amendment to either 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 a water shortage contingency plan, or an action taken pursuant to either 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.

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**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 board and the Public Utilities Commission, for the preparation of water management plans, water shortage contingency plans, or conservation plans; provided, that if the board or the Public Utilities Commission requires additional information concerning water conservation, drought response measures, or financial conditions 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 that complies with analogous 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 urban water management plan, its drought risk assessment, its water supply and demand assessment, and its water shortage contingency plan and implementing the reasonable water conservation measures included in either of the plans.

**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 is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.

**10657.** The department may adopt regulations regarding the definitions of water, water use, and reporting periods, and may adopt any other regulations deemed necessary or desirable to implement this part. In developing regulations pursuant to this section, the department shall solicit broad public participation from stakeholders and other interested persons.

# **APPENDIX B**

## **WATER CONSERVATION ACT OF 2009**

**Senate Bill 7 (SB X7-7)**



**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 §10608-10608.8

**Chapter 2.** Definitions §10608.12

**Chapter 3.** Urban Retail Water Suppliers §10608.16-10608.44

**Chapter 4.** Agricultural Water Suppliers §10608.48

**Chapter 5.** Sustainable Water Management §10608.50

**Chapter 6.** Standardized Data Collection §10608.52

**Chapter 7.** Funding Provisions §10608.56-10608.60

**Chapter 8.** Quantifying Agricultural Water Use Efficiency §10608.64

**Chapter 9.** Urban Water Use Objectives and Water Use Reporting §10609-10609.38

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) "CII water use" means water used by commercial water users, industrial water users, institutional water users, and large landscape water users.

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

(f) "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.

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

(h) "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.

(i) "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.

(j) "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.

(k) "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.

(l) "Large landscape" means a nonresidential landscape as described in the performance measures for CII water use adopted pursuant to Section 10609.10.

(m) "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.

(n) "Performance measures" means actions to be taken by urban retail water suppliers that will result in increased water use efficiency by CII water users. Performance measures may include, but are not limited to, educating CII water users on best management practices, conducting water use audits, and preparing water management plans. Performance measures do not include process water.

(o) "Potable reuse" means direct potable reuse, indirect potable reuse for groundwater recharge, and reservoir water augmentation as those terms are defined in Section 13561.

(p) "Process water" means water used by industrial water users for producing a product or product content or water used for research and development. Process water includes, but is not limited to, continuous manufacturing processes, and water used for testing, cleaning, and maintaining equipment. Water used to cool machinery or buildings used in the manufacturing process or necessary to maintain product quality or chemical characteristics for product manufacturing or control rooms, data centers, laboratories, clean rooms, and other industrial facility units that are integral to the manufacturing or research and development process is process water. Water used in the manufacturing process that is necessary for complying with local, state, and federal health and safety laws, and is not incidental water, is process water. Process water does not mean incidental water uses.

(q) "Recycled water" means recycled water, as defined in subdivision (n) of Section 13050.

(r) “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.

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

(t) “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.

(u) “Urban water use objective” means an estimate of aggregate efficient water use for the previous year based on adopted water use efficiency standards and local service area characteristics for that year, as described in Section 10609.20.

(v) “Urban water use target” means the urban retail water supplier’s targeted future daily per capita water use.

(w) “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 2017 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 website, 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 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.

**10608.34.** (a) (1) On or before January 1, 2017, the department shall adopt rules for all of the following:

(A) The conduct of standardized water loss audits by urban retail water suppliers in accordance with the method adopted by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0.

(B) The process for validating a water loss audit report prior to submitting the report to the department. For the purposes of this section, “validating” is a process whereby an urban retail water supplier uses a technical expert to confirm the basis of all data entries in the urban retail water supplier’s water loss audit report and to appropriately characterize the quality of the reported data. The validation process shall follow the principles and terminology laid out by the American Water Works Association in the third edition of Water Audits and Loss Control Programs, Manual M36 and in the Free Water Audit Software, version 5.0. A validated water loss audit report shall include the name and technical qualifications of the person engaged for validation.

(C) The technical qualifications required of a person to engage in validation, as described in subparagraph (B).

(D) The certification requirements for a person selected by an urban retail water supplier to provide validation of its own water loss audit report.

(E) The method of submitting a water loss audit report to the department.

(2) The department shall update rules adopted pursuant to paragraph (1) no later than six months after the release of subsequent editions of the American Water Works Association’s Water Audits and Loss Control Programs, Manual M36. Except as provided by the department, until the department adopts updated rules pursuant to this paragraph, an urban retail water supplier may rely upon a subsequent edition of the American Water Works Association’s Water Audits and Loss Control Programs, Manual M36 or the Free Water Audit Software.

(b) (1) On or before October 1 of each year until October 1, 2023, each urban retail water supplier reporting on a calendar year basis shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year as prescribed by the department pursuant to subdivision (a).

- (2) On or before January 1 of each year until January 1, 2024, each urban retail water supplier reporting on a fiscal year basis shall submit a completed and validated water loss audit report for the previous fiscal year as prescribed by the department pursuant to subdivision (a).
  - (3) On or before January 1, 2024, and on or before January 1 of each year thereafter, each urban retail water supplier shall submit a completed and validated water loss audit report for the previous calendar year or the previous fiscal year as part of the report submitted to the department pursuant to subdivision (a) of Section 10609.24 and as prescribed by the department pursuant to subdivision (a).
  - (4) Water loss audit reports submitted on or before October 1, 2017, may be completed and validated with assistance as described in subdivision (c).
- (c) Using funds available for the 2016–17 fiscal year, the board shall contribute up to four hundred thousand dollars (\$400,000) towards procuring water loss audit report validation assistance for urban retail water suppliers.
- (d) Each water loss audit report submitted to the department shall be accompanied by information, in a form specified by the department, identifying steps taken in the preceding year to increase the validity of data entered into the final audit, reduce the volume of apparent losses, and reduce the volume of real losses.
- (e) At least one of the following employees of an urban retail water supplier shall attest to each water loss audit report submitted to the department:
- (1) The chief financial officer.
  - (2) The chief engineer.
  - (3) The general manager.
- (f) The department shall deem incomplete and return to the urban retail water supplier any final water loss audit report found by the department to be incomplete, not validated, unattested, or incongruent with known characteristics of water system operations. A water supplier shall resubmit a completed water loss audit report within 90 days of an audit being returned by the department.
- (g) The department shall post all validated water loss audit reports on its internet website in a manner that allows for comparisons across water suppliers. The department shall make the validated water loss audit reports available for public viewing in a timely manner after their receipt.
- (h) Using available funds, the department shall provide technical assistance to guide urban retail water suppliers' water loss detection programs, including, but not limited to, metering techniques, pressure management techniques, condition-based assessment techniques for transmission and distribution pipelines, and utilization of portable and permanent water loss detection devices.
- (i) No earlier than January 1, 2019, and no later than July 1, 2020, the board shall adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. In adopting these rules, the board shall employ full life-cycle cost accounting to evaluate the costs of meeting the performance standards. The board may consider establishing a minimum allowable water loss threshold that, if reached and maintained by an urban water supplier, would exempt the urban water supplier from further water loss reduction requirements.

**10608.35.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and make a recommendation to the Legislature, by January 1, 2020, on the feasibility of developing and enacting water loss reporting requirements for urban wholesale water suppliers.

(b) The studies and investigations shall include an evaluation of the suitability of applying the processes and requirements of Section 10608.34 to urban wholesale water suppliers.

(c) In conducting necessary studies and investigations and developing its recommendation, the department shall solicit broad public participation from stakeholders and other interested persons.

**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.

#### CHAPTER 9. URBAN WATER USE OBJECTIVES AND WATER USE REPORTING

**10609.** (a) The Legislature finds and declares that this chapter establishes a method to estimate the aggregate amount of water that would have been delivered the previous year by an urban retail water supplier if all that water had been used efficiently. This estimated aggregate water use is the urban retail water supplier's urban water use objective. The method is based on water use efficiency standards and local service area characteristics for that year. By comparing the amount of water actually used in the previous year with the urban water use objective, local urban water suppliers will be in a better position to help eliminate unnecessary use of water; that is, water used in excess of that needed to accomplish the intended beneficial use.

(b) The Legislature further finds and declares all of the following:

(1) This chapter establishes standards and practices for the following water uses:

- (A) Indoor residential use.
- (B) Outdoor residential use.
- (C) CII water use.
- (D) Water losses.
- (E) Other unique local uses and situations that can have a material effect on an urban water supplier's total water use.

(2) This chapter further does all of the following:

- (A) Establishes a method to calculate each urban water use objective.
- (B) Considers recycled water quality in establishing efficient irrigation standards.
- (C) Requires the department to provide or otherwise identify data regarding the unique local conditions to support the calculation of an urban water use objective.
- (D) Provides for the use of alternative sources of data if alternative sources are shown to be as accurate as, or more accurate than, the data provided by the department.
- (E) Requires annual reporting of the previous year's water use with the urban water use objective.
- (F) Provides a bonus incentive for the amount of potable recycled water used the previous year when comparing the previous year's water use with the urban water use objective, of up to 10 percent of the urban water use objective.

(3) This chapter requires the department and the board to solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter.

(4) This chapter preserves the Legislature’s authority over long-term water use efficiency target setting and ensures appropriate legislative oversight of the implementation of this chapter by doing all of the following:

(A) Requiring the Legislative Analyst to conduct a review of the implementation of this chapter, including compliance with the adopted standards and regulations, accuracy of the data, use of alternate data, and other issues the Legislative Analyst deems appropriate.

(B) Stating legislative intent that the director of the department and the chairperson of the board appear before the appropriate Senate and Assembly policy committees to report on progress in implementing this chapter.

(C) Providing one-time-only authority to the department and board to adopt water use efficiency standards, except as explicitly provided in this chapter. Authorization to update the standards shall require separate legislation.

(c) It is the intent of the Legislature that the following principles apply to the development and implementation of long-term standards and urban water use objectives:

(1) Local urban retail water suppliers should have primary responsibility for meeting standards-based water use targets, and they shall retain the flexibility to develop their water supply portfolios, design and implement water conservation strategies, educate their customers, and enforce their rules.

(2) Long-term standards and urban water use objectives should advance the state’s goals to mitigate and adapt to climate change.

(3) Long-term standards and urban water use objectives should acknowledge the shade, air quality, and heat-island reduction benefits provided to communities by trees through the support of water-efficient irrigation practices that keep trees healthy.

(4) The state should identify opportunities for streamlined reporting, eliminate redundant data submissions, and incentivize open access to data collected by urban and agricultural water suppliers.

**10609.2.** (a) The board, in coordination with the department, shall adopt long-term standards for the efficient use of water pursuant to this chapter on or before June 30, 2022.

(b) Standards shall be adopted for all of the following:

(1) Outdoor residential water use.

(2) Outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.

(3) A volume for water loss.

(c) When adopting the standards under this section, the board shall consider the policies of this chapter and the proposed efficiency standards’ effects on local wastewater management, developed and natural parklands, and urban tree health. The standards and potential effects shall be identified by May 30, 2022. The board shall allow for public comment on potential effects identified by the board under this subdivision.

(d) The long-term standards shall be set at a level designed so that the water use objectives, together with other demands excluded from the long-term standards such as CII indoor water use and CII outdoor water use not connected to a dedicated landscape meter, would exceed the statewide conservation targets required pursuant to Chapter 3 (commencing with Section 10608.16).

(e) The board, in coordination with the department, shall adopt by regulation variances recommended by the department pursuant to Section 10609.14 and guidelines and methodologies pertaining to the calculation of an urban retail water supplier's urban water use objective recommended by the department pursuant to Section 10609.16.

**10609.4.** (a) (1) Until January 1, 2025, the standard for indoor residential water use shall be 55 gallons per capita daily.

(2) Beginning January 1, 2025, and until January 1, 2030, the standard for indoor residential water use shall be the greater of 52.5 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(3) Beginning January 1, 2030, the standard for indoor residential water use shall be the greater of 50 gallons per capita daily or a standard recommended pursuant to subdivision (b).

(b) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and may jointly recommend to the Legislature a standard for indoor residential water use that more appropriately reflects best practices for indoor residential water use than the standard described in subdivision (a). A report on the results of the studies and investigations shall be made to the chairpersons of the relevant policy committees of each house of the Legislature by January 1, 2021, and shall include information necessary to support the recommended standard, if there is one. The studies and investigations shall also include an analysis of the benefits and impacts of how the changing standard for indoor residential water use will impact water and wastewater management, including potable water usage, wastewater, recycling and reuse systems, infrastructure, operations, and supplies.

(2) The studies, investigations, and report described in paragraph (1) shall include collaboration with, and input from, a broad group of stakeholders, including, but not limited to, environmental groups, experts in indoor plumbing, and water, wastewater, and recycled water agencies.

**10609.6.** (a) (1) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor residential use for adoption by the board in accordance with this chapter.

(2) (A) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).

(B) The standards shall apply to irrigable lands.

(C) The standards shall include provisions for swimming pools, spas, and other water features. Ornamental water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, shall be analyzed separately from swimming pools and spas.

(b) The department shall, by January 1, 2021, provide each urban retail water supplier with data regarding the area of residential irrigable lands in a manner that can reasonably be applied to the standards adopted pursuant to this section.

(c) The department shall not recommend standards pursuant to this section until it has conducted pilot projects or studies, or some combination of the two, to ensure that the data provided to local agencies are reasonably accurate for the data's intended uses, taking into consideration California's diverse landscapes and community characteristics.

**10609.8.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, standards for outdoor irrigation of landscape areas with dedicated irrigation meters or other means of calculating outdoor irrigation use in connection with CII water use for adoption by the board in accordance with this chapter.

(b) The standards shall incorporate the principles of the model water efficient landscape ordinance adopted by the department pursuant to the Water Conservation in Landscaping Act (Article 10.8 (commencing with Section 65591) of Chapter 3 of Division 1 of Title 7 of the Government Code).

(c) The standards shall include an exclusion for water for commercial agricultural use meeting the definition of subdivision (b) of Section 51201 of the Government Code.

**10609.9.** For purposes of Sections 10609.6 and 10609.8, "principles of the model water efficient landscape ordinance" means those provisions of the model water efficient landscape ordinance applicable to the establishment or determination of the amount of water necessary to efficiently irrigate both new and existing landscapes. These provisions include, but are not limited to, all of the following:

(a) Evapotranspiration adjustment factors, as applicable.

(b) Landscape area.

(c) Maximum applied water allowance.

(d) Reference evapotranspiration.

(e) Special landscape areas, including provisions governing evapotranspiration adjustment factors for different types of water used for irrigating the landscape.

**10609.10.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, performance measures for CII water use for adoption by the board in accordance with this chapter.

(b) Prior to recommending performance measures for CII water use, the department shall solicit broad public participation from stakeholders and other interested persons relating to all of the following:

(1) Recommendations for a CII water use classification system for California that address significant uses of water.

(2) Recommendations for setting minimum size thresholds for converting mixed CII meters to dedicated irrigation meters, and evaluation of, and recommendations for, technologies that could be used in lieu of requiring dedicated irrigation meters.

(3) Recommendations for CII water use best management practices, which may include, but are not limited to, water audits and water management plans for those CII customers that exceed a recommended size, volume of water use, or other threshold.

(c) Recommendations of appropriate performance measures for CII water use shall be consistent with the October 21, 2013, report to the Legislature by the Commercial, Industrial, and Institutional Task Force entitled “Water Use Best Management Practices,” including the technical and financial feasibility recommendations provided in that report, and shall support the economic productivity of California’s commercial, industrial, and institutional sectors.

(d) (1) The board, in coordination with the department, shall adopt performance measures for CII water use on or before June 30, 2022.

(2) Each urban retail water supplier shall implement the performance measures adopted by the board pursuant to paragraph (1).

**10609.12.** The standards for water loss for urban retail water suppliers shall be the standards adopted by the board pursuant to subdivision (i) of Section 10608.34.

**10609.14.** (a) The department, in coordination with the board, shall conduct necessary studies and investigations and, no later than October 1, 2021, recommend for adoption by the board in accordance with this chapter appropriate variances for unique uses that can have a material effect on an urban retail water supplier’s urban water use objective.

(b) Appropriate variances may include, but are not limited to, allowances for the following:

- (1) Significant use of evaporative coolers.
- (2) Significant populations of horses and other livestock.
- (3) Significant fluctuations in seasonal populations.
- (4) Significant landscaped areas irrigated with recycled water having high levels of total dissolved solids.
- (5) Significant use of water for soil compaction and dust control.
- (6) Significant use of water to supplement ponds and lakes to sustain wildlife.
- (7) Significant use of water to irrigate vegetation for fire protection.
- (8) Significant use of water for commercial or noncommercial agricultural use.

(c) The department, in recommending variances for adoption by the board, shall also recommend a threshold of significance for each recommended variance.

(d) Before including any specific variance in calculating an urban retail water supplier’s water use objective, the urban retail water supplier shall request and receive approval by the board for the inclusion of that variance.

(e) The board shall post on its Internet Web site all of the following:

- (1) A list of all urban retail water suppliers with approved variances.
- (2) The specific variance or variances approved for each urban retail water supplier.

(3) The data supporting approval of each variance.

**10609.15.** To help streamline water data reporting, the department and the board shall do all of the following:

- (a) Identify urban water reporting requirements shared by both agencies, and post on each agency's Internet Web site how the data is used for planning, regulatory, or other purposes.
- (b) Analyze opportunities for more efficient publication of urban water reporting requirements within each agency, and analyze how each agency can integrate various data sets in a publicly accessible location, identify priority actions, and implement priority actions identified in the analysis.
- (c) Make appropriate data pertaining to the urban water reporting requirements that are collected by either agency available to the public according to the principles and requirements of the Open and Transparent Water Data Act (Part 4.9 (commencing with Section 12400)).

**10609.16.** The department, in coordination with the board, shall conduct necessary studies and investigations and recommend, no later than October 1, 2021, guidelines and methodologies for the board to adopt that identify how an urban retail water supplier calculates its urban water use objective. The guidelines and methodologies shall address, as necessary, all of the following:

- (a) Determining the irrigable lands within the urban retail water supplier's service area.
- (b) Updating and revising methodologies described pursuant to subparagraph (A) of paragraph (1) of subdivision (h) of Section 10608.20, as appropriate, including methodologies for calculating the population in an urban retail water supplier's service area.
- (c) Using landscape area data provided by the department or alternative data.
- (d) Incorporating precipitation data and climate data into estimates of a urban retail water supplier's outdoor irrigation budget for its urban water use objective.
- (e) Estimating changes in outdoor landscape area and population, and calculating the urban water use objective, for years when updated landscape imagery is not available from the department.
- (f) Determining acceptable levels of accuracy for the supporting data, the urban water use objective, and compliance with the urban water use objective.

**10609.18.** The department and the board shall solicit broad public participation from stakeholders and other interested persons in the development of the standards and the adoption of regulations pursuant to this chapter. The board shall hold at least one public meeting before taking any action on any standard or variance recommended by the department.

**10609.20.** (a) Each urban retail water supplier shall calculate its urban water use objective no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use conditions for the previous calendar or fiscal year.

(c) Each urban water supplier's urban water use objective shall be composed of the sum of the following:

- (1) Aggregate estimated efficient indoor residential water use.
- (2) Aggregate estimated efficient outdoor residential water use.

