



# **Water Shortage Contingency Plan 2020 Update**

**Rio Linda/Elverta Community Water District**

**June 2022**



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## Introduction

### 2020 Urban Water Management Plan

#### Rio Linda/Elverta Community Water District

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## 1 INTRODUCTION

### **CWC § 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.*

Rio Linda Elverta Community Water District's (District's) Water Shortage Contingency Plan (WSCP) has been developed to serve as a flexible framework of planned response measures to mitigate future water supply shortages. This WSCP builds upon and supersedes the WSCP that was presented in the 2015 Urban Water Management Plan (UWMP).

The WSCP includes the stages of response to a water shortage caused by drought or by supply interruptions caused by infrastructure failure, regulatory mandate, or catastrophic human-caused or natural events. The primary objective of the WSCP is to ensure that the District 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. The WSCP also includes procedures to conduct an annual assessment of water supply and demand in order to determine whether water shortage conditions are likely to exist in the forthcoming year, and to proactively begin the process of implementing WSCP stages of action, as appropriate.

This WSCP has been prepared in accordance with California Water Code (CWC) § 10640 and CWC § 10632 of the UWMP Act. Text from the UWMP Act has been included in grey text boxes with italicized font at beginning of relevant sections of this WSCP. The information presented in the respective WSCP sections and the associated text and tables are collectively intended to fulfill the requirements of that sub-section of the UWMP Act.



## 2 WATER SUPPLY RELIABILITY ANALYSIS

**CWC § 10632 (a) (1)** *The analysis of water supply reliability conducted pursuant to Section 10635.*

This section provides a summary of the water supply reliability analysis in Chapter 8 of the District’s 2020 UWMP, recognizing that the WSCP is intended to be a standalone document that can be adopted and amended independently.

The District overlies the North American Subbasin of the Sacramento Valley Basin, which is ranked as high priority basin.<sup>1</sup> The District is completely reliant on groundwater to meet its water demands and to date the reliability of the District’s water supply has largely been insulated from long periods of drought. Similarly, through implementation of the North American Groundwater Sustainability Plan (GSP), the District’s supply reliability is expected to be sufficient to meet all projected demands through the planning horizon of this UWMP (i.e., through 2045).

The District is not anticipated to experience supply shortfall in either single dry years or multiple dry years by 2045 based on past and projected reliability of groundwater supply even during drought years. Additionally, as part of the supply reliability analysis, the District has conducted a Drought Risk Assessment (DRA), which evaluates the effects on available water supply sources of an assumed five-year drought commencing the year after the assessment is completed (i.e., from 2021 through 2025). The District’s supply is expected to be sufficient to meet demands in all five years of the assumed drought (i.e., from 2021 through 2025).

The District has developed this WSCP to address water shortage conditions resulting from any cause (e.g., droughts, impacted distribution system infrastructure, regulatory-imposed shortage restrictions, etc.). The WSCP identifies a variety of actions that the District will implement to reduce demands and further ensure supply reliability at various levels of water shortage.

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<sup>1</sup> Basin prioritizations and break down up priority points are available here: <https://gis.water.ca.gov/app/bp-dashboard/final/>



### 3 PRIOR DROUGHT ACTIONS

The District has historically developed different strategies for reducing water demand during water shortages. The District's actions in response to the recent severe drought that occurred in California between 2014 and 2017 are discussed below.

On 1 April 2015, Governor Brown issued the fourth in a series of Executive Orders regarding actions necessary to address California's severe drought conditions. Executive Order B-29-15 directed the State Water Resources Control Board (SWRCB) to impose the first ever mandatory restrictions on urban water suppliers to achieve a statewide 25 percent reduction in potable urban water usage through February 2016. The Executive Order also required commercial, industrial, and institutional (CII) users to implement water efficiency measures, prohibited irrigation with potable water of ornamental turf in public street medians, and prohibited irrigation with potable water outside newly constructed homes and buildings that is not delivered by drip or microspray systems, along with numerous other directives.