- (3) Aggregate estimated efficient outdoor irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with CII water use.
  - (4) Aggregate estimated efficient water losses.
  - (5) Aggregate estimated water use in accordance with variances, as appropriate.
- (d) (1) An urban retail water supplier that delivers water from a groundwater basin, reservoir, or other source that is augmented by potable reuse water may adjust its urban water use objective by a bonus incentive calculated pursuant to this subdivision.
- (2) The water use objective bonus incentive shall be the volume of its potable reuse delivered to residential water users and to landscape areas with dedicated irrigation meters in connection with CII water use, on an acre-foot basis.
  - (3) The bonus incentive pursuant to paragraph (1) shall be limited in accordance with one of the following:
    - (A) The bonus incentive shall not exceed 15 percent of the urban water supplier’s water use objective for any potable reuse water produced at an existing facility.
    - (B) The bonus incentive shall not exceed 10 percent of the urban water supplier’s water use objective for any potable reuse water produced at any facility that is not an existing facility.
  - (4) For purposes of this subdivision, “existing facility” means a facility that meets all of the following:
    - (A) The facility has a certified environmental impact report, mitigated negative declaration, or negative declaration on or before January 1, 2019.
    - (B) The facility begins producing and delivering potable reuse water on or before January 1, 2022.
    - (C) The facility uses microfiltration and reverse osmosis technologies to produce the potable reuse water.
- (e) (1) The calculation of the urban water use objective shall be made using landscape area and other data provided by the department and pursuant to the standards, guidelines, and methodologies adopted by the board. The department shall provide data to the urban water supplier at a level of detail sufficient to allow the urban water supplier to verify its accuracy at the parcel level.
- (2) Notwithstanding paragraph (1), an urban retail water supplier may use alternative data in calculating the urban water use objective if the supplier demonstrates to the department that the alternative data are equivalent, or superior, in quality and accuracy to the data provided by the department. The department may provide technical assistance to an urban retail water supplier in evaluating whether the alternative data are appropriate for use in calculating the supplier’s urban water use objective.

**10609.21.** (a) For purposes of Section 10609.20, and notwithstanding paragraph (4) of subdivision (d) of Section 10609.20, “existing facility” also includes the North City Project, phase one of the Pure Water San Diego Program, for which an environmental impact report was certified on April 10, 2018.

(b) This section shall become operative on January 1, 2019.

**10609.22.** (a) An urban retail water supplier shall calculate its actual urban water use no later than January 1, 2024, and by January 1 every year thereafter.

(b) The calculation shall be based on the urban retail water supplier's water use for the previous calendar or fiscal year.

(c) Each urban water supplier's urban water use shall be composed of the sum of the following:

(1) Aggregate residential water use.

(2) Aggregate outdoor irrigation of landscape areas with dedicated irrigation meters in connection with CII water use.

(3) Aggregate water losses.

**10609.24.** (a) An urban retail water supplier shall submit a report to the department no later than January 1, 2024, and by January 1 every year thereafter. The report shall include all of the following:

(1) The urban water use objective calculated pursuant to Section 10609.20 along with relevant supporting data.

(2) The actual urban water use calculated pursuant to Section 10609.22 along with relevant supporting data.

(3) Documentation of the implementation of the performance measures for CII water use.

(4) A description of the progress made towards meeting the urban water use objective.

(5) The validated water loss audit report conducted pursuant to Section 10608.34.

(b) The department shall post the reports and information on its internet website.

(c) The board may issue an information order or conservation order to, or impose civil liability on, an entity or individual for failure to submit a report required by this section.

**10609.25.** As part of the first report submitted to the department by an urban retail water supplier no later than January 1, 2024, pursuant to subdivision (a) of Section 10609.24, each urban retail water supplier shall provide a narrative that describes the water demand management measures that the supplier plans to implement to achieve its urban water use objective by January 1, 2027.

**10609.26.** (a) (1) On and after January 1, 2024, the board may issue informational orders pertaining to water production, water use, and water conservation to an urban retail water supplier that does not meet its urban water use objective required by this chapter. Informational orders are intended to obtain information on supplier activities, water production, and conservation efforts in order to identify technical assistance needs and assist urban water suppliers in meeting their urban water use objectives.

(2) In determining whether to issue an informational order, the board shall consider the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet the urban water use objective.

(3) The board shall share information received pursuant to this subdivision with the department.



(4) An urban water supplier may request technical assistance from the department. The technical assistance may, to the extent available, include guidance documents, tools, and data.

(b) On and after January 1, 2025, the board may issue a written notice to an urban retail water supplier that does not meet its urban water use objective required by this chapter. The written notice may warn the urban retail water supplier that it is not meeting its urban water use objective described in Section 10609.20 and is not making adequate progress in meeting the urban water use objective, and may request that the urban retail water supplier address areas of concern in its next annual report required by Section 10609.24. In deciding whether to issue a written notice, the board may consider whether the urban retail water supplier has received an informational order, the degree to which the urban retail water supplier is not meeting its urban water use objective, information provided in the report required by Section 10609.24, and actions the urban retail water supplier has implemented or will implement in order to help meet its urban water use objective.

(c) (1) On and after January 1, 2026, the board may issue a conservation order to an urban retail water supplier that does not meet its urban water use objective. A conservation order may consist of, but is not limited to, referral to the department for technical assistance, requirements for education and outreach, requirements for local enforcement, and other efforts to assist urban retail water suppliers in meeting their urban water use objective.

(2) In issuing a conservation order, the board shall identify specific deficiencies in an urban retail water supplier's progress towards meeting its urban water use objective, and identify specific actions to address the deficiencies.

(3) The board may request that the department provide an urban retail water supplier with technical assistance to support the urban retail water supplier's actions to remedy the deficiencies.

(d) A conservation order issued in accordance with this chapter may include requiring actions intended to increase water-use efficiency, but shall not curtail or otherwise limit the exercise of a water right, nor shall it require the imposition of civil liability pursuant to Section 377.

**10609.27.** Notwithstanding Section 10609.26, the board shall not issue an information order, written notice, or conservation order pursuant to Section 10609.26 if both of the following conditions are met:

(a) The board determines that the urban retail water supplier is not meeting its urban water use objective solely because the volume of water loss exceeds the urban retail water supplier's standard for water loss.

(b) Pursuant to Section 10608.34, the board is taking enforcement action against the urban retail water supplier for not meeting the performance standards for the volume of water losses.

**10609.28.** The board may issue a regulation or informational order requiring a wholesale water supplier, an urban retail water supplier, or a distributor of a public water supply, as that term is used in Section 350, to provide a monthly report relating to water production, water use, or water conservation.

**10609.30.** On or before January 10, 2024, the Legislative Analyst shall provide to the appropriate policy committees of both houses of the Legislature and the public a report evaluating the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. The board and the department shall provide the Legislative Analyst with the available data to complete this report.

(a) The report shall describe all of the following:

- (1) The rate at which urban retail water users are complying with the standards, and factors that might facilitate or impede their compliance.
- (2) The accuracy of the data and estimates being used to calculate urban water use objectives.
- (3) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.
- (4) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.
- (5) The early indications of how implementing this chapter might impact the efficiency of statewide urban water use.
- (6) Recommendations, if any, for improving statewide urban water use efficiency and the standards and practices described in this chapter.
- (7) Any other issues the Legislative Analyst deems appropriate.

**10609.32.** It is the intent of the Legislature that the chairperson of the board and the director of the department appear before the appropriate policy committees of both houses of the Legislature on or around January 1, 2026, and report on the implementation of the water use efficiency standards and water use reporting pursuant to this chapter. It is the intent of the Legislature that the topics to be covered include all of the following:

- (a) The rate at which urban retail water suppliers are complying with the standards, and factors that might facilitate or impede their compliance.
- (b) What enforcement actions have been taken, if any.
- (c) The accuracy of the data and estimates being used to calculate urban water use objectives.
- (d) Indications of the economic impacts, if any, of the implementation of this chapter on urban water suppliers and urban water users, including CII water users.
- (e) The frequency of use of the bonus incentive, the volume of water associated with the bonus incentive, value to urban water suppliers of the bonus incentive, and any implications of the use of the bonus incentive on water use efficiency.
- (f) An assessment of how implementing this chapter is affecting the efficiency of statewide urban water use.

**10609.34.** Notwithstanding Section 15300.2 of Title 14 of the California Code of Regulations, an action of the board taken under this chapter shall be deemed to be a Class 8 action, within the meaning of Section 15308 of Title 14 of the California Code of Regulations, provided that the action does not involve relaxation of existing water conservation or water use standards.

**10609.36.** (a) Nothing in this chapter shall be construed to determine or alter water rights. Sections 1010 and 1011 apply to water conserved through implementation of this chapter.

(b) Nothing in this chapter shall be construed to authorize the board to update or revise water use efficiency standards authorized by this chapter except as explicitly provided in this chapter. Authorization to update the standards beyond that explicitly provided in this chapter shall require separate legislation.

(c) Nothing in this chapter shall be construed to limit or otherwise affect the use of recycled water as seawater barriers for groundwater salinity management.

**10609.38.** The board may waive the requirements of this chapter for a period of up to five years for any urban retail water supplier whose water deliveries are significantly affected by changes in water use as a result of damage from a disaster such as an earthquake or fire. In establishing the period of a waiver, the board shall take into consideration the breadth of the damage and the time necessary for the damaged areas to recover from the disaster.

# **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 from 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)**



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
Stephanie Sprague	Del Oro Water Company	1219144523	3/30/2021 3:49:00 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
1990	DOWC_Paradise_Pines_District.kml	1181
2000	DOWC_Paradise_Pines_District.kml	1181
2010	DOWC_Paradise_Pines_District.kml	1181
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:

Year beginning baseline period range:

Year ending baseline period range<sup>1</sup>: 2008

**5-year baseline period**

Year beginning baseline period range:

Year ending baseline period range<sup>2</sup>: 2007

---

<sup>1</sup> The ending year must be between December 31, 2004 and December 31, 2010.

<sup>2</sup> The ending year must be between December 31, 2007 and December 31, 2010.

Persons per Connection			
Year	Census Block Level	Number of Connections *	Persons per Connection
	Total Population		
1990	7,072	<input type="text"/>	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	<input type="text" value="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	<input type="text" value="4701"/>	1.99
2011	-	-	1.90
2012	-	-	1.90
2013	-	-	1.90
2014	-	-	1.90
2015	-	-	1.90
2020	-	-	2.09 **

Population Using Persons-Per-Connection				
Year		Number of Connections *	Persons per Connection	Total Population
<b>10 to 15 Year Baseline Population Calculations</b>				
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
<b>5 Year Baseline Population Calculations</b>				
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
<b>2020 Compliance Year Population Calculations</b>				
	2020	3198	2.09 **	6,682

Hide Print Confirmation

QUESTIONS / ISSUES? CONTACT THE WUEDATA HELP DESK  
 MWELo QUESTIONS / ISSUES? CONTACT THE MWELo 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  
American Water Works Association.  
Copyright © 2014, All Rights Reserved.

Click to access definition  
 Click to add a comment

**Water Audit Report for:** DEL ORO WATER COMPANY (CA0410011)  
**Reporting Year:** 2020 1/2020 - 12/2020

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**

Volume from own sources:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="3"/>	<input type="text" value="149.986"/>	MG/Yr
Water imported:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="3"/>	<input type="text" value="114.256"/>	MG/Yr
Water exported:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="3"/>	<input type="text" value="9.467"/>	MG/Yr

Pcnt:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="2"/>	<input type="text" value=""/>	MG/Yr
Value:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="2"/>	<input type="text" value=""/>	MG/Yr
Pcnt:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="2"/>	<input type="text" value=""/>	MG/Yr

Enter negative % or value for under-registration  
Enter positive % or value for over-registration

**WATER SUPPLIED:** 254.775 MG/Yr

**AUTHORIZED CONSUMPTION**

Billed metered:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="5"/>	<input type="text" value="207.664"/>	MG/Yr
Billed unmetered:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="n/a"/>	<input type="text" value=""/>	MG/Yr
Unbilled metered:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="9"/>	<input type="text" value="1.511"/>	MG/Yr
Unbilled unmetered:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="7"/>	<input type="text" value="15.947"/>	MG/Yr

Unbilled Unmetered volume entered is greater than the recommended default value

**AUTHORIZED CONSUMPTION:** 225.122 MG/Yr

Click here:   
for help using option  
buttons below

Pcnt:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value=""/>	<input type="text" value="15.947"/>	MG/Yr
-------	----------------------------------	----------------------------------	-------------------------------	-------------------------------------	-------

Use buttons to select  
percentage of water  
supplied  
OR  
value

Pcnt:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="0.25%"/>	<input type="text" value=""/>	MG/Yr
-------	----------------------------------	----------------------------------	------------------------------------	-------------------------------	-------

Value:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="1.00%"/>	<input type="text" value=""/>	MG/Yr
Pcnt:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="0.25%"/>	<input type="text" value=""/>	MG/Yr

**WATER LOSSES (Water Supplied - Authorized Consumption)**

29.652 MG/Yr

**Apparent Losses**

Unauthorized consumption:    MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="5"/>	<input type="text" value="2.113"/>	MG/Yr
Systematic data handling errors:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value=""/>	<input type="text" value="0.519"/>	MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

**Apparent Losses:**  3.269 MG/Yr

**Real Losses (Current Annual Real Losses or CARL)**

Real Losses = Water Losses - Apparent Losses:  26.383 MG/Yr

**WATER LOSSES:** 29.652 MG/Yr

**NON-REVENUE WATER**

**NON-REVENUE WATER:**  47.110 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

**SYSTEM DATA**

Length of mains:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="6"/>	<input type="text" value="64.8"/>	miles
Number of <u>active AND inactive</u> service connections:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="8"/>	<input type="text" value="4,841"/>	
Service connection density:	<input type="button" value="?"/>	<input type="text" value=""/>	<input type="text" value="75"/>	conn./mile main	

Are customer meters typically located at the curbstop or property line?

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:     psi

**COST DATA**

Total annual cost of operating water system:	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="10"/>	<input type="text" value="\$1,921,254"/>	\$/Year
Customer retail unit cost (applied to Apparent Losses):	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="9"/>	<input type="text" value="\$3.55"/>	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	<input type="button" value="+"/>	<input type="button" value="?"/>	<input type="text" value="5"/>	<input type="text" value="\$2,036.03"/>	\$/Million gallons <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

**WATER AUDIT DATA VALIDITY SCORE:**

\*\*\* YOUR SCORE IS: 54 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: Water imported
- 3: Billed metered

# **APPENDIX F**

## **UNITED STATES CENSUS BUREAU'S 2015-2019 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES**

**Magalia CDP (Census Designated Place)**

## SELECTED ECONOMIC CHARACTERISTICS

Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Magalia CDP, California				
Label	Estimate	Margin of Error	Percent	Percent Margin of Error
▼ EMPLOYMENT STATUS				
▼ Population 16 years and over	9,927	±685	9,927	(X)
▼ In labor force	4,623	±604	46.6%	±4.2
▼ Civilian labor force	4,623	±604	46.6%	±4.2
Employed	4,290	±580	43.2%	±4.1
Unemployed	333	±144	3.4%	±1.4
Armed Forces	0	±19	0.0%	±0.4
Not in labor force	5,304	±451	53.4%	±4.2
▼ Civilian labor force	4,623	±604	4,623	(X)
Unemployment Rate	(X)	(X)	7.2%	±3.0
▼ Females 16 years and over	5,189	±489	5,189	(X)
▼ In labor force	2,364	±427	45.6%	±5.4
▼ Civilian labor force	2,364	±427	45.6%	±5.4
Employed	2,217	±418	42.7%	±5.5
▼ Own children of the householder under 6 years	701	±285	701	(X)
All parents in family in labor force	595	±258	84.9%	±12.6
▼ Own children of the householder 6 to 17 years	995	±243	995	(X)
All parents in family in labor force	564	±197	56.7%	±19.7
▼ COMMUTING TO WORK				
▼ Workers 16 years and over	4,090	±560	4,090	(X)
Car, truck, or van – drove alone	3,527	±534	86.2%	±5.3
Car, truck, or van – carpooled	321	±162	7.8%	±3.8
Public transportation (excluding taxicab)	52	±68	1.3%	±1.6
Walked	17	±24	0.4%	±0.6
Other means	0	±19	0.0%	±0.9
Worked from home	173	±121	4.2%	±3.0
Mean travel time to work (minutes)	30.5	±5.0	(X)	(X)
▼ OCCUPATION				
▼ Civilian employed population 16 years and over	4,290	±580	4,290	(X)
Management, business, science, and arts occupations	1,525	±325	35.5%	±6.5
Service occupations	963	±264	22.4%	±5.5
Sales and office occupations	1,013	±351	23.6%	±6.7
Natural resources, construction, and maintenance occupations	440	±190	10.3%	±4.3
Production, transportation, and material moving occupations	349	±143	8.1%	±3.4
▼ INDUSTRY				
▼ Civilian employed population 16 years and over	4,290	±580	4,290	(X)
Agriculture, forestry, fishing and hunting, and mining	154	±115	3.6%	±2.7
Construction	313	±153	7.3%	±3.6
Manufacturing	250	±123	5.8%	±3.0
Wholesale trade	63	±54	1.5%	±1.3

Retail trade	926	±303	21.6%	±5.5
Transportation and warehousing, and utilities	143	±118	3.3%	±2.7
Information	13	±15	0.3%	±0.4
Finance and insurance, and real estate and rental and leasing	86	±59	2.0%	±1.3
Professional, scientific, and management, and administrative and waste management services	833	±139	7.3%	±3.2
Educational services, and health care and social assistance	1,043	±270	24.3%	±5.6
Arts, entertainment, and recreation, and accommodation and food services	591	±229	13.8%	±5.0
Other services, except public administration	185	±108	4.3%	±2.4
Public administration	210	±121	4.9%	±2.7
▼ CLASS OF WORKER				
▼ Civilian employed population 16 years and over	4,290	±580	4,290	(X)
Private wage and salary workers	3,471	±541	80.9%	±4.6
Government workers	523	±202	12.2%	±4.5
Self-employed in own not incorporated business workers	296	±134	6.9%	±3.2
Unpaid family workers	0	±19	0.0%	±0.8
▼ INCOME AND BENEFITS (IN 2019 INFLATION-ADJUSTED DOLLARS)				
▼ Total households	4,633	±258	4,633	(X)
Less than \$10,000	233	±106	5.0%	±2.2
\$10,000 to \$14,999	383	±172	8.3%	±3.6
\$15,000 to \$24,999	470	±158	10.1%	±3.3
\$25,000 to \$34,999	463	±133	10.0%	±2.9
\$35,000 to \$49,999	735	±186	15.9%	±4.0
\$50,000 to \$74,999	946	±227	20.4%	±4.7
\$75,000 to \$99,999	828	±225	17.9%	±4.8
\$100,000 to \$149,999	398	±144	8.6%	±3.0
\$150,000 to \$199,999	60	±57	1.3%	±1.2
\$200,000 or more	117	±90	2.5%	±1.9
Median household income (dollars)	50,415	±3,287	(X)	(X)
Mean household income (dollars)	59,107	±4,533	(X)	(X)
▼ With earnings	2,884	±274	62.2%	±4.9
Mean earnings (dollars)	61,328	±7,412	(X)	(X)
▼ With Social Security	2,357	±244	50.9%	±4.9
Mean Social Security income (dollars)	19,752	±1,831	(X)	(X)
▼ With retirement income	1,349	±239	29.1%	±5.3
Mean retirement income (dollars)	21,614	±3,239	(X)	(X)
▼ With Supplemental Security Income	492	±158	10.6%	±3.4
Mean Supplemental Security Income (dollars)	11,557	±2,340	(X)	(X)
▼ With cash public assistance income	146	±82	3.2%	±1.8
Mean cash public assistance income (dollars)	4,012	±1,935	(X)	(X)
With Food Stamp/SNAP benefits in the past 12 months	515	±137	11.1%	±2.9
▼ Families	2,946	±306	2,946	(X)
Less than \$10,000	79	±63	2.7%	±2.1
\$10,000 to \$14,999	9	±16	0.3%	±0.5
\$15,000 to \$24,999	186	±80	6.3%	±2.6
\$25,000 to \$34,999	437	±144	14.8%	±4.4
\$35,000 to \$49,999	485	±127	16.5%	±4.2
\$50,000 to \$74,999	701	±201	23.8%	±6.6

\$75,000 to \$99,999	635	±183	21.6%	±6.0
\$100,000 to \$149,999	312	±121	10.6%	±3.9
\$150,000 to \$199,999	21	±24	0.7%	±0.8
\$200,000 or more	81	±85	2.7%	±2.8
Median family income (dollars)	60,082	±10,214	(X)	(X)
Mean family income (dollars)	66,784	±4,843	(X)	(X)
Per capita income (dollars)	24,428	±1,767	(X)	(X)
▼ Nonfamily households	1,687	±312	1,687	(X)
Median nonfamily income (dollars)	24,213	±16,390	(X)	(X)
Mean nonfamily income (dollars)	43,826	±8,316	(X)	(X)
Median earnings for workers (dollars)	24,854	±5,580	(X)	(X)
Median earnings for male full-time, year-round workers (dollars)	52,321	±6,814	(X)	(X)
Median earnings for female full-time, year-round workers (dollars)	39,604	±6,036	(X)	(X)
▼ HEALTH INSURANCE COVERAGE				
▼ Civilian noninstitutionalized population	11,476	±803	11,476	(X)
▼ With health insurance coverage	10,939	±803	95.3%	±1.7
With private health insurance	7,140	±700	62.2%	±4.0
With public coverage	6,417	±662	55.9%	±4.7
No health insurance coverage	537	±197	4.7%	±1.7
▼ Civilian noninstitutionalized population under 19 years	1,929	±336	1,929	(X)
No health insurance coverage	47	±66	2.4%	±3.4
▼ Civilian noninstitutionalized population 19 to 64 years	6,671	±609	6,671	(X)
▼ In labor force:	4,133	±536	4,133	(X)
▼ Employed:	3,876	±517	3,876	(X)
▼ With health insurance coverage	3,539	±509	91.3%	±4.1
With private health insurance	2,928	±445	75.5%	±5.5
With public coverage	820	±244	21.2%	±5.4
No health insurance coverage	337	±162	8.7%	±4.1
▼ Unemployed:	257	±124	257	(X)
▼ With health insurance coverage	246	±124	95.7%	±7.1
With private health insurance	151	±97	58.8%	±25.2
With public coverage	107	±81	41.6%	±23.7
No health insurance coverage	11	±18	4.3%	±7.1
▼ Not in labor force:	2,538	±378	2,538	(X)
▼ With health insurance coverage	2,396	±350	94.4%	±2.7
With private health insurance	1,074	±236	42.3%	±7.8
With public coverage	1,637	±334	64.5%	±7.9
No health insurance coverage	142	±76	5.6%	±2.7
▼ PERCENTAGE OF FAMILIES AND PEOPLE WHOSE INCOME IN THE PAST 12 MONTHS IS BELOW THE POVERTY LEVEL				
▼ All families	(X)	(X)	5.3%	±2.8
▼ With related children of the householder under 18 years	(X)	(X)	9.4%	±6.4
With related children of the householder under 5 years only	(X)	(X)	6.6%	±11.9
▼ Married couple families	(X)	(X)	1.9%	±2.0
▼ With related children of the householder under 18 years	(X)	(X)	0.0%	±6.2
With related children of the householder under 5 years only	(X)	(X)	0.0%	±18.3
▼ Families with female householder, no spouse present	(X)	(X)	18.8%	±12.4
▼ With related children of the householder under 18 years	(X)	(X)	32.2%	±24.4



With related children of the householder under 5 years only	(X)	(X)	100.0%	±74.6
▼ All people	(X)	(X)	13.7%	±4.1
▼ Under 18 years	(X)	(X)	11.5%	±8.6
▼ Related children of the householder under 18 years	(X)	(X)	10.4%	±8.4
Related children of the householder under 5 years	(X)	(X)	4.8%	±7.5
Related children of the householder 5 to 17 years	(X)	(X)	13.3%	±11.9
▼ 18 years and over	(X)	(X)	14.1%	±4.2
18 to 64 years	(X)	(X)	16.4%	±5.4
65 years and over	(X)	(X)	8.7%	±4.1
People in families	(X)	(X)	5.8%	±3.8
Unrelated individuals 15 years and over	(X)	(X)	38.4%	±8.1

Columns

Cell/Column Notes

### Table Notes

## SELECTED ECONOMIC CHARACTERISTICS

**Survey/Program:**

American Community Survey

**Year:**

2019

**Estimates:**

5-Year

**Table ID:**

DP03

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.

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

2019 ACS data products include updates to several categories of the existing means of transportation question. For more information, see: Change to Means of Transportation.

Between 2018 and 2019 the American Community Survey retirement income question changed. These changes resulted in an increase in both the number of households reporting retirement income and higher aggregate retirement income at the national level. For more information see Changes to the Retirement Income Question .

The categories for relationship to householder were revised in 2019. For more information see Revisions to the Relationship to Household item.

Beginning in data year 2019, respondents to the Weeks Worked question provided an integer value for the number of weeks worked. For data years 2008 through 2018, respondents selected a category corresponding to the number of weeks worked.

Occupation titles and their 4-digit codes are based on the Standard Occupational Classification (SOC). The Census occupation codes for 2018 and later years are based on the 2018 revision of the SOC. To allow for the creation of the multiyear tables, occupation data in the multiyear files (prior to data year 2018) were recoded to the 2018 Census occupation codes. We recommend using caution when comparing data coded using 2018 Census occupation codes with data coded using Census occupation codes prior to data year 2018. For more information on the Census occupation code changes, please visit our website at <https://www.census.gov/topics/employment/industry-occupation/guidance/code-lists.html>.

In 2019, methodological changes were made to the class of worker question. These changes involved modifications to the question wording, the category wording, and the visual format of the categories on the questionnaire. The format for the class of worker categories are now listed under the headings "Private Sector Employee," "Government Employee," and "Self-Employed or Other." Additionally, the category of Active Duty was added as one of the response categories under the "Government Employee" section for the mail questionnaire. For more detailed information about the 2019 changes, see the 2016 American Community Survey Content Test Report for Class of Worker located at [http://www.census.gov/library/working-papers/2017/acs/2017\\_Martinez\\_01.html](http://www.census.gov/library/working-papers/2017/acs/2017_Martinez_01.html).

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 ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

Employment and unemployment estimates may vary from the official labor force data released by the Bureau of Labor Statistics because of differences in survey design and data collection. For guidance on differences in employment and unemployment estimates from different sources go to Labor Force Guidance.

Workers include members of the Armed Forces and civilians who were at work last week.

Industry titles and their 4-digit codes are based on the North American Industry Classification System (NAICS). The Census industry codes for 2018 and later years are based on the 2017 revision of the NAICS. To allow for the creation of multiyear tables, industry data in the multiyear files (prior to data year 2018) were recoded to the 2017 Census industry codes. We recommend using caution when comparing data coded using 2017 Census industry codes with data coded using Census industry codes prior to data year 2018. For more information on the Census industry code changes, please visit our website at <https://www.census.gov/topics/employment/industry-occupation/guidance/code-lists.html>.

Logical coverage edits applying a rules-based assignment of Medicaid, Medicare and military health coverage were added as of 2009 -- please see [https://www.census.gov/library/working-papers/2010/demo/coverage\\_edits\\_final.html](https://www.census.gov/library/working-papers/2010/demo/coverage_edits_final.html) for more details. Select geographies of 2008 data comparable to the 2009 and later tables are available at <https://www.census.gov/data/tables/time-series/acs/1-year-re-run-health-insurance.html>. The health insurance coverage category names were modified in 2010. See [https://www.census.gov/topics/health/health-insurance/about/glossary.html#par\\_textimage\\_18](https://www.census.gov/topics/health/health-insurance/about/glossary.html#par_textimage_18) for a list of the insurance type definitions.

Beginning in 2017, selected variable categories were updated, including age-categories, income-to-poverty ratio (IPR) categories, and the age universe for certain employment and education variables. See user note entitled "Health Insurance Table Updates" for further details.

The 2015-2019 American Community Survey (ACS) data generally reflect the September 2018 Office of Management and Budget (OMB) delineations 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 delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, 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.

#### Explanation of Symbols:

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.

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, or the margin of error associated with a median was larger than the median itself.

An "-" following a median estimate means the median falls in the lowest interval of an open-ended distribution.

An "+" following a median estimate means the median falls in the upper interval of an open-ended distribution.

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.

An "\*\*\*\*\*" entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

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.

An "(X)" means that the estimate is not applicable or not available.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical 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.

# **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<sup>1</sup> (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

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<sup>1</sup> 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**

<b>Inventory Units</b>	<b>Inventory Sub-Units</b>	<b>Areas Within Sub-Units</b>	<b>Included in Butte County GMP</b>
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
<b>CWC § 10750 et seq., Mandatory Components</b>	
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
<b>CWC § 10750 et seq., Voluntary Components</b>	
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
<b>DWR Bulletin 118 Suggested Components</b>	
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**

## **2020 CONSUMER CONFIDENCE REPORT**

**Del Oro Water Company, Paradise Pines (DOWCPP)**



**2020 Water Quality Report**  
Del Oro Water Company – Paradise Pines District  
Public Water System Number CA0410011

**Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.**

**Del Oro Water Company**  
is firmly committed to producing and delivering a safe,  
dependable supply of quality water in an efficient, cost effective manner,  
with service that exceeds the expectations of our customers.

## Getting to know Del Oro Water Company (DOWC).....

DOWC was established in 1963 to meet the water needs of the Paradise Pines area in Magalia, California. Since then, the company has expanded throughout California, and currently provides service to over 16,000 customers in ten counties: Shasta, Humboldt, Tehama, Butte, Glenn, Colusa, Tuolumne, Fresno, Tulare and Kern. DOWC is a Class B water utility under the direction of the California Public Utilities Commission (CPUC).

Although, on November 8, 2018, Del Oro was significantly affected by the CAMP Fire in Butte County. The catastrophic event affected four of our districts destroying 38% of Paradise Pines, 89% of Magalia, 50% of Lime Saddle, and 34% of Buzztail Districts reducing our total state-wide customer by 26%. Despite of the losing significant portion of our customers' homes and business, DEL ORO IS COMMITTED TO STAYING 100% OPERATIONAL and efficient.

DOWC works diligently upgrading and improving each of its twenty districts. Because of their diverse geology, each district requires unique water quality testing (hundreds of water quality tests each year) and maintenance. DOWC completes CPUC-approved projects to replace and maintain over 700,000 feet of distribution piping; 96 pumps, booster pumps, and wells; and 32 storage tanks with over 8 million gallons of storage capacity. Five of DOWC's districts utilize surface water (springs, lakes, rivers or canals) to provide drinking water to their customers.

DOWC is proud to offer its customers excellent service provided by sixteen field service technicians including eleven that are certified treatment plant operators and ten certified distribution operators. DOWC field technicians work earnestly to maintain the individual water systems as the costs to provide water service continues to increase, not just for DOWC customers, but throughout the United States.

DOWC tests the drinking water quality for all constituents as required by the State Water Resources Control Board – Division of Drinking Water (SWRCB-DDW) and the United States Environmental Protection Agency – Federal Regulations (EPA). This report shows the results of our most current monitoring for the period of **January 1 - December 31, 2020** including results which are current but were taken in previous years.

DOWC tests for both “Regulated and Unregulated” contaminants. This consumer confidence report provides results only for contaminants which were detected in your district's system.

Water for **Del Oro Water Company, Paradise Pines District (DOWCPP)** originates from local water sources described as Wells 2, 3, 4 and 6. 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 their website: [www.paradiseirrigation.com](http://www.paradiseirrigation.com).

A Source Water Assessment was completed in December 2016, and found that sources are considered most vulnerable to the following activities not associated with any detected contaminants: 1. *Septic Tanks*, 2. *Wells*, 3. *Transportation Corridors*, and 4. *Above ground storage tanks*. A copy of the complete assessment may be viewed by calling the District office at 1-877-335-6764.

If DOWC Paradise Pines District has information (public meetings, rate increase, water quality issues, drought information, or district improvements) of which you should be notified, your billing will contain a message indicating the information or directing you to DOWC's website: [www.delorowater.com](http://www.delorowater.com). For additional information concerning your drinking water, you can contact Community Relations at P.O. Drawer 5172, Chico, CA 95927, 1-530-717-2500.

### Continuing Drought Information.....

State of California Executive Order B-40-17 lifts the drought emergency in all California counties except a few counties in the southern half of California. However, please keep in mind that Californians should always use water wisely. Water conservation tips apply to all areas of California throughout the year.

- Limit watering outside to three (3) days per week. Set up a schedule so you remember what days are your “watering” days
- Look for and fix leaks in your home or business and on your property
- Never use water to clean driveways and sidewalks
- Use water restricting devices in your home
- Always use a nozzle on your hose to control water usage

### Concerns about Lead in your drinking water.....

***Del Oro Water Company would like to inform its customers about the safety of lead and copper testing.*** While DOWC ***does not*** use lead pipes in the distribution lines that serve its customers, older homes may have been built using lead pipes or lead connectors. In California, lead in drinking water comes primarily from materials and components used for in-home plumbing (for example, lead solder used to join copper plumbing, brass and other lead-containing fixtures). Therefore, the established Lead and Copper Rule is critical to the water quality monitoring program.

DOWC is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If your home’s plumbing contains lead piping or pipe fittings, lead solder, or brass fixtures that may contain lead, 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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. ***Lead and Copper Tap Monitoring*** by DOWC is conducted at designated customers’ homes and is an important part of a water utility’s monitoring schedule.

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 from the Safe Drinking Water Hotline 1-800-426-4791 or at <http://www.epa.gov/safewater/lead> .

In January 2017, the State of California issued new guidelines on lead testing in schools. DOWC is committed to supporting its school districts’ efforts to protect students by ensuring that the drinking water at the school sites meets lead requirements. DOWC has completed lead testing in schools (K through 12) that have requested lead testing within the DOWC service areas. DOWC has performed lead testing at both Cedarwood Elementary and Pine Ridge School with the following results: (the State has a “Maximum Contaminant Level” regulation of 15 parts per billion (ppb))

<u>Name of School</u>	<u>No. of Samples Collected</u>	<u>Range of Detection (ppb)</u>
Cedarwood Elementary	3 samples collected	1.50 – 6.62
Pine Ridge	5 samples collected	0.56 – 1.73



## Explanation of 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 highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**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.

**Variations and Exemptions:** Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

**Level 1 Assessment:** A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

**Level 2 Assessment:** A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

**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)

**µS/cm:** microsiemens per centimeter (measure of specific conductance)

**ppt:** Parts per trillion or nanograms per liter (ng/L)

**ppq:** Parts per quadrillion, or picograms per liter

**NTU:** Nephelometric Turbidity Units

**MFL:** Million fibers per liter

**TON:** Threshold odor number

**All sources of drinking water** (both tap water and bottled water) come from 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 stormwater 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 stormwater 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 stormwater 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**, EPA and the SWRCB-DDW 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people, such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, and those with HIV/AIDS or other immune system disorders; some elderly people; and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. EPA and Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

**Tables 1, 2, 3, 4 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.

Results followed by an \* indicate a detected level over the MCL, MRDL, or TT and will have a footnote (†). Additional information regarding any violations (if applicable) will be provided later in this report.

**TABLE 1 – Sampling Results Showing the Detection of Coliform Bacteria – Monthly 2020**

<b>Microbiological Contaminants</b> (and reporting units)	<b>Highest No. of Detections</b>	<b>No. of Months in Violation</b>	<b>MCL</b>	<b>In Compliance?</b>	<b>Typical Source of Bacteria</b>
Total Coliform Bacteria (State Total Coliform Rule)	0	0	1 positive monthly sample	Yes	Naturally present in the environment
Fecal Coliform or <i>E. Coli</i> (State Total Coliform Rule)	0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive	Yes	Human and animal fecal waste
<i>E. Coli</i> (Federal Revised Total Coliform Rule)	0	0	Routine & repeat samples are total coliform-positive & either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i>	Yes	Human and animal fecal waste

**TABLE 2 – Sampling Results Showing the Detection of Lead and Copper – Sample Dates: June 13, 2020 – June 16, 2020**

<b>Lead and Copper</b> (and reporting units)	<b>Number of Samples Collected</b>	<b>90<sup>th</sup> Percentile Level Detected</b>	<b>No. sites exceeding AL</b>	<b>AL</b>	<b>MCLG</b>	<b>In Compliance?</b>	<b>Typical Source of Contaminant</b>
Lead (ppm)	20	0	0	0.015	0	Yes	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)	20	0.543	0	1.3	1.3	Yes	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

**TABLE 3 – Sodium and Hardness**

<b>Chemical or Constituent</b> (and reporting units)	<b>Range of Dates</b>	<b>Level Detected</b>	<b>Range of Detections</b>	<b>MCL</b>	<b>In Compliance?</b>	<b>Typical Source of Contaminant</b>
Sodium (ppm)	2018 - 2020	5.36	4.96 – 6.0	None	Yes	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2018 - 2020	84.25	70 - 99	None	Yes	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

**TABLE 4 – Detection of Contaminants with a *PRIMARY* Drinking Water Standard**

<b>Chemical or Constituent</b> (and reporting units)	<b>Range of Dates</b>	<b>Level Detected</b>	<b>Range of Detections</b>	<b>MCL</b>	<b>In Compliance?</b>	<b>Typical Source of Contaminant</b>
Antimony (ppb)	2018 - 2020	ND	ND - ND	6	Yes	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (ppb)	2018 - 2020	0.71	0 – 1.13	10	Yes	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2018 – 2020	8.063	5.812 – 9.79	1,000	Yes	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Beryllium (ppb)	2018 – 2020	ND	ND - ND	4	Yes	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries
Cadmium (ppb)	2018 – 2020	ND	ND - ND	5	Yes	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories; and metal refineries; runoff from waste batteries & paints
Chromium (total) (ppb)	2018 – 2020	0.64	0 - 1.05	50	Yes	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Copper (ppm)	2018 – 2020	15.14	.64 – 54.93	1,000	Yes	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm)	2018 – 2020	ND	ND - ND	2	Yes	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Hexavalent Chromium (ppb)	10/31/2017	ND	N/A	*	Yes	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Mercury (ppb)	2018 – 2020	ND	ND - ND	2	Yes	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland
Nickel (ppb)	2018 – 2020	0.21	0 – 0.83	100	Yes	Erosion of natural deposits; discharge from metal factories
Nitrate (as N) (ppm)	02/18/2020	0.09	ND – 0.36	10	Yes	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (as N) (ppm)	2018 - 2020	0.05	ND – 0.19	1	Yes	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

\* There is currently no MCL for hexavalent chromium. The previous MCL of 10 ppb was withdrawn on September 11, 2017.

<b>TABLE 4 – Detection of Contaminants with a <i>PRIMARY</i> Drinking Water Standard - Continued</b>						
<b>Chemical or Constituent</b> (and reporting units)	<b>Range of Dates</b>	<b>Level Detected</b>	<b>Range of Detections</b>	<b>MCL</b>	<b>In Compliance?</b>	<b>Typical Source of Contaminant</b>
Perchlorate (ppb)	02/18/2020	ND	ND – ND	6	Yes	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts
Selenium (ppb)	2018 – 2020	ND	0 – 1.08	50	Yes	Discharge from petroleum, glass and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
Thallium (ppb)	2018 – 2020	ND	ND - ND	2	Yes	Leaching from ore-processing sites; discharge from electronics, glass and drug factories

<b>TABLE 5 – Detection of Contaminants with a <i>SECONDARY</i> Drinking Water Standard</b>						
<b>Chemical or Constituent</b> (and reporting units)	<b>Range of Dates</b>	<b>Level Detected</b>	<b>Range of Detections</b>	<b>MCL</b>	<b>In Compliance?</b>	<b>Typical Source of Contaminant</b>
Aluminum (ppb)	2018 – 2020	ND	ND - ND	1,000	Yes	Erosion of natural deposits; residual from some surface water treatment processes
Color (units)	2018 – 2020	ND	ND - ND	15	Yes	Naturally-occurring organic materials
Foaming Agents (MBAS) (ppm)	2018 - 2020	ND	ND - ND	0.5	Yes	Municipal and industrial waste discharges
Iron (ppb)	2018 - 2020	81.32	0 – 241.0	300	Yes	Leaching from natural deposits; industrial wastes
Manganese (ppb)	2018 – 2020	2.416	0 – 5.244	50	Yes	Leaching from natural deposits
Methyl- <i>tert</i> -butyl ether (MTBE) (ppb)	02/18/2020	ND	ND – ND	13	Yes	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor – Threshold (TON)	2018 - 2020	0.25	0 - 1	3	Yes	Naturally-occurring organic materials
Silver (ppb)	2018 – 2020	0.19	0 – 0.77	100	Yes	Industrial discharges
Turbidity (NTU)	2018 – 2020	0.34	0.20 - 0.50	5	Yes	Soil Runoff
Zinc (mg/L)	2018 – 2020	49.95	0 – 97.54	5,000	Yes	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS) (mg/L)	2018 – 2020	122.75	110 - 136	1,000	Yes	Runoff/leaching from natural deposits
Specific Conductance (µS/cm)	2018 – 2020	199.38	181.5 - 217	1,600	Yes	Substances that form ions when in water; seawater influence
Chloride (mg/L)	2018 – 2020	1.86	0.97 – 2.54	500	Yes	Runoff/leaching from natural deposits; seawater influence
Sulfate (mg/L)	2018 – 2020	1.41	0.55 – 2.10	500	Yes	Runoff/leaching from natural deposits; industrial wastes

<b>TABLE 6 – Radioactive Contaminants</b>						
<b>Chemical or Constituent</b> (and reporting units)	<b>Range of Dates</b>	<b>Highest Level Detected</b>	<b>Range of Detections</b>	<b>MCL</b>	<b>In Compliance?</b>	<b>Typical Source of Contaminant</b>
Gross Alpha (pCi/L)	2014 - 2016	2.046	0.1110 – 5.26	15	Yes	Erosion of natural deposits
Radium (pCi/L)	10/11/2016	1.525	0.00 – 2.61	5	Yes	
<b>TABLE 7 – Disinfection Byproducts, Disinfectant Residuals and Disinfection Byproduct Precursors</b>						
<b>Chemical or Constituent</b> (and reporting units)	<b>Sample Date</b>	<b>Highest Level Detected</b>	<b>Range of Detections</b>	<b>MCL</b>	<b>In Compliance?</b>	<b>Typical Source of Contaminant</b>
TTHM's (Total Trihalomethanes) (ppb)	2020	13.38	ND – 35	80	Yes	Byproduct of drinking water chlorination
HAA5 (Haloacetic Acids) (ppb)	2020	6.90	0 – 23	60	Yes	
Chlorine Residual (ppm)	12/2020	0.68	0.13 – 0.46	40	Yes	

**ADDITIONAL GENERAL INFORMATION ON DRINKING WATER:**

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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. Infants and young children are typically more vulnerable to lead in drinking water than the general populations. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your homes plumbing.

# **APPENDIX I**

## **RULE 14.1**

### **WATER SHORTAGE CONTINGENCY PLAN**

**Del Oro Water Company, Paradise Pines (DOWCPP)**

Rule No. 14.1  
(Continued)

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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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WATER SHORTAGE CONTINGENCY PLAN

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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WATER SHORTAGE CONTINGENCY PLAN

- 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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WATER SHORTAGE CONTINGENCY PLAN

- 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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WATER SHORTAGE CONTINGENCY PLAN

- 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 with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with the regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.

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Rule No. 14.1

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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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Rule No. 14.1  
(Continued)

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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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WATER SHORTAGE CONTINGENCY PLAN

- 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 with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with the regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development;
  - 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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Rule No. 14.1  
(Continued)

N

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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Rule No. 14.1  
(Continued)

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WATER SHORTAGE CONTINGENCY PLAN

- 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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Rule No. 14.1  
(Continued)

N

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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Rule No. 14.1  
(Continued)

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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

**WATER SHORTAGE CONTINGENCY PLAN**  
**WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES**  
(Continues)

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**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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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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WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES  
(Continues)

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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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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;

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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.

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**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.

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# **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](http://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:** 16,196

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 of Operations. 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 personnel 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 inspector's 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, 530-717-2500      Chief Financial Officer, 530-717-2500      Vice President of Operations, 530-717-2500

John O'Farrell, State Superintendent  
530-873-0326 Direct Line  
530-521-6132 Cell Phone

Bryan Fortino, Information Technology Administrator  
530-809-3959 Direct Line  
480-399-0061 Cell Phone

Jim Roberts, Assistant Superintendent  
530-521-8215 Cell Phone

Jake Kevwitch, Field Technician  
530-521-8219 Cell Phone

Brandan Niblett, Field Technician  
530-774-5350 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:

	<b>Name</b>	<b>Phone (Day)</b>	<b>Phone (After-hours)</b>
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 (equip. 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 in 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 |
| • Brandan Niblett | T-2 – Operator # 43983 | D-2 – Operator # 49331 |

### **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**

Chlorine is stored at the DOWC Service Center, 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**

<b>Agency</b>	<b>Address, City</b>	<b>Phone #</b>	<b>FAX #</b>
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<sup>1</sup>;
- 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 Emergency/Disaster Personnel and Responsibilities**

<b>Name / Title</b>	<b>Telephone No. (Work)</b>	<b>Role</b>
John O'Farrell	530-873-0326	State Superintendent for Paradise Pines District, will assign responsibilities to staff as needed. Assists with all duties.
State Superintendent	530-521-6132	
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.
Bryan Fortino	530-809-3959	Provides Community Relations and IT services.
Director of Community Relations Information Technology Administrator		
Plan B Pro Answering Services	530-566-0370	Assists in handling incoming phone calls

**External Emergency Contact List**

<b>Agency/Department</b>	<b>Telephone No. (Day)</b> <b>Telephone No. (After Hours)</b>
<b><i>Other Water Agency</i></b> 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
<b><i>Fire Department</i></b> Butte County Fire, 176 Nelson Ave., Oroville, CA 95965	911 or 530-538-7111
<b><i>Local Law Enforcement</i></b> Butte County Sheriff, 14166 Skyway, Magalia, CA 95954	911 or 530-538-7321
<b><i>Butte County Office of Emergency Services</i></b>	530-538-7373
<b><i>FBI Office</i></b> (terrorism or sabotage) (Also notify local law enforcement.)	911 or 916-481-9110
<b><i>California Office of Emergency Services — Warning Center</i></b> (24-hr. number)— <i>Note: Ask for referral to SWRCB Duty Officer-DDW</i>	(800) 852-7550 or (916) 845-8911
<b><i>California Dept. of Fish and Wildlife – Central Region</i></b>	530-225-2316 / 530-225-2300
<b><i>SWRCB District Office</i></b> District 21 - Valley	Reese Crenshaw, District Engineer 530-244-4861 / 530-547-5147
<b><i>Local Environmental Health Agency</i></b> 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: 530-894-5405



## **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



**State Water Resources Control Board**

Division of Drinking Water

**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:		Telephone		
Contact Name & Title	Email Address	Day	Evening	Cell
1. John O'Farrell, Superintendent	<a href="mailto:johnofarrell@delorowater.com">johnofarrell@delorowater.com</a>	530-873-0326	530-521-6132	530-521-6132
2. Jim Roberts, Asst. Super	<a href="mailto:jimroberts@delorowater.com">jimroberts@delorowater.com</a>	530-873-0326	530-521-8215	530-521-8215
3. Jake Kevwitch, Field Technician	<a href="mailto:jakekevwitch@delorowater.com">jakekevwitch@delorowater.com</a>	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	Day	Telephone Evening
1. Reese Crenshaw, Senior Sanitary Engineer	530-224-4861	530-547-5147
2. Scott Small, Water Resources Control Engineer,	530-224-3252	530-339-2445
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

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

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 within 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.

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**Del Oro Water Co., Paradise Pines District (DOWCPP) water is possibly contaminated with \_\_\_\_\_**

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**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.

---

**Del Oro Water Co., Paradise Pines District (DOWCPP) water is possibly contaminated with \_\_\_\_\_**

---

**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: \_\_\_\_\_  
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.**  
: 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 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](http://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>

## Appendix L – Conservation Literature

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.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](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. <https://www.epa.gov/watersense>
  - 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 2020 UWMP by DOWC Board of Directors

# **APPENDIX M-1**

## **NOTIFICATION TO INTENT TO UPDATE UWMP**

Neighboring Town - Town of Paradise, Community Development/Planning Director

Neighboring Water Provider - Paradise Irrigation District

Butte County - Water and Resource Conservation



April 1, 2021

Town of Paradise  
Community Development/Planning Director  
5555 Skyway  
Paradise, CA 95969

RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan

To Whom It May Concern:

Del Oro Water Company – Paradise Pines District, which provides water to customers in Magalia, Butte County, California, has begun preparing its 2020 Urban Water Management Plan (UWMP), which must be completed by July 1, 2021. Pursuant to California Water Code Section 10642, we are writing to notify you that preparation is underway, and to encourage your active input and involvement in the process.

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.

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)



April 1, 2021

Paradise Irrigation District  
6332 Clark Rd.  
Paradise CA 95969

RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan

To Whom It May Concern:

Del Oro Water Company – Paradise Pines District, which provides water to customers in Magalia, Butte County, California, has begun preparing its 2020 Urban Water Management Plan (UWMP), which must be completed by July 1, 2021. Pursuant to California Water Code Section 10642, we are writing to notify you that preparation is underway, and to encourage your active input and involvement in the process.

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Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)





April 1, 2021

Butte County Water and Resource Conservation  
308 Nelson Avenue  
Oroville, CA 95965

RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan

To Whom It May Concern:

Del Oro Water Company – Paradise Pines District, which provides water to customers in Magalia, Butte County, California, has begun preparing its 2020 Urban Water Management Plan (UWMP), which must be completed by July 1, 2021. Pursuant to California Water Code Section 10642, we are writing to notify you that preparation is underway, and to encourage your active input and involvement in the process.

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Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)

## **APPENDIX M-2**

### **NOTIFICATION OF UWMP PUBLIC MEETING**

Neighboring Town - Town of Paradise, Community Development/Planning Director

Neighboring Water Provider - Paradise Irrigation District

Butte County - Water and Resource Conservation

Butte County - Local Agency Formation Commission (LAFCo)



June 8, 2021

Town of Paradise  
Community Development/Planning Director  
5555 Skyway  
Paradise, CA 95969

**RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan**

To Whom It May Concern:

Del Oro Water Company (DOWC) has prepared an Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) for its Paradise Pines District in compliance with the requirements of the California Urban Water Management Planning Act.

The Draft UWMP is being made available for review and comment. A draft copy of DOWC's UWMP and WSCP may be reviewed on DOWC's website at [www.delorowater.com/2020draftuwmp](http://www.delorowater.com/2020draftuwmp) or you may email [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com) to request that the draft copy be emailed to you.

Comments on the Draft UWMP may be made at the scheduled public hearing to be held via Zoom on Thursday, June 24, 2021 at 7 pm. To RSVP for the public hearing, please register using the contact form on DOWC's website at <http://www.delorowater.com/deloro/customer-service/uwmp-rsvp.html> and an email will be sent to registrants on June 21, 2021 with the Zoom link.

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 Janice Hanna by mail at *Del Oro Water Company, Drawer 5172, Chico, CA, 95927-5172*, by email to [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com), or by fax to 530-894-5405.

Sincerely,

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)



June 8, 2021

Paradise Irrigation District  
6332 Clark Rd.  
Paradise CA 95969

**RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan**

To Whom It May Concern:

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Sincerely,

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)



June 8, 2021

Butte County Water and Resource Conservation  
308 Nelson Avenue  
Oroville, CA 95965

**RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan**

To Whom It May Concern:

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The Draft UWMP is being made available for review and comment. A draft copy of DOWC's UWMP and WSCP may be reviewed on DOWC's website at [www.delorowater.com/2020draftuwmp](http://www.delorowater.com/2020draftuwmp) or you may email [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com) to request that the draft copy be emailed to you.

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Sincerely,

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)



June 8, 2021

Stephen Lucas, Executive Director  
Butte Local Agency Formation Commission  
1453 Downer Street, Suite C  
Oroville, CA 95965-4950

**RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan**

Mr. Lucas,

Del Oro Water Company (DOWC) has prepared an Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) for its Paradise Pines District in compliance with the requirements of the California Urban Water Management Planning Act.

The Draft UWMP is being made available for review and comment. A draft copy of DOWC's UWMP and WSCP may be reviewed on DOWC's website at [www.delorowater.com/2020draftuwmp](http://www.delorowater.com/2020draftuwmp) or you may email [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com) to request that the draft copy be emailed to you.

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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 Janice Hanna by mail at *Del Oro Water Company, Drawer 5172, Chico, CA, 95927-5172*, by email to [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com), or by fax to 530-894-5405.

Sincerely,

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)

## **APPENDIX M-3**

### **ANNOUNCEMENT OF PUBLIC MEETING PROOF OF PUBLICATION**

Chico Enterprise-Record, including the Paradise Post Newspaper

**Chico Enterprise-Record**

400 E. Park Ave.  
Chico, Ca 95928  
530-896-7702  
erlegal@chicoer.com

3838196

DEL ORO WATER COMPANY  
DRAW 5172  
CHICO, CA 95927

**IN THE SUPERIOR COURT OF THE  
STATE OF CALIFORNIA,  
IN AND FOR THE COUNTY OF BUTTE**

In The Matter Of  
**Public Notice - 2020 Urban Water Management  
Plan and Water Shortage Contingency Plan**

**AFFIDAVIT OF PUBLICATION**

STATE OF CALIFORNIA }  
COUNTY OF BUTTE } **SS.**

The undersigned resident of the county of Butte, State of California, says:

That I am, and at all times herein mentioned was a citizen of the United States and not a party to nor interested in the above entitled matter; that I am the principal clerk of the printer and publisher of

**The Chico Enterprise-Record  
The Oroville Mercury-Register**

That said newspaper is one of general circulation as defined by Section 6000 Government Code of the State of California, Case No. 26796 by the Superior Court of the State of California, in and for the County of Butte; that said newspaper at all times herein mentioned was printed and published daily in the City of Chico and County of Butte; that the notice of which the annexed is a true printed copy, was published in said newspaper on the following days:

**06/10/2021, 06/17/2021**

Dated June 24, 2021  
at Chico, California

(Signature)

Legal No. **0006582948**

**DEL ORO WATER COMPANY  
PARADISE PINES DISTRICT  
CUSTOMERS**  
(Account Numbers Beginning with  
"002")  
**AND OTHER INTERESTED PARTIES  
2020 URBAN WATER MANAGEMENT  
PLAN AND WATER SHORTAGE  
CONTINGENCY 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 2020 Updated Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). Per California state law, and in compliance with the requirements of the California Urban Water Management Act, a public meeting for interested parties must be held before the report is adopted and submitted.

Comments on the combined draft UWMP and WSCP may be made at the public meeting, scheduled for June 24, 2021 at 7 PM. For accuracy of record, written comments are most desirable and strongly encouraged. Comments should be supported by factual information whenever possible.

The UWMP plan, which was previously filed in 2000, 2005, 2010, and 2015, contained 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.

**This meeting is NOT about rates and tariffs, and the adoption of the 2020 Updated Paradise Pines Urban Water Management Plan and Water Shortage Contingency Plan does not increase or decrease present rates. The plan does not propose any rate changes.**

A draft copy of DOWCPP's combined Urban Water Management Plan and Water Shortage Contingency Plan may be reviewed by PDF ONLY after June 8, 2021 online at [www.delorowater.com/2020draftuwmp](http://www.delorowater.com/2020draftuwmp). A final copy of the plan will also be made available online after comments have been received and any appropriate amendments have been made.

Please go to [www.delorowater.com/2020uwmp](http://www.delorowater.com/2020uwmp) for meeting information and to RSVP (required to attend).

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.



partments. 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: 530-894-5405  
E-Mail: [communityrelations@corporatecenter.us](mailto:communityrelations@corporatecenter.us)

Comments should mention that they pertain to Del Oro Water Company, Paradise Pines District 2020 Updated Urban Water Management Plan and Water Shortage Contingency Plan and must be received by Del Oro no later than June 21, 2021.  
6/10, 6/17/2021

## **APPENDIX M-4**

### **ADOPTION OF 2020 UWMP BY DOWC BOARD OF DIRECTORS**

Del Oro Water Company, Paradise Pines (DOWCPP)



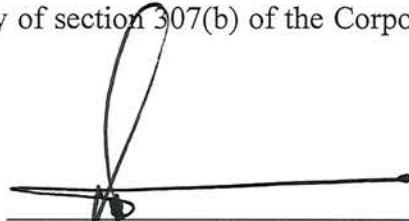
**WRITTEN CONSENT OF DIRECTORS  
TO ACTION WITHOUT A MEETING**

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 2020 Urban Water Management Plan Update has been adopted as modified after the public hearing on the evening of June 24, 2021. 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, 2021

  
\_\_\_\_\_  
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



**WRITTEN CONSENT OF DIRECTORS**

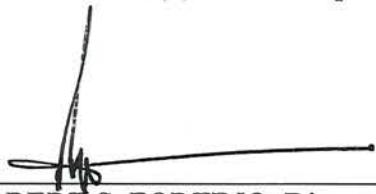
**TO ACTION WITHOUT A MEETING**

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 10632, the 2020 Water Shortage Contingency Plan Update has been adopted as modified after the public hearing on the evening of June 24, 2021. 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, 2021

  
\_\_\_\_\_  
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**

## **2015 UWMP - CHAPTER 5 (SB X7-7 BASE CALCULATIONS)**

**Del Oro Water Company, Paradise Pines (DOWCPP)**

## 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-GPCD*.

**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:

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)					

*Continued on next page*

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
		Extraordinary Events*	Economic Adjustment*	Weather Normalization*	TOTAL Adjustments*	Adjusted 2015 GPCD*		
87	146	0	0	0	0	87	87	Yes
<i>*All values are in Gallons per Capita per Day (GPCD)</i>								
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.

<b>SB X7-7 Table-1: Baseline Period Ranges</b>			
<b>Baseline</b>	<b>Parameter</b>	<b>Value</b>	<b>Units</b>
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 <sup>1, 2</sup>	10	Years
	Year beginning baseline period range	1999	
	Year ending baseline period range <sup>3</sup>	2008	
5-year baseline period	Number of years in baseline period	5	Years
	Year beginning baseline period range	2003	
	Year ending baseline period range <sup>4</sup>	2007	
<i><sup>1</sup>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.</i>			
<i><sup>3</sup>The ending year must be between December 31, 2004 and December 31, 2010.</i>			
<i><sup>4</sup>The ending year must be between December 31, 2007 and December 31, 2010.</i>			

### 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](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)	
<input type="checkbox"/>	<b>1. Department of Finance (DOF)</b> DOF Table E-8 (1990 - 2000) and (2000-2010) and DOF Table E-5 (2011 - 2015) when available
<input type="checkbox"/>	<b>2. Persons-per-Connection Method</b>
<input checked="" type="checkbox"/>	<b>3. DWR Population Tool</b>
<input type="checkbox"/>	<b>4. Other</b> 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		<b>2015</b>		<b>9,546</b>	
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”.

<b>SB X7-7 Table 4: Annual Gross Water Use</b>								
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Into Dist. System <i>This column will remain blank until SB X7-7 Table 4-A is completed.</i>	Deductions					Annual Gross Water Use	
		Exported Water	Change in Dist. System Storage (+/-)	Indirect Recycled Water <i>This column will remain blank until SB X7-7 Table 4-B is completed.</i>	Water Delivered for Ag. Use	Process Water <i>This column will remain blank until SB X7-7 Table 4-D is completed.</i>		
<b>10 to 15 Year Baseline - Gross Water Use</b>								
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
<b>10 - 15 year baseline average gross water use</b>								<b>707,002</b>
<b>5 Year Baseline - Gross Water Use</b>								
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
<b>5 year baseline average gross water use</b>								<b>737,401</b>
<b>2015 Compliance Year - Gross Water Use</b>								
<b>2015</b>		424,129	17,345	-	-	-	-	<b>406,785</b>

“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.

<b>SB X7-7 Table 4-A: Volume Entering the Distribution System(s)</b>				
Complete one table for each source.				
Name of Source		Well #2		
This water source is:				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input type="checkbox"/>	A purchased or imported source			
Baseline Year <i>Fm SB X7-7 Table 3</i>	Volume Entering Distribution System	Meter Error Adjustment* <i>Optional (+/-)</i>	Corrected Volume Entering Distribution System	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
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
<b>5 Year Baseline - Water into Distribution System</b>				
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
<b>2015 Compliance Year - Water into Distribution System</b>				
<b>2015</b>	118,618	-		118,618
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				

Continued on next page

<b>SB X7-7 Table 4-A: Volume Entering the Distribution System(s)</b>				
Complete one table for each source.				
<b>Name of Source</b>		<b>Well #3</b>		
<b>This water source is:</b>				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input type="checkbox"/>	A purchased or imported source			
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	<b>Volume Entering Distribution System</b>	<b>Meter Error Adjustment*</b> <i>Optional (+/-)</i>	<b>Corrected Volume Entering Distribution System</b>	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
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
<b>5 Year Baseline - Water into Distribution System</b>				
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
<b>2015 Compliance Year - Water into Distribution System</b>				
<b>2015</b>	68,701	-		68,701
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				

Continued on next page

<b>SB X7-7 Table 4-A: Volume Entering the Distribution System(s)</b>				
Complete one table for each source.				
<b>Name of Source</b>		<b>Well #4</b>		
<b>This water source is:</b>				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input type="checkbox"/>	A purchased or imported source			
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	<b>Volume Entering Distribution System</b>	<b>Meter Error Adjustment*</b> <i>Optional (+/-)</i>	<b>Corrected Volume Entering Distribution System</b>	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
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
<b>5 Year Baseline - Water into Distribution System</b>				
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
<b>2015 Compliance Year - Water into Distribution System</b>				
<b>2015</b>	72,839	-		72,839
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				

Continued on next page

<b>SB X7-7 Table 4-A: Volume Entering the Distribution System(s)</b>				
Complete one table for each source.				
<b>Name of Source</b>		<b>Well #6</b>		
<b>This water source is:</b>				
<input checked="" type="checkbox"/>	The supplier's own water source			
<input type="checkbox"/>	A purchased or imported source			
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	<b>Volume Entering Distribution System</b>	<b>Meter Error Adjustment*</b> <i>Optional (+/-)</i>	<b>Corrected Volume Entering Distribution System</b>	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
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
<b>5 Year Baseline - Water into Distribution System</b>				
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
<b>2015 Compliance Year - Water into Distribution System</b>				
<b>2015</b>	62,742	-	-	62,742
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				

Continued on next page

<b>SB X7-7 Table 4-A: Volume Entering the Distribution System(s)</b>				
Complete one table for each source.				
<b>Name of Source</b>		<b>Stirling Bluffs via PID</b>		
<b>This water source is:</b>				
<input type="checkbox"/>	The supplier's own water source			
<input checked="" type="checkbox"/>	A purchased or imported source			
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>	<b>Volume Entering Distribution System</b>	<b>Meter Error Adjustment*</b> <i>Optional (+/-)</i>	<b>Corrected Volume Entering Distribution System</b>	
<b>10 to 15 Year Baseline - Water into Distribution System</b>				
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
<b>5 Year Baseline - Water into Distribution System</b>				
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
<b>2015 Compliance Year - Water into Distribution System</b>				
<b>2015</b>	101,230	-		101,230
<i>* Meter Error Adjustment - See guidance in Methodology 1, Step 3 of Methodologies Document</i>				

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.

<b>SB X7-7 Table 5: Gallons Per Capita Per Day (GPCD)</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Annual Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use (GPCD)</b>
<b>10 to 15 Year Baseline GPCD</b>				
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
<b>10-15 Year Average Baseline GPCD</b>				<b>162</b>
<b>5 Year Baseline GPCD</b>				
<b>Baseline Year</b> <i>Fm SB X7-7 Table 3</i>		<b>Service Area Population</b> <i>Fm SB X7-7 Table 3</i>	<b>Gross Water Use</b> <i>Fm SB X7-7 Table 4</i>	<b>Daily Per Capita Water Use</b>
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
<b>5 Year Average Baseline GPCD</b>				<b>165</b>
<b>2015 Compliance Year GPCD</b>				
<b>2015</b>		9,622	406,785	<b>87</b>

<b>SB X7-7 Table 6: Gallons per Capita per Day</b> <i>Summary From Table SB X7-7 Table 5</i>	
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	
<input checked="" type="checkbox"/>	Method 1	SB X7-7 Tables 7A
<input type="checkbox"/>	Method 2	SB X7-7 Tables 7B, 7C, and 7D
<input type="checkbox"/>	Method 3	SB X7-7 Tables 7E
<input type="checkbox"/>	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.

<b>SB X7-7 Table 7-F: Confirm Minimum Reduction for 2020 Target</b>			
5 Year Baseline GPCD From SB X7-7 Table 5	Maximum 2020 Target <sup>1</sup>	Calculated 2020 Target <sup>2</sup>	<b>Confirmed 2020 Target</b>
165	157	130	<b>130</b>
<sup>1</sup> Maximum 2020 Target is 95% of the 5 Year Baseline GPCD except for suppliers at or below 100 GPCD. <sup>2</sup> 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).

<b>SB X7-7 Table 8: 2015 Interim Target GPCD</b>		
Confirmed 2020 Target Fm SB X7-7 Table 7-F	10-15 year Baseline GPCD Fm SB X7-7 Table 5	<b>2015 Interim Target GPCD</b>
130	162	<b>146</b>

### 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)					2015 GPCD (Adjusted if applicable)	Did Supplier Achieve Targeted Reduction for 2015?
		Enter "0" if Adjustment Not Used			TOTAL Adjustments	Adjusted 2015 GPCD		
		Extraordinary Events	Economic Adjustment	Weather Normalization				
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](http://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**

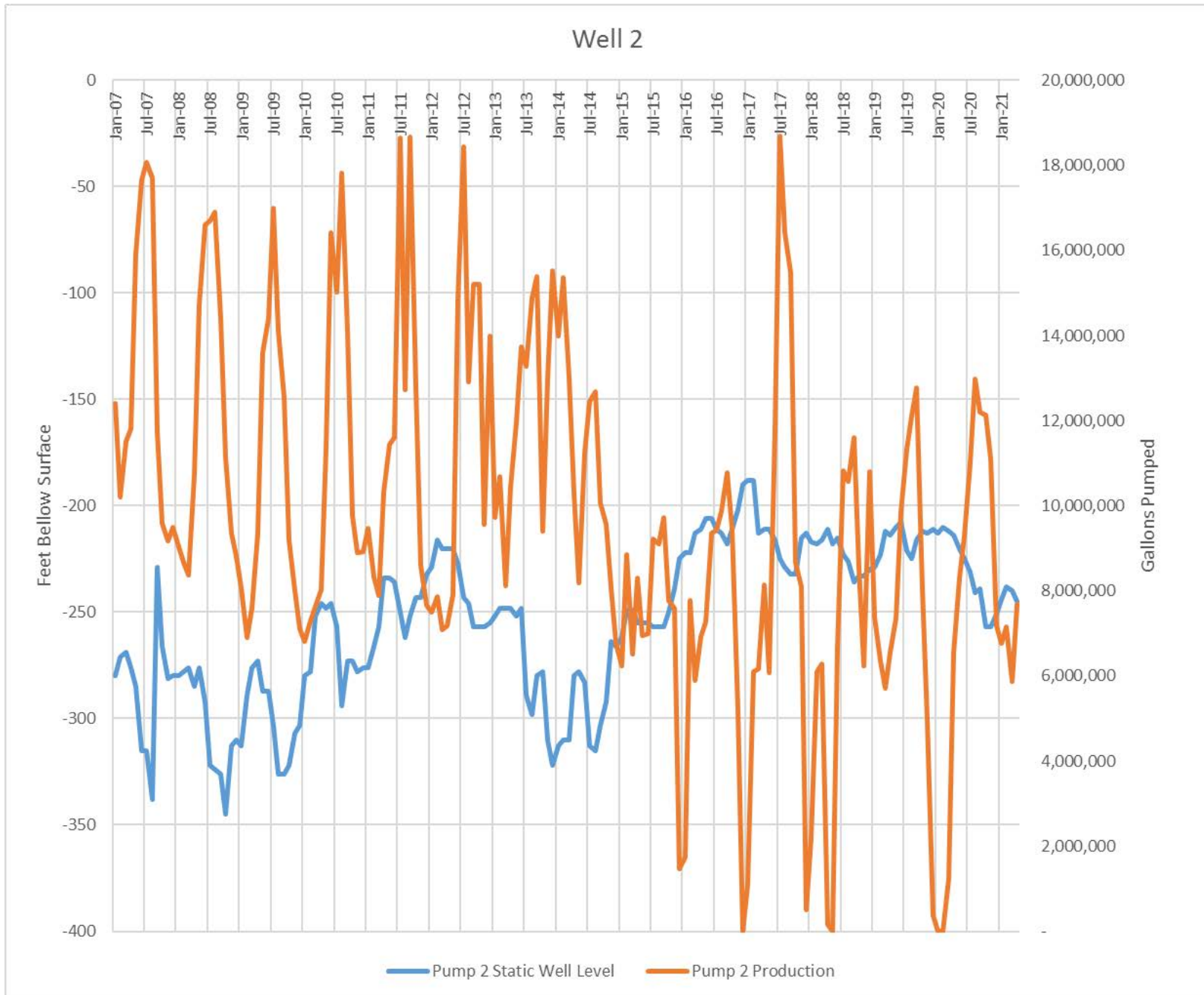
Del Oro does not participate in a Regional Alliance. Table 5-2 is therefore not applicable.

# **APPENDIX O**

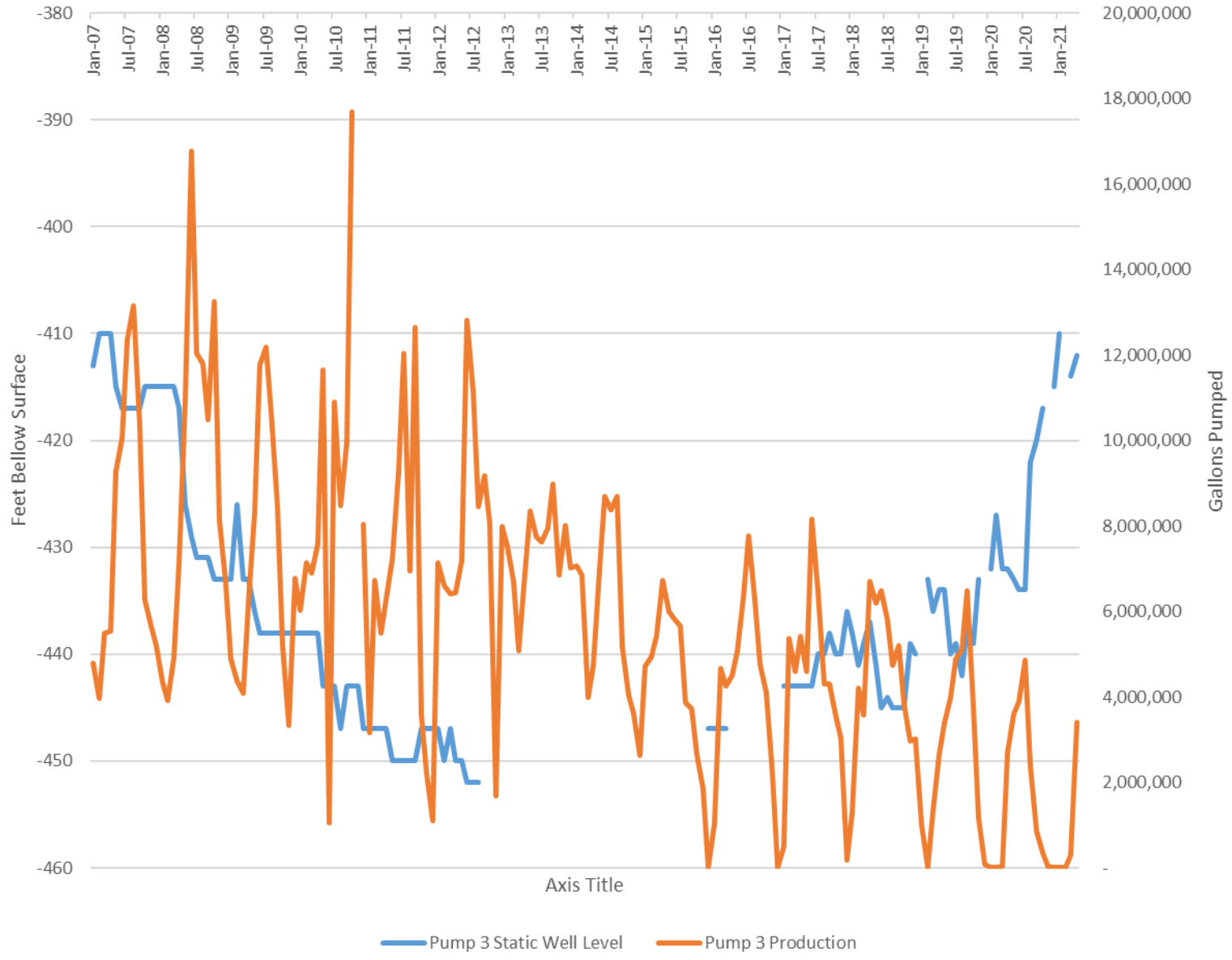
## **DROUGHT RISK ASSESSMENT DATA, METHODS, AND BASIS FOR WATER SHORTAGE CONDITIONS AND WELL LEVEL INFORMATION**

**Del Oro Water Company, Paradise Pines (DOWCPP)**

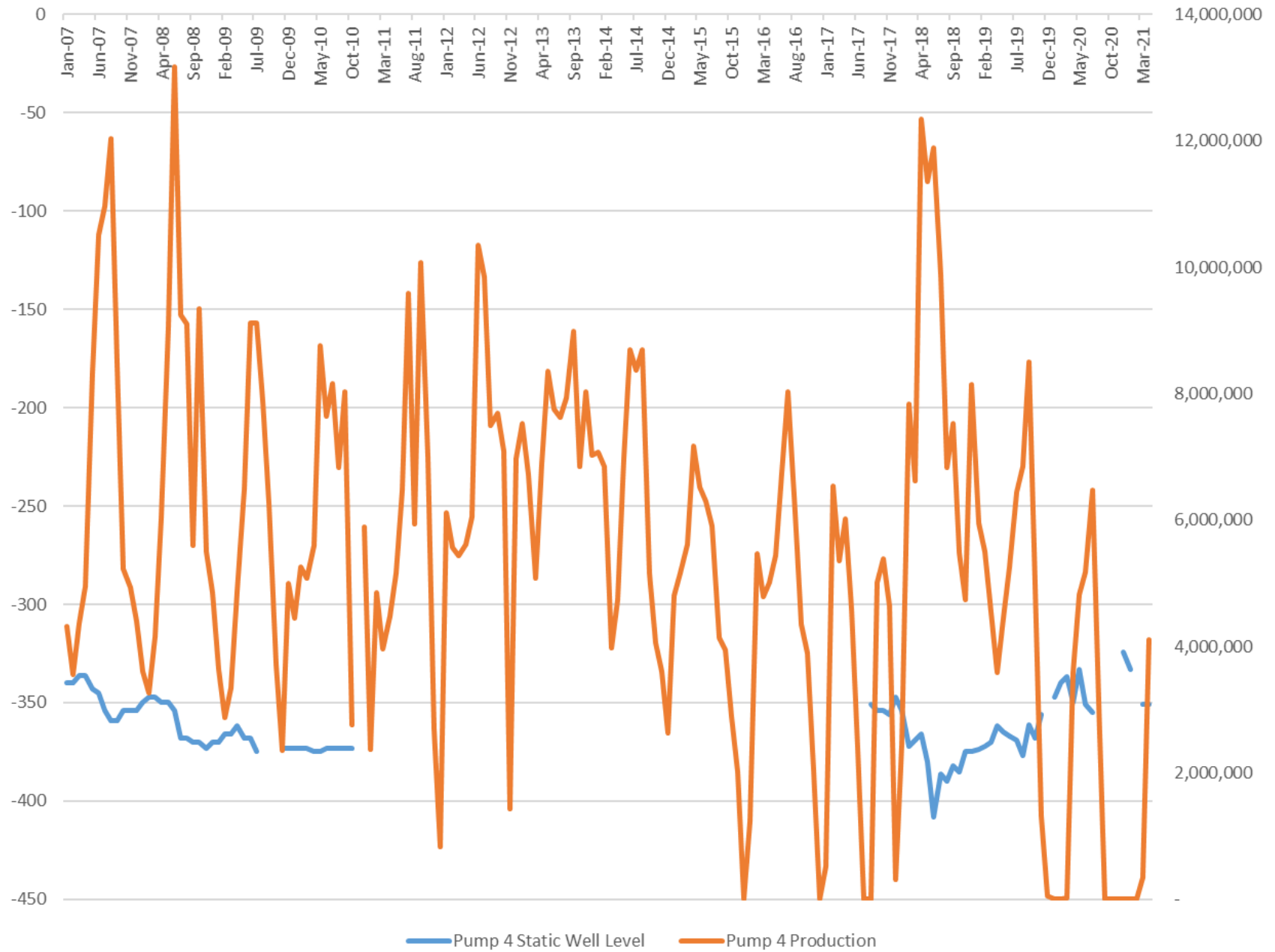
Historical well level and usage.



### Well 3

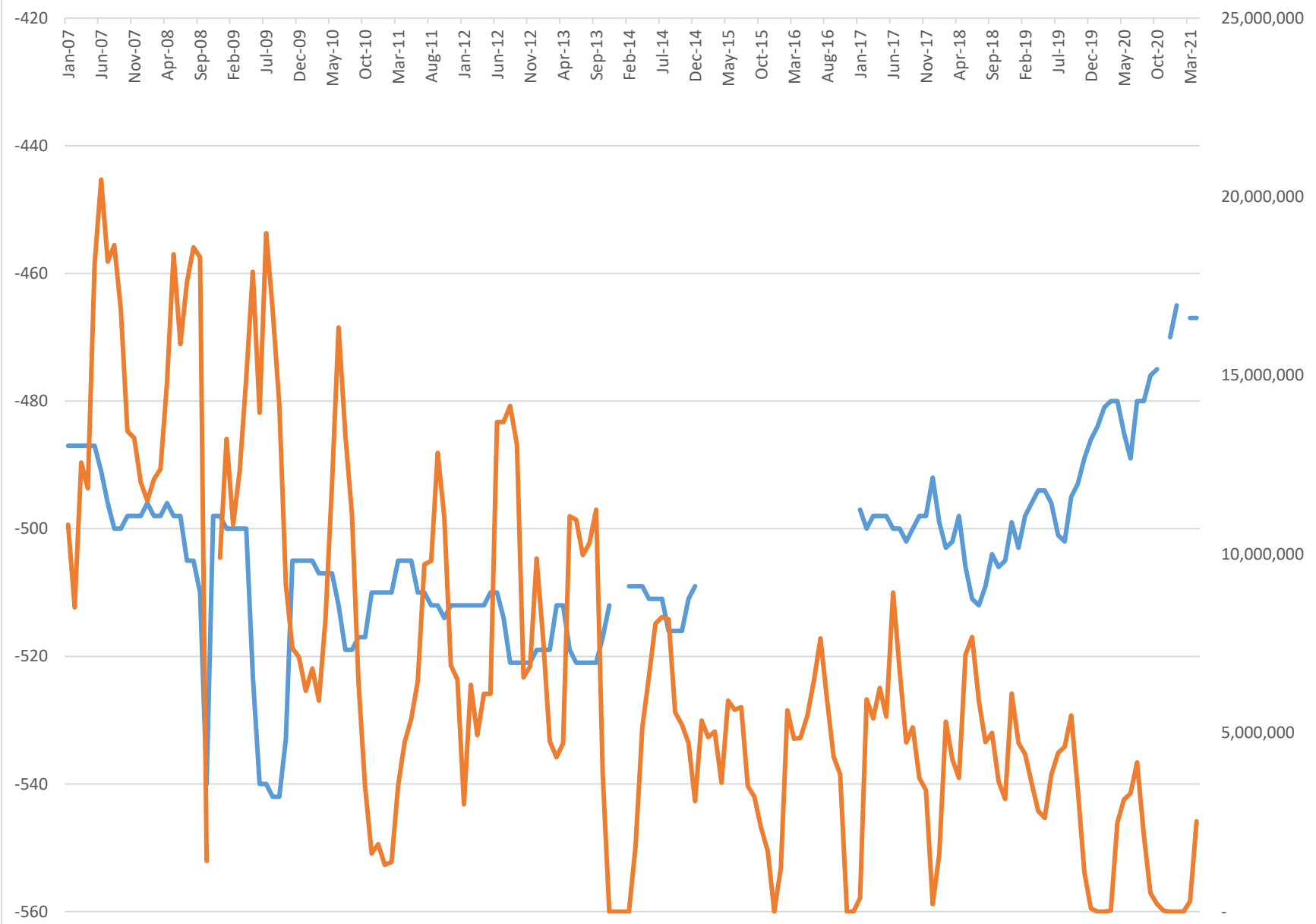


# Well 4



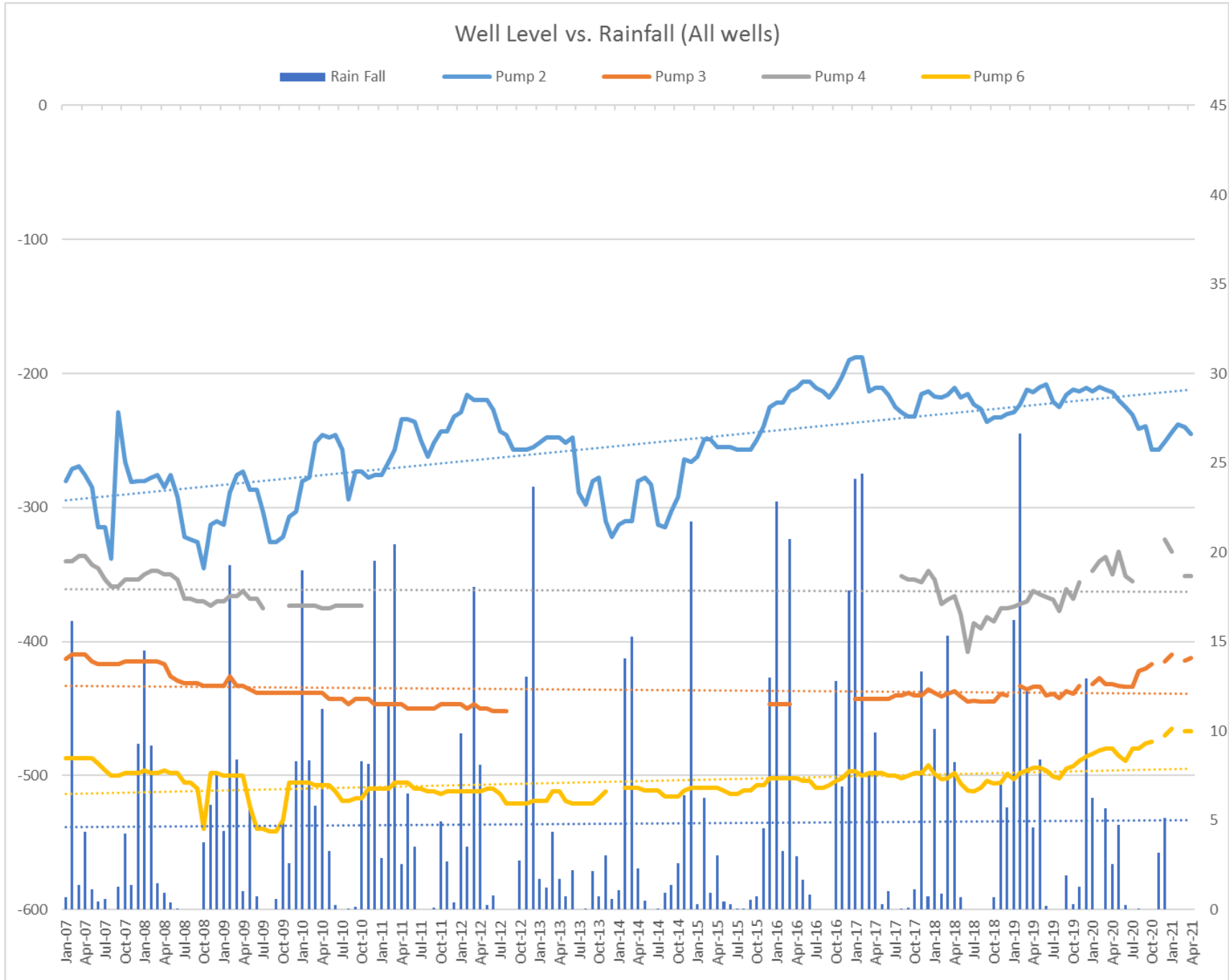


# Well 6

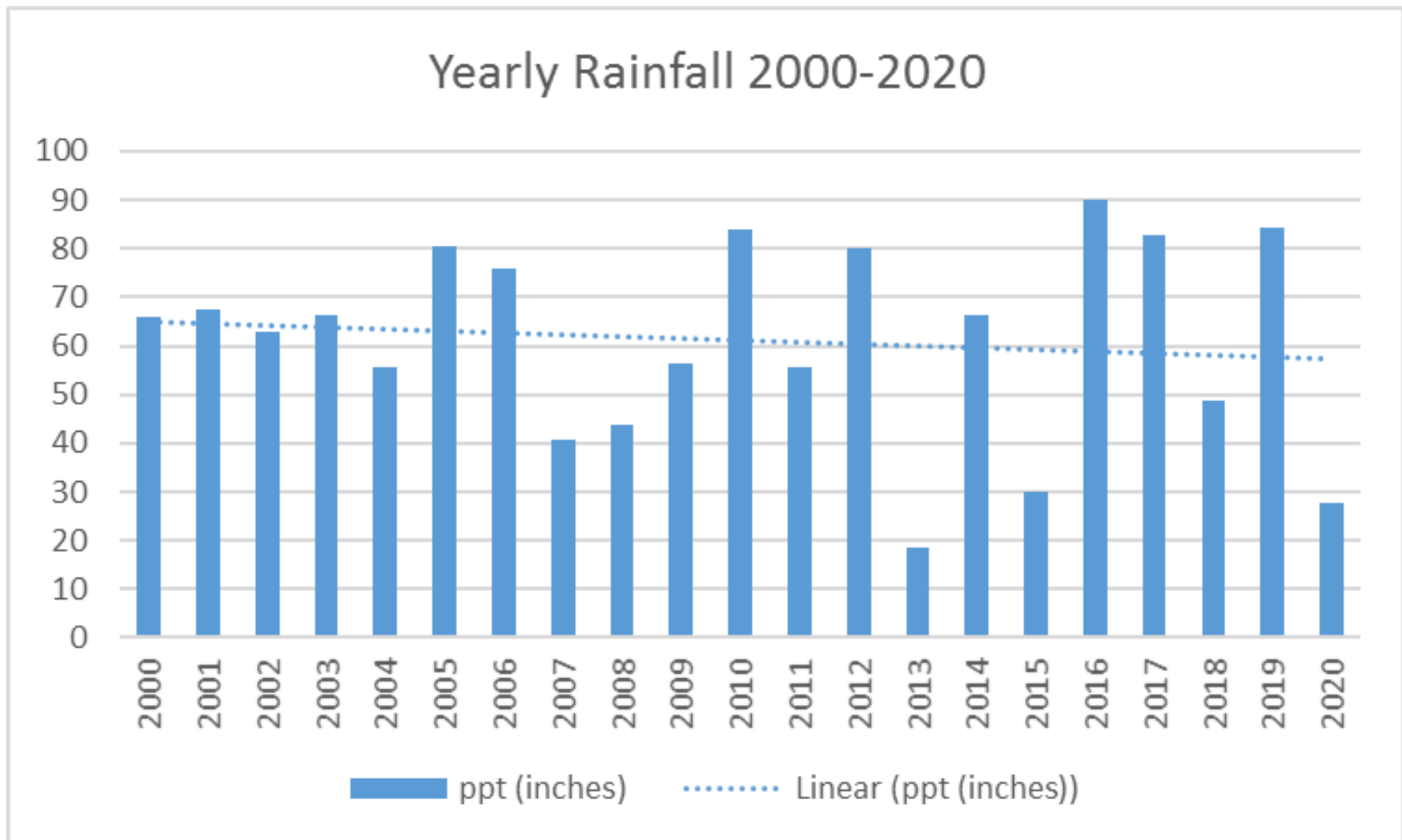


— Pump 6 Static Well Level — Pump 6 Production

Historical well levels and rainfall.



Yearly rainfall, 2000-2020.



## Part 1: SUMMARY: Existing Potable Supply Tables

*[use of monthly data is recommended]*

Total Supply		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Total
eAR (for comparison)														
2020 Actual Use		22,470	23,186	22,076	21,153	26,529	29,019	35,481	42,408	40,128	35,947	32,437	22,431	353,265
Normal Year		33,272	32,003	28,762	34,524	27,698	41,771	55,252	50,408	57,639	41,372	36,743	27,390	466,834
Single Dry Year		41,223	38,709	30,520	33,327	38,206	58,703	64,782	66,083	51,267	47,536	38,317	28,550	537,223
Multi-Year Drought	2021 (1st year)	26,159	28,474	27,877	34,530	39,079	56,806	85,989	68,758	91,288	64,716	39,468	30,643	593,786
	2022 (2nd year)	36,118	35,265	31,907	33,827	36,423	80,738	90,194	78,908	79,156	68,033	38,339	61,078	669,986
	2023 (3rd year)	46,144	37,384	29,323	37,471	52,394	65,968	70,895	75,965	78,104	53,797	50,702	48,340	646,488
	2024 (4th year)	41,771	38,709	30,520	33,327	38,206	60,165	67,192	68,775	53,630	49,889	39,735	29,358	551,279
	2025 (5th year)	32,596	31,867	30,202	34,521	33,914	44,718	54,598	48,998	46,346	39,669	29,814	11,113	438,356

## Part 2: SUMMARY: Existing and Planned Potable Supplies

Total Supply		2025	2030	2035	2040	2045 (opt)
Normal		488,006	519,931	551,857	583,782	615,708
Single Dry Year		551,279	551,279	551,279	551,279	551,279
Multi-Year Drought	Year 1	593,786	592,301	590,817	589,333	587,848
	Year 2	669,986	668,311	666,636	664,961	663,286
	Year 3	646,488	644,871	643,255	641,639	640,023
	Year 4	551,279	549,901	548,523	547,144	545,766
	Year 5	438,356	437,260	436,164	435,068	433,972

Customer Water Use Worksheet.

**Part 1: Current (2020) Total Water Use (potable)**

*[use of monthly data is recommended]*

Use Category		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	2020 Tot.
2020	Single-family Residential	15,011	14,155	14,328	14,437	19,321	20,119	27,432	30,587	30,251	28,006	23,663	16,454	253,764
	Multi-family Residential	240	222	287	175	191	277	281	277	266	225	245	240	2,926
	Commercial	345	369	307	249	283	409	605	692	618	733	552	456	5,618
	Industrial													0
	Institutional and Governmental	1,214	348	1,296	604	766	930	1,742	1,670	1,545	1,520	1,144	762	13,540
	Landscape Irrigation	1	2	3	4	15	37	68	135	366	14	76	84	806
	Sales to Other Agencies	684	717	585	628	897	1,008	1,434	2,079	1,710	1,200	1,074	640	12,656
	Agricultural													0
	Other 1	2,891	4,761	2,756	2,625	2,061	2,104	789	1,454	852	772	2,495	762	24,322
	Other 2													0
	Other 3													0
	Customer Water Use Subtotal	20,386	20,574	19,562	18,723	23,534	24,884	32,352	36,893	35,608	32,470	29,250	19,398	313,632
	Distribution System Water Loss	3,303	3,303	3,303	3,303	3,303	3,304	3,304	3,304	3,303	3,303	3,303	3,303	3,303
2020 Total Water Use	23,689	23,877	22,865	22,026	26,837	28,188	35,656	40,197	38,911	35,773	32,553	22,701	353,271	

## Part 2: Projected Total Water Use (potable)

2025	2030	2035	2040	2045 (opt)
312,389	370,865	405,958	416,199	426,698
3,602	4,276	4,681	4,799	4,920
6,916	8,210	8,987	9,214	9,447
16,668	19,788	21,661	22,207	22,767
992	1,178	1,289	1,322	1,355
18,820	18,820	18,820	18,820	18,820
29,941	35,545	38,909	39,890	40,897
389,328	458,682	500,305	512,451	524,904
48,797	57,932	63,413	65,013	66,653
438,125	516,614	563,718	577,464	591,557

## Part 3: Estimating Total Water Use (potable) for next 5 years *[use of monthly data is recommended]*

For Drought Risk Assessment	Change from 2020	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	16,968
	2021 Total Water Use	25,103	25,291	24,279	23,440	28,251	29,602	37,070	41,611	40,325	37,187	33,967	24,115	370,239
	Change from 2021	1,414	1,414	1,414	1,414	1,424	1,414	1,414	1,414	1,414	1,414	1,414	1,414	16,978
	2022 Total Water Use	26,517	26,705	25,693	24,854	29,675	31,016	38,484	43,025	41,739	38,601	35,381	25,529	387,217
	Change from 2022	1,414	1,414	1,414	1,414	1,414	1,418	1,414	1,414	1,414	1,414	1,414	1,414	16,972
	2023 Total Water Use	27,931	28,119	27,107	26,268	31,089	32,434	39,898	44,439	43,153	40,015	36,795	26,943	404,189
	Change from 2023	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	16,968
	2024 Total Water Use	29,345	29,533	28,521	27,682	32,503	33,848	41,312	45,853	44,567	41,429	38,209	28,357	421,157
	Change from 2024	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	1,414	16,968
	2025 Total Water Use	30,759	30,947	29,935	29,096	33,917	35,262	42,726	47,267	45,981	42,843	39,623	29,771	438,125



<b>2024</b>	<b>M1</b>	<b>M2</b>	<b>M3</b>	<b>M4</b>	<b>M5</b>	<b>M6</b>	<b>M7</b>	<b>M8</b>	<b>M9</b>	<b>M10</b>	<b>M11</b>	<b>M12</b>	<b>Total</b>
Total Potable Water Use [Use Worksheet]	29,345	29,533	28,521	27,682	32,503	33,848	41,312	45,853	44,567	41,429	38,209	28,357	421,157
Total Potable Supplies [Supply Worksheet]	41,771	38,709	30,520	33,327	38,206	60,165	67,192	68,775	53,630	49,889	39,735	29,358	551,279
Surplus/Shortfall w/o WSCP Action	12,426	9,176	1,999	5,645	5,703	26,318	25,880	22,922	9,063	8,460	1,527	1,001	130,122
Planned WSCP Actions (use reduction and supply augmentation)													
WSCP - supply augmentation benefit													0
WSCP - use reduction savings benefit													0
Revised Surplus/(shortfall)	12,426	9,176	1,999	5,645	5,703	26,318	25,880	22,922	9,063	8,460	1,527	1,001	130,122
Resulting % Use Reduction from WSCP action	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>2025</b>	<b>M1</b>	<b>M2</b>	<b>M3</b>	<b>M4</b>	<b>M5</b>	<b>M6</b>	<b>M7</b>	<b>M8</b>	<b>M9</b>	<b>M10</b>	<b>M11</b>	<b>M12</b>	<b>Total</b>
Total Potable Water Use [Use Worksheet]	30,759	30,947	29,935	29,096	33,917	35,262	42,726	47,267	45,981	42,843	39,623	29,771	438,125
Total Potable Supplies [Supply Worksheet]	32,596	31,867	30,202	34,521	33,914	44,718	54,598	48,998	46,346	39,669	29,814	11,113	438,356
Surplus/Shortfall w/o WSCP Action	1,837	920	267	5,425	-3	9,457	11,873	1,731	365	-3,174	-9,808	-18,658	231
Planned WSCP Actions (use reduction and supply augmentation)													
WSCP - supply augmentation benefit													0
WSCP - use reduction savings benefit					3				3174	9908	18658		31,743
Revised Surplus/(shortfall)	1,837	920	267	5,425	0	9,457	11,873	1,731	365	0	100	0	31,974
Resulting % Use Reduction from WSCP action	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	25%	63%	7%



# **APPENDIX P**

## **UWMP CHECKLIST - 2020**

**Del Oro Water Company, Paradise Pines (DOWCPP)**

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	1
x	x	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	1
x	x	Section 2.2	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	3
x	x	Section 2.6	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	4
x	x	Section 2.6.2	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 and contingency plan.	Plan Preparation	6
x		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	6
	x	Section 2.6	10631(h)	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	N/A
x	x	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	8
x	x	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	13-15
x	x	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	16-19
x	x	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	19
x	x	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	16-19 & Appx. N
x	x	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	19
x	x	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	20-21
x	x	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	24
x	x	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans and other policies or laws.	System Water Use	25, 28-29
x	x	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	26-27
x	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	24
x	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	29-31
x	x	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	31
x		Chapter 5	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	32
x		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	33
	x	Section 5.1	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	N/A
x		Section 5.2	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	N/A
x		Section 5.5	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	32-33

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	33
x	x	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	43-45
x	x	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, <i>including changes in supply due to climate change.</i>	System Supplies	43-45
x	x	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	36
x	x	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	42-43
x	x	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030, 2035, 2040 and optionally 2045.	System Supplies	42-43
x	x	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	34-35
x	x	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or 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	36
x	x	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	36
x	x	Section 6.2.2	10631(b)(4)(B)	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	N/A
x	x	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	36
x	x	Section 6.2.2.4	10631(b)(4)(C)	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	38-39
x	x	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	44
x	x	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.	System Supplies	41
x	x	Section 6.2.5	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)	39-40
x	x	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	39-40
x	x	Section 6.2.5	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)	39-40
x	x	Section 6.2.5	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)	39-40
x	x	Section 6.2.5	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)	39-40
x	x	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	39-40
x	x	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	41
x	x	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	39-40
x	x	Section 6.2.8, Section 6.3.7	10631(f)	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 for a period of drought lasting 5 consecutive water years.	System Supplies	41-44
x	x	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	44

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x	x	Section 7.2	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	45-46
x	x	Section 7.2.4	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	45-46
x	x	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive 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	46-49
x	x	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	50-53
x	x	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	52-53
x	x	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	46-52
x	x	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	46-52
x	x	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	53-54
x	x	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	55-65
x	x	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	54
x	x	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	54
x	x	Section 8.2	10632(a)(2)(A)	Provide the written decision-making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	55
x	x	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	55
x	x	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	56
x	x	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	57
x	x	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	59
x	x	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	57
x	x	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	60
x	x	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	60
x	x	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	57
x	x	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	60
x	x	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	61
x	x	Section 8.5 and 8.6	10632(a)(5)(B) 10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	61

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (Optional Column for Agency Review Use)
x		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	61-62
x		Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	63
x	x	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	63
x	x	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	63
x	x	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	64
x	x	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	64
x		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	64
x		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	64
x		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	65
x	x	Sections 8.12 and 10.4	10635(c)	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 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	65
x	x	Section 8.12	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	65
	x	Sections 9.1 and 9.3	10631(e)(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	N/A
x		Sections 9.2 and 9.3	10631(e)(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	66-72
x		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	74
x	x	Section 10.2.1	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. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	73-74
x	x	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	75
x	x	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	74
x	x	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	74
x	x	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	74
x	x	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	75
x	x	Section 10.4	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	75
x	x	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	75

<b>Retail</b>	<b>Wholesale</b>	<b>2020 Guidebook Location</b>	<b>Water Code Section</b>	<b>Summary as Applies to UWMP</b>	<b>Subject</b>	<b>2020 UWMP Location (Optional Column for Agency Review Use)</b>
x	x	Section 10.5	10645(a)	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	75
x	x	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency 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	75
x	x	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	75
x	x	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	75-76

# **APPENDIX Q**

## **WATER SHORTAGE CONTINGENCY PLAN**

**Del Oro Water Company, Paradise Pines (DOWCPP)**



2020

# Water Shortage Contingency Plan

**Submitted by:**

Del Oro Water Company, Paradise Pines District  
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**Prepared by:**

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Under the Direction of:

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**Adopted by:**

Del Oro Water Company Board of Directors  
July 1, 2021



# Del Oro Water Company, Paradise Pines District 2020 Water Shortage Contingency Plan

## Contact Sheet

Date plan submitted to the Department of Water Resources: **July 1, 2021**

Names of persons preparing this plan:

**Stephanie Sprague, Senior Staff Accountant; and**

**Kaila Clark, Staff Accountant; under the direction of**

**Janice Hanna, Director of Corporate Accounting and Regulatory Affairs**

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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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Appendix A – Rule 14.1 Water Shortage Contingency Plan

Appendix B – Schedule 14.1 Staged Mandatory Water Use Reductions

Appendix C – Emergency Response Plan

Appendix D – Record of Public Notification and Submission

## Acronyms Used in this Plan

<b>CASGEM</b>	California Statewide Groundwater Elevation Monitoring Program	
<b>CPUC</b>	California Public Utilities Commission	<a href="http://www.cpuc.ca.gov/PUC/water">www.cpuc.ca.gov/PUC/water</a>
<b>CWC</b>	California Water Code	
<b>DOWC</b>	Del Oro Water Company	<a href="http://www.delorowater.com">www.delorowater.com</a>
<b>DOWCLS</b>	Del Oro Water Company's Lime Saddle District	<a href="http://www.delorowater.com/lime-saddle.html">www.delorowater.com/lime-saddle.html</a>
<b>DOWCPP</b>	Del Oro Water Company's Paradise Pines District	<a href="http://www.delorowater.com/paradise-pines.html">www.delorowater.com/paradise-pines.html</a>
<b>DOWCSB</b>	Del Oro Water Company's Stirling Bluffs District	<a href="http://www.delorowater.com/stirling-bluffs.html">www.delorowater.com/stirling-bluffs.html</a>
<b>DRA</b>	Drought Risk Assessment	<a href="#">See Chapter 7 for additional explanation</a>
<b>DWR</b>	(California) Department of Water Resources	<a href="http://www.water.ca.gov">www.water.ca.gov</a>
<b>PID</b>	Paradise Irrigation District	<a href="http://www.pidwater.com">www.pidwater.com</a>
<b>SLRRMA</b>	Statewide Lost Revenue Recovery Memorandum Account	
<b>SWRCB</b>	(California) State Water Resources Control Board	<a href="http://www.waterboards.ca.gov">www.waterboards.ca.gov</a>
<b>WSCP</b>	Water Shortage Contingency Plan	<a href="#">See Chapter 8 for additional explanation</a>

## Water Shortage Contingency Planning

The Water Shortage Contingency Plan (WSCP) for the Del Oro Water Company Paradise Pines district (DOWCPP) is included in chapter 8 of DOWCPP Urban Water Management Plan, and in Appendix Q.

The WSCP serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios. The primary objective of the WSCP is to ensure that DOWCPP has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions.

**CWC** 10632 (3) (A) *Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.*

### 1 Water Supply Reliability Analysis

DOWCPP uses groundwater as its main source of supply. This is supplemented with transfers from DOWC's Stirling Bluffs District.

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 up-thrust 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.

The four wells that make up the groundwater sources for DOWCPP are comprised of fractured rock as described above. This type of aquifer structure leads to variable amounts of water available to the wells. Water fills the space between cracks and fractures, the extent of which can vary the amount of water production. It can take up to seven years for surface water to reach the aquifer(s) accessed by DOWCPP's wells. This causes variable water levels, even in wells that are nearby. Butte County does not conduct groundwater monitoring in these areas; however, DOWC constantly monitors the water levels in all wells. Wells in this region of fractured rock are of great risk of "going dry" due to their nature, especially during drought and dry periods, and because climate is not predictive of groundwater availability in the DOWCPP area, DOWC's well depth and constant monitoring helps alleviate this risk

Since 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.

Each DOWCPP well is monitored individually. Well levels are reported daily for constant monitoring. However, the fractured rock nature of the wells makes it difficult to gauge long term reliability, since well recharge happens at variable rates. Based on historical monitoring, Wells 2 and 6 have a consistent average level with a very quick recharge. Well 2 and Well 6 levels correspond closely to rainfall levels with recharge of about one year. Well 2 is the most heavily used so levels vary significantly. Well 3 has no observed volatility, but is slower to recharge. Recharge is estimated to lag behind rainfall by about 3 years for Well 3. Finally, Well 4, which also has no volatile changes, is the first to drop below levels that sustain pumping and is the slowest to recharge. Recharge appears to be about 5 years for Well 4, depending on rainfall levels. To combat the inconsistency of recharge rates, DOWC uses constant monitoring to identify low well levels and cease production until the level returns to an acceptable level. The system setup allows for water to be easily moved around the district, causing no interruptions for customers.

DOWCPP has additional emergency resources available.

DOWCPP has an exchange agreement in place with neighboring Paradise Irrigation District (PID). The water is diverted from DOWC Stirling Bluffs (DOWCSB), at Toadtown by weir into Little Butte Creek / Butte Canal. This water is transported into Paradise Lake, owned by PID. From Paradise Lake it is released by valve into a natural ditch and finally deposited into Magalia Reservoir. Magalia Reservoir acts as a holding tank for PID's water treatment plant. Once water is treated, it is pumped into the DOWCPP system by booster pump. Water is metered going both into and out of the exchange system. DOWCPP pays a fee per acre foot for PID to treat and transport the water. This water acts as a supplement water supply to the DOWCPP system.

In 2011, the Regional Intertie Project was completed, which allowed DOWC's Lime Saddle District (DOWCLS) to become self-sufficient with internal water supplies from groundwater and surface water from Lake Oroville. Prior to this project's completion, DOWCLS was supplied water through a similar transfer through PID. The existing infrastructure allows for water to pass into PID's system from DOWCLS and then into DOWCPP. A similar inter-district intertie is set up with PID and DOWC's Magalia district (DOWCMG). The interties with PID allow for emergency water to be transferred to DOWCPP in the case of wells going dry.

All available transfers to DOWCPP, are from both surface water and ground water sources. Water that is transferred from DOWCSB is from a natural creek. DOWC has never experienced reduced flows from that source. Therefore, water is considered very reliable from DOWCSB to supplement DOWCPP as needed. PID is sourced through surface water having a similar source as DOWCSB, and is supplemented with wells that have a similar composition as DOWCPP's wells. Therefore, it is probable that reliability is high if emergency water is needed from PID. Finally, water from DOWCLS is mainly surface water. Water is drawn in from Lake Oroville until the lake level is too low. The lake level historically drops below usable levels only in very dry or multiple dry years. DOWCLS is supplemented by ground water with wells of similar composition as DOWCPP, with similar reliability.

## 2 Annual Water Supply and Demand Assessment Procedures

**CWC** 10632(a)(2) *The procedures used in conducting an annual water supply and demand assessment that include, at a minimum, both of the following:*

*(A) The written decision-making process that an urban water supplier will use each year to determine its water supply reliability.*

*(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:*

*(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.*

*(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.*

*(iii) Existing infrastructure capabilities and plausible constraints.*

*(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.*

*(v) A description and quantification of each source of water supply.*

### 2.1 Decision-Making Process

On a monthly basis, well levels, water usage, and water loss are monitored by DOWCPP's staff to determine if there is likely to be a water shortage condition. Should water shortage conditions be likely, monitoring is increased to biweekly or weekly. All criteria are assessed by DOWCPP staff, and if warranted, staff will follow DOWCPP's WSCP to limit water shortages based on these findings.

### 2.2 Data and Methodologies

#### 1. Evaluation Criteria

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. Wells in this region of fractured rock are of great risk of "going dry" due to their nature, especially during drought and dry periods, and because climate is not predictive of groundwater availability in the DOWCPP area, DOWC's well depth and



constant monitoring helps alleviate this risk.<sup>1</sup> Evaluation of Groundwater Sustainability Act (GSA), local, and state regulatory conditions of mandated drought or water use restrictions.

## 2. Water Supply

The groundwater in the DOWCPP area is within a volcanic setting; it is not an adjudicated basin, discussed in detail in Section 1.0. There are currently no GSA-mandated pumping limitations; however, well level monitoring determines potential constraints on water supply.

## 3. Current Year Unconstrained Customer Demand

Current demand is difficult to gauge correctly, from 2007 to 2016, DOWCPP observed a rise in the number of younger adults and families with children, and a decline in the total number of connections. Trends observed through 2015 showed that the retiree population, which previously fueled DOWCPP's growth, was gradually passing on, and the newly vacant properties were being occupied by new residents more slowly than the vacancies were being created. The Camp Fire in 2018 destroyed approximately 33% of homes in DOWCPP's service area, and drove many retirees out of the district. DOWC expects most of the newly rebuilt homes and remaining homes to be occupied by young families. In addition, fear of fire, new building requirements, and warming weather conditions have generally increased water usage per connection. However, passive savings resulting from possible future codes, standards, ordinances, and land use plans were not considered in the following projections. While DOWC acknowledges that passive savings will occur as new homes with efficient, modern plumbing and fixtures replace older homes that were lost in the Camp Fire, DOWC is unable to reliably estimate those savings.

Projected demand can be gauged based on historical information from last year, with an approximate 3% increase for population restoration.

## 4. Current Year Available Supply

As discussed in the evaluation criteria above, supply is monitored via well levels plus the full amount of exchange water available from DOWCSB. Barring drastic well level changes which would cause DOWCPP to reduce or cease production from a particular well, supply availability is assumed to be equal the current year unconstrained demand.

## 5. Infrastructure Considerations

There are no currently planned projects to increase supply. DOWCPP's infrastructure is fully built out for the current service area, and there are no plans for the service area to be expanded. Infrastructure repairs and maintenance are done on an as-needed basis. Mainline replacements are planned on an every-other-year basis. 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.

## 6. Other Factors

As identified under the evaluation criteria above, local regulatory conditions could potentially limit the availability of supplies. If such constraints are identified, DOWCPP will modify this WSCP to address these constraints and mitigate potential effects.

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<sup>1</sup> <https://www.buttecounty.net/wrcdocs/Reports/I%26A/2016WI%26AFINAL.pdf> Butte County Water Inventory and Analysis, June 2016, Section 4.3.1

### 3 Six Standard Water Shortage Stages

**CWC** 10632(a)(3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers’ water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	Percent Shortage Range	Shortage Response Actions (Narrative description)
1	Up to 10%	Demand Reduction (See Table 8-2)
2	Up to 20%	Demand Reduction (See Table 8-2)
3	Up to 30%	Demand Reduction (See Table 8-2)
4	Up to 40%	Demand Reduction (See Table 8-2)
5	Up to 50%	Demand Reduction (See Table 8-2)
6	>50%	Demand Reduction (See Table 8-2)

### 4 Shortage Response Actions

**CWC** 10632 (a)(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

- (A) Locally appropriate supply augmentation actions.
- (B) Locally appropriate demand reduction actions to adequately respond to shortages.
- (C) Locally appropriate operational changes.
- (D) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.
- (E) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

*Continued on next page*

## 4.1 Demand Reduction

<b>Table 8-2: Demand Reduction Actions</b>				
Shortage Level	Demand Reduction Actions	Estimated reduction of shortage gap?	Additional Explanation or Reference (optional)	Penalty, Charge, or Other Enforcement?
1	Expand Public Information Campaign	7%		No
	Improve Customer Billing			No
	Landscape - Restrict or prohibit runoff from landscape irrigation			Yes
	Landscape - Limit landscape irrigation to specific times			Yes
	CII - Lodging establishment must offer opt out of linen service			Yes
	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner			Yes
	Other - Prohibit use of potable water for washing hard surfaces			Yes
2	Other	13%	Continue With Stage 1	Yes
	Offer Water Use Surveys			No
	Landscape - Limit landscape irrigation to specific days			Yes
	Landscape - Prohibit certain types of landscape irrigation			Yes
	CII - Restaurants may only serve water upon request			Yes
	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water			Yes
3	Other	26%	Continue With Stage 1&2	Yes
	Decrease Line Flushing			No
	Reduce System Water Loss			No
	Increase Water Waste Patrols			No
	Implement or Modify Drought Rate Structure or Surcharge			Yes
4	Other	35%	Continue With Stage 1,2&3	Yes

Table 8-2: Demand Reduction Actions (Continued)				
Shortage Level	Demand Reduction Actions	Estimated reduction of shortage gap?	Additional Explanation or Reference (optional)	Penalty, Charge, or Other Enforcement?
	Water Features - Restrict water use for decorative water features, such as fountains			Yes
	Other water feature or swimming pool restriction			Yes
	Other - Prohibit use of potable water for construction and dust control			Yes
5	Other	44%	Continue With Stage 1,2,3,&4	Yes
	Moratorium or Net Zero Demand Increase on New Connections			Yes
	Landscape - Prohibit certain types of landscape irrigation			Yes
	Pools - Allow filling of swimming pools only when an appropriate cover is in place.			Yes
	Other		Probit Filling Pools	Yes
6	Other	55%	Continue With Stage 1,2,3,4,&5	Yes
	Landscape - Prohibit all landscape irrigation			Yes
	Pools and Spas - Require covers for pools and spas			Yes

## 4.2 Supply Augmentation

For supply augmentation, DOWCPP has an exchange agreement in place with neighboring Paradise Irrigation District (PID), see explanation in Section 8.1 and Table 8-3.

<b>Table 8-3: Supply Augmentation and Other Actions</b>			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap?	Additional Explanation or Reference <i>(optional)</i>
Shortage Level 1	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 2	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 3	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 4	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 5	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.
Shortage Level 6	Exchanges	100%	Exchange through PID intertie systems as needed. See Section 8.1.

## 4.3 Operational Changes

Primary operational changes will include increased monitoring of well levels and looking for ways to reduce water loss, including capital improvements. Most importantly, DOWCPP emphasizes the importance to DOWC’s customers on everyday conservation and reduction in overall water use.

Possible system improvement ideas to be considered for DOWCPP that will have a positive effect on the water supply:

- 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 DeSabra Reservoir, which could then be gravity fed to DOWCPP's Upper Zone. This would require construction of a treatment plant.

#### 4.4 Additional Mandatory Restrictions

The water shortage response actions included in Table 8-2 include a variety of mandatory customer water use restrictions that will be necessary to achieve the targeted demand reductions of the different shortage stages. A detailed listing of the stages is in Appendices I and J.

#### 4.5 Emergency Response Plan

See Appendix C for DOWCPP's Emergency Response Plan.

#### 4.6 Seismic Risk Assessment and Mitigation Plan

**CWC** 10632.5. (a) *In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.*

*(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.*

*(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.*

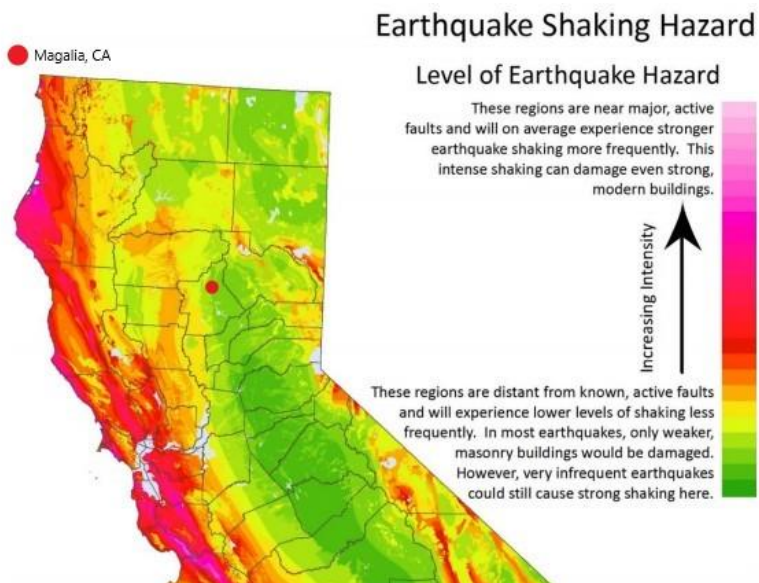
Butte County has a very low risk of seismic activity risk. According to the California State Hazard Mitigation Plan of 2018, Butte County had one declared earthquake disaster declared between 1950 and 2017. That declared disaster was in southern Butte County, quite a distance from DOWCPP. Due to this, seismic activity risk is not listed on the DOWCPP Risk and Resilience report for 2020.<sup>2</sup> See Figure 1 on the next page, which is from page 290 of that report.

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<sup>2</sup> California State Hazard Mitigation Plan of 2018 Section 6.1

[https://www.caloes.ca.gov/HazardMitigationSite/Documents/002-2018%20SHMP\\_FINAL\\_ENTIRE%20PLAN.pdf](https://www.caloes.ca.gov/HazardMitigationSite/Documents/002-2018%20SHMP_FINAL_ENTIRE%20PLAN.pdf)

Figure 1



#### 4.7 Shortage Response Action Effectiveness

Table 8-2 shows the effectiveness of the specific demand- reduction actions and implementation levels necessary for DOWCPP to achieve the targeted savings for each water shortage stage.

### 5 Communication Protocols

**CWC** 10632 (a)(5) *Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:*

*(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.*

*(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.*

*(C) Any other relevant communications*

If DOWCPP anticipates a shortage, it will begin informing customers of voluntary conservation via bill notes or inserts and website messaging. If shortages are observed, DOWCPP will file an Advice Letter with the CPUC requesting to activate its Schedule PP-14.1 to move to mandatory restrictions on water use. As part of the filing, customers will be informed via notices enclosed with their bills or mailed separately if needed in addition to website postings. If the Advice Letter is approved, customers will be notified, with all relevant restrictions, guidance, and penalty information available on DOWC’s website.

## 6 Compliance and Enforcement

**CWC 10632 (a)(6)** *For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions as determined pursuant to Section 10632.2.*

In accordance with Schedule NO. PP-14.1, DOWCPP is currently authorized to take the following actions to enforce the water use restrictions:

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.

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.

DOWCPP along with DOWC plans to submit to the California Public Utilities Commission (CPUC) Updates to both Rule 14.1 and Schedule No. PP-14.1 to align with the restrictions identified in the WSCP. Rule 14.1 is located in appendix A and Schedule No. PP 14.1 is located in appendix B.

## 7 Legal Authorities

**CWC** 10632 (a)(7) (A) *A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.*

(B) *A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1. [see below]*

(C) *A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.*

### **Water Code Section Division 1, Section 350**

*Declaration of water shortage emergency condition. The governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, shall declare a water shortage emergency condition to prevail within the area served by such*

*distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.*

DOWCPP is a privately-held water utility regulated by the CPUC. As such, it does not have the authority to adopt resolutions or ordinances. Rule 14.1, as filed with the CPUC, serves as DOWCPP's WSCP and included Mandatory Staged Restrictions of Water Use. In the event that more stringent measures are required, DOWCPP may request the addition of Schedule No. PP-14.1 which includes Staged Mandatory Water Use Reductions. DOWCPP coordinates with Butte County for the possible proclamation of a local emergency as defined in Section 8558 of the Government Code and to ensure consistency with local resolutions and ordinances.

On May 28, 2015, DOWCPP filed its current Schedule No. PP-14.1 with the CPUC. The Schedule lays out the staged mandatory reductions and drought surcharges associated with DOWCPP's WSCP. This filing is consistent with Resolution W-5034, adopted by the Commission on April 9, 2015, ordering compliance with requirements of the State Water Resources Control Board (SWRCB).

Schedule No. PP-14.1 is an extension of the WSCP provided in Rule 14.1. The compliance and enforcement information presented in this WSCP is based on the current versions of both Rule 14.1 and Schedule No. PP-14.1, which are based, in part, on the specific SWRCB requirements associated with the Governor's Executive Order B-29-15, which required statewide cutbacks to address the unprecedented 2011-2017 drought, as well as the additional information required pursuant to the CWC.

DOWCPP plans to submit to the California Public Utilities Commission (CPUC) updates to both Rule 14.1 and Schedule No. PP-14.1 to align with the restrictions identified in the WSCP and the six stage model. Rule 14.1 is located in appendix A and Schedule No. PP-14.1 is located in appendix B.

## 8 Financial Consequences of WSCP Activation

**CWC** 10632(a)(8) *A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:*

- (A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*
- (B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).*
- (C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.*

DOWCPP uses a Statewide Lost Revenue Recovery Memorandum Account (SLRRMA) to track all revenue reductions, expense fluctuations, and surcharges billed to customers during a declared drought emergency. The surcharges billed directly to customers for exceeding their allotted water budget are included in their monthly bills; while fines for wasted water, or other egregious violations, range from \$25 to \$400 per occurrence, and may include a termination of services for repeated violations. For a detailed description of the customer surcharges per stage, see appendix B. If DOWCPP can demonstrate that it is not making its allowed rate of return, the balance of the SLRRMA is submitted to the CPUC in an Advice Letter filing for a disposition decision. Customers are notified of the Advice Letter filing and have the right to respond or protest, if desired. If approved by the CPUC, the utility will collect a flat rate surcharge from customers on their monthly bills, which will be credited to the SLRRMA.

For the 2014-2016 drought, the CPUC allowed DOWCPP to collect flat surcharges in addition to drought surcharges incurred by customers who exceeded their water budgets while Schedule PP-14.1 was in effect. The drought caused a 26% revenue reduction and a net decrease of expenses by 10%. DOWCPP was able to recoup 15% of the potential to collect from the surcharges outlined in Schedule No. PP-14.1. Another 24% of the remaining lost revenue was collected through the flat surcharge.

## 9 Monitoring and Reporting

**CWC** 10632(a)(9) *For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.*

Reporting is made to all management personnel on a monthly basis. This reporting includes:

- Aggregate customer demand
- Current well and supply levels
- Operations activities (e.g., water flushing activities, leak repairs, etc.)
- Unexplained water loss
- Current and projected water supply conditions
- Customer compliance with water use restrictions
- Customer outreach activities
- Customer service inquiries

As water shortage conditions are identified or anticipated, reporting frequency and depth will be increased commiserate with the conditions.

## 10 WSCP Refinement Procedures

**CWC** 10632 (a) (10) *Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.*

DOWCPP will adopt and file any subsequent amendments to this 2020 WSCP as required by law or as needed. The amended WSCP 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.

## 11 Special Water Feature Distinction

**CWC** 10632 (b) *For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an 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.*

Per Rule 14.1, “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.

## 12 Plan Adoption, Submittal, and Availability

**CWC 10632 (c)** *The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.*

A public hearing was held on June 24, 2021. Information was provided to the public regarding DOWCPP's Water Shortage Contingency Plan. No changes to the WSCP were suggested.

The 2020 WSCP was formally adopted by the Del Oro Water Company Board of Directors following the public meeting (see Appendix D).

This 2020 update to the Del Oro Water Company, Paradise Pines District, Water Shortage Contingency Plan was submitted to the California Department of Water Resources via the WUE Data Portal and the California State Library via mail on July 1, 2021. A copy of the WSCP was also transmitted to Butte County on that date.

As of July 8, 2021, the WSCP is available on DOWC's website at <http://www.delorowater.com/2020wscp>

# **APPENDIX A**

## **RULE 14.1**

### **WATER SHORTAGE CONTINGENCY PLAN**

**Del Oro Water Company, Paradise Pines (DOWCPP)**

Rule No. 14.1  
(Continued)

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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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(To be inserted by utility)

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Director, Corporate Accounting

Effective June 1, 2015

Resolution No. W-4976 & W-5034

Rule No. 14.1  
(Continued)

N

WATER SHORTAGE CONTINGENCY PLAN

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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WATER SHORTAGE CONTINGENCY PLAN

- 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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WATER SHORTAGE CONTINGENCY PLAN

- 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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(Continued)

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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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Resolution No. W-4976 & W-5034

Rule No. 14.1  
(Continued)

N

WATER SHORTAGE CONTINGENCY PLAN

- 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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Rule No. 14.1

(Continued)

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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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Rule No. 14.1  
(Continued)

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 with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with the regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development.

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*Director, Corporate Accounting*

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Resolution No. \_\_\_\_\_

Rule No. 14.1

(Continued)

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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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Rule No. 14.1  
(Continued)

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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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Rule No. 14.1  
(Continued)

WATER SHORTAGE CONTINGENCY PLAN

- 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 with potable water of landscapes outside of newly constructed homes and buildings in a manner inconsistent with the regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development;
  - 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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Rule No. 14.1  
(Continued)

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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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Rule No. 14.1  
(Continued)

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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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Rule No. 14.1  
(Continued)

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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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Rule No. 14.1  
(Continued)

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WATER SHORTAGE CONTINGENCY PLAN

- 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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Rule No. 14.1  
(Continued)

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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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Rule No. 14.1  
(Continued)

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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 B**

## **SCHEDULE 14.1 STAGED MANDATORY WATER USE REDUCTIONS**

**Del Oro Water Company, Paradise Pines (DOWCPP)**



Schedule No. PP-14.1

**WATER SHORTAGE CONTINGENCY PLAN**  
**WITH STAGED MANDATORY REDUCTIONS AND DROUGHT SURCHARGES**  
(Continues)

N

**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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Schedule No. PP-14.1

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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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(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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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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- 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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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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**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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- 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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- 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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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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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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- 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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- 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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- 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**

**I. 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.

N

(To be inserted by utility)

Issued By

(To be inserted by P.U.C.)

Advice Letter No. 409

**JANICE HANNA**

Date Filed May 7, 2015

Decision No. \_\_\_\_\_

Director, Corporate Accounting

Effective June 1, 2015

Resolution No. W-4976 & W-5034



Schedule No. PP-14.1

N

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

(To be inserted by utility)

Issued By

(To be inserted by P.U.C.)

Advice Letter No. 409 \_\_\_\_\_

**JANICE HANNA**

Date Filed May 7, 2015

Decision No. \_\_\_\_\_

*Director, Corporate Accounting*

Effective June 1, 2015

Resolution No. W-4976 & W-5034



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  
N

(To be inserted by utility)

Advice Letter No. 409

Decision No. \_\_\_\_\_

*Issued By*

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*Director, Corporate Accounting*

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# **APPENDIX C**

## **EMERGENCY RESPONSE PLAN**

**Del Oro Water Company, Paradise Pines (DOWCPP)**



# EMERGENCY RESPONSE PLAN

## Paradise Pines District

DRAWER 5172 CHICO, CALIFORNIA 95927 – [WWW.DELOROWATER.COM](http://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:** 16,196

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 of Operations. 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 personnel 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 inspector's 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, 530-717-2500      Chief Financial Officer, 530-717-2500      Vice President of Operations, 530-717-2500

John O'Farrell, State Superintendent  
530-873-0326 Direct Line  
530-521-6132 Cell Phone

Bryan Fortino, Information Technology Administrator  
530-809-3959 Direct Line  
480-399-0061 Cell Phone

Jim Roberts, Assistant Superintendent  
530-521-8215 Cell Phone

Jake Kevwitch, Field Technician  
530-521-8219 Cell Phone

Brandan Niblett, Field Technician  
530-774-5350 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:

	<b>Name</b>	<b>Phone (Day)</b>	<b>Phone (After-hours)</b>
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 (equip. 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 in 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 |
| • Brandan Niblett | T-2 – Operator # 43983 | D-2 – Operator # 49331 |

### **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**

Chlorine is stored at the DOWC Service Center, 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**

<b>Agency</b>	<b>Address, City</b>	<b>Phone #</b>	<b>FAX #</b>
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<sup>1</sup>;
- 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 Emergency/Disaster Personnel and Responsibilities**

<b>Name / Title</b>	<b>Telephone No. (Work)</b>	<b>Role</b>
John O'Farrell	530-873-0326	State Superintendent for Paradise Pines District, will assign responsibilities to staff as needed. Assists with all duties.
State Superintendent	530-521-6132	
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.
Bryan Fortino	530-809-3959	Provides Community Relations and IT services.
Director of Community Relations Information Technology Administrator		
Plan B Pro Answering Services	530-566-0370	Assists in handling incoming phone calls

**External Emergency Contact List**

<b>Agency/Department</b>	<b>Telephone No. (Day)</b> <b>Telephone No. (After Hours)</b>
<b><i>Other Water Agency</i></b> 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
<b><i>Fire Department</i></b> Butte County Fire, 176 Nelson Ave., Oroville, CA 95965	911 or 530-538-7111
<b><i>Local Law Enforcement</i></b> Butte County Sheriff, 14166 Skyway, Magalia, CA 95954	911 or 530-538-7321
<b><i>Butte County Office of Emergency Services</i></b>	530-538-7373
<b><i>FBI Office</i></b> (terrorism or sabotage) (Also notify local law enforcement.)	911 or 916-481-9110
<b><i>California Office of Emergency Services — Warning Center</i></b> (24-hr. number)— <i>Note: Ask for referral to SWRCB Duty Officer-DDW</i>	(800) 852-7550 or (916) 845-8911
<b><i>California Dept. of Fish and Wildlife – Central Region</i></b>	530-225-2316 / 530-225-2300
<b><i>SWRCB District Office</i></b> District 21 - Valley	Reese Crenshaw, District Engineer 530-244-4861 / 530-547-5147
<b><i>Local Environmental Health Agency</i></b> 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: 530-894-5405

## **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



**State Water Resources Control Board**

Division of Drinking Water

**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:		Telephone		
Contact Name & Title	Email Address	Day	Evening	Cell
1. John O'Farrell, Superintendent	<a href="mailto:johnofarrell@delorowater.com">johnofarrell@delorowater.com</a>	530-873-0326	530-521-6132	530-521-6132
2. Jim Roberts, Asst. Super	<a href="mailto:jimroberts@delorowater.com">jimroberts@delorowater.com</a>	530-873-0326	530-521-8215	530-521-8215
3. Jake Kevwitch, Field Technician	<a href="mailto:jakekevwitch@delorowater.com">jakekevwitch@delorowater.com</a>	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	Day	Telephone Evening
1. Reese Crenshaw, Senior Sanitary Engineer	530-224-4861	530-547-5147
2. Scott Small, Water Resources Control Engineer,	530-224-3252	530-339-2445
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

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

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 within 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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**Del Oro Water Co., Paradise Pines District (DOWCPP) water is possibly contaminated with \_\_\_\_\_**

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**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.
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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 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 D**

## **RECORD OF PUBLIC NOTIFICATION & SUBMISSION**

D-1 Notification to Intent to Update UWMP & WSCP

D-2 Notification of UWMP & WSCP Public Meeting

D-3 Announcement of Hearing: Proof of Publication

D-4 Adoption of 2020 UWMP & WSCP by DOWC Board of Directors



# **APPENDIX D-1**

## **NOTIFICATION TO INTENT TO UPDATE UWMP & WSCP**

Neighboring Town - Town of Paradise, Community Development/Planning Director

Neighboring Water Provider - Paradise Irrigation District

Butte County - Water and Resource Conservation



April 1, 2021

Town of Paradise  
Community Development/Planning Director  
5555 Skyway  
Paradise, CA 95969

RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan

To Whom It May Concern:

Del Oro Water Company – Paradise Pines District, which provides water to customers in Magalia, Butte County, California, has begun preparing its 2020 Urban Water Management Plan (UWMP), which must be completed by July 1, 2021. Pursuant to California Water Code Section 10642, we are writing to notify you that preparation is underway, and to encourage your active input and involvement in the process.

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.

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)



April 1, 2021

Paradise Irrigation District  
6332 Clark Rd.  
Paradise CA 95969

RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan

To Whom It May Concern:

Del Oro Water Company – Paradise Pines District, which provides water to customers in Magalia, Butte County, California, has begun preparing its 2020 Urban Water Management Plan (UWMP), which must be completed by July 1, 2021. Pursuant to California Water Code Section 10642, we are writing to notify you that preparation is underway, and to encourage your active input and involvement in the process.

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Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)



April 1, 2021

Butte County Water and Resource Conservation  
308 Nelson Avenue  
Oroville, CA 95965

RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan

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Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)

## **APPENDIX D-2**

### **NOTIFICATION OF UWMP PUBLIC MEETING**

Neighboring Town - Town of Paradise, Community Development/Planning Director

Neighboring Water Provider - Paradise Irrigation District

Butte County - Water and Resource Conservation

Butte County - Local Agency Formation Commission (LAFCo)



June 8, 2021

Town of Paradise  
Community Development/Planning Director  
5555 Skyway  
Paradise, CA 95969

**RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan**

To Whom It May Concern:

Del Oro Water Company (DOWC) has prepared an Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) for its Paradise Pines District in compliance with the requirements of the California Urban Water Management Planning Act.

The Draft UWMP is being made available for review and comment. A draft copy of DOWC's UWMP and WSCP may be reviewed on DOWC's website at [www.delorowater.com/2020draftuwmp](http://www.delorowater.com/2020draftuwmp) or you may email [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com) to request that the draft copy be emailed to you.

Comments on the Draft UWMP may be made at the scheduled public hearing to be held via Zoom on Thursday, June 24, 2021 at 7 pm. To RSVP for the public hearing, please register using the contact form on DOWC's website at <http://www.delorowater.com/deloro/customer-service/uwmp-rsvp.html> and an email will be sent to registrants on June 21, 2021 with the Zoom link.

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 Janice Hanna by mail at *Del Oro Water Company, Drawer 5172, Chico, CA, 95927-5172*, by email to [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com), or by fax to 530-894-5405.

Sincerely,

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)



June 8, 2021

Paradise Irrigation District  
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Paradise CA 95969

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Sincerely,

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)



June 8, 2021

Butte County Water and Resource Conservation  
308 Nelson Avenue  
Oroville, CA 95965

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Del Oro Water Company (DOWC) has prepared an Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) for its Paradise Pines District in compliance with the requirements of the California Urban Water Management Planning Act.

The Draft UWMP is being made available for review and comment. A draft copy of DOWCPP's UWMP and WSCP may be reviewed on DOWC's website at [www.delorowater.com/2020draftuwmp](http://www.delorowater.com/2020draftuwmp) or you may email [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com) to request that the draft copy be emailed to you.

Comments on the Draft UWMP and WSCP may be made at the scheduled public hearing to be held via Zoom on Thursday, June 24, 2021 at 7 pm. To RSVP for the public hearing, please register using the contact form on DOWC's website at <http://www.delorowater.com/deloro/customer-service/uwmp-rsvp.html> and an email will be sent to registrants on June 21, 2021 with the Zoom link.

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 Janice Hanna by mail at *Del Oro Water Company, Drawer 5172, Chico, CA, 95927-5172*, by email to [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com), or by fax to 530-894-5405.

Sincerely,

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)





June 8, 2021

Stephen Lucas, Executive Director  
Butte Local Agency Formation Commission  
1453 Downer Street, Suite C  
Oroville, CA 95965-4950

**RE: Del Oro Water Company – Paradise Pines District 2020 Urban Water Management Plan**

Mr. Lucas,

Del Oro Water Company (DOWC) has prepared an Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP) for its Paradise Pines District in compliance with the requirements of the California Urban Water Management Planning Act.

The Draft UWMP is being made available for review and comment. A draft copy of DOWC's UWMP and WSCP may be reviewed on DOWC's website at [www.delorowater.com/2020draftuwmp](http://www.delorowater.com/2020draftuwmp) or you may email [communityrelations@delorowater.com](mailto:communityrelations@delorowater.com) to request that the draft copy be emailed to you.

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Sincerely,

Janice Hanna  
Director of Corporate Accounting and Regulatory Affairs  
Del Oro Water Company  
(530) 809-3960  
[jeh@corporatecenter.us](mailto:jeh@corporatecenter.us)

## **APPENDIX D-3**

### **ANNOUNCEMENT OF PUBLIC MEETING PROOF OF PUBLICATION**

Chico Enterprise-Record, including the Paradise Post Newspaper

# Chico Enterprise-Record

400 E. Park Ave.  
Chico, Ca 95928  
530-896-7702  
erlegal@chicoer.com

3838196

DEL ORO WATER COMPANY  
DRAW 5172  
CHICO, CA 95927

## IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE COUNTY OF BUTTE

In The Matter Of  
**Public Notice - 2020 Urban Water Management  
Plan and Water Shortage Contingency Plan**

### AFFIDAVIT OF PUBLICATION

STATE OF CALIFORNIA }  
COUNTY OF BUTTE } SS.

The undersigned resident of the county of Butte, State of California, says:

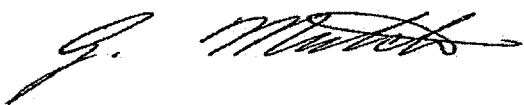
That I am, and at all times herein mentioned was a citizen of the United States and not a party to nor interested in the above entitled matter; that I am the principal clerk of the printer and publisher of

**The Chico Enterprise-Record  
The Oroville Mercury-Register**

That said newspaper is one of general circulation as defined by Section 6000 Government Code of the State of California, Case No. 26796 by the Superior Court of the State of California, in and for the County of Butte; that said newspaper at all times herein mentioned was printed and published daily in the City of Chico and County of Butte; that the notice of which the annexed is a true printed copy, was published in said newspaper on the following days:

**06/10/2021, 06/17/2021**

Dated June 24, 2021  
at Chico, California



(Signature)

Legal No. **0006582948**

**DEL ORO WATER COMPANY  
PARADISE PINES DISTRICT  
CUSTOMERS**  
(Account Numbers Beginning with  
"002")  
**AND OTHER INTERESTED PARTIES  
2020 URBAN WATER MANAGEMENT  
PLAN AND WATER SHORTAGE  
CONTINGENCY 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 2020 Updated Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). Per California state law, and in compliance with the requirements of the California Urban Water Management Act, a public meeting for interested parties must be held before the report is adopted and submitted.

Comments on the combined draft UWMP and WSCP may be made at the public meeting, scheduled for June 24, 2021 at 7 PM. For accuracy of record, written comments are most desirable and strongly encouraged. Comments should be supported by factual information whenever possible.

The UWMP plan, which was previously filed in 2000, 2005, 2010, and 2015, contained 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.

**This meeting is NOT about rates and tariffs, and the adoption of the 2020 Updated Paradise Pines Urban Water Management Plan and Water Shortage Contingency Plan does not increase or decrease present rates. The plan does not propose any rate changes.**

A draft copy of DOWCPP's combined Urban Water Management Plan and Water Shortage Contingency Plan may be reviewed by PDF ONLY after June 8, 2021 online at [www.delorowater.com/2020draftuwmp](http://www.delorowater.com/2020draftuwmp). A final copy of the plan will also be made available online after comments have been received and any appropriate amendments have been made.

Please go to [www.delorowater.com/2020uwmp](http://www.delorowater.com/2020uwmp) for meeting information and to RSVP (required to attend).

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.

partments. 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: 530-894-5405  
E-Mail: [communityrelations@corporateteamcenter.us](mailto:communityrelations@corporateteamcenter.us)

Comments should mention that they pertain to Del Oro Water Company, Paradise Pines District 2020 Updated Urban Water Management Plan and Water Shortage Contingency Plan and must be received by Del Oro no later than June 21, 2021.  
6/10, 6/17/2021

## **APPENDIX D-4**

### **ADOPTION OF 2020 UWMP & WSCP BY DOWC BOARD OF DIRECTORS**

Del Oro Water Company, Paradise Pines (DOWCPP)



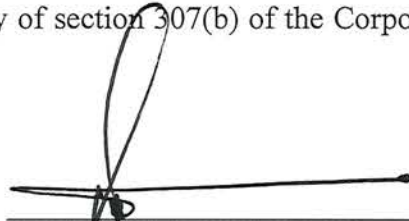
**WRITTEN CONSENT OF DIRECTORS  
TO ACTION WITHOUT A MEETING**

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 2020 Urban Water Management Plan Update has been adopted as modified after the public hearing on the evening of June 24, 2021. 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, 2021

  
\_\_\_\_\_  
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



**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 10632, the 2020 Water Shortage Contingency Plan Update has been adopted as modified after the public hearing on the evening of June 24, 2021. 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, 2021

  
\_\_\_\_\_  
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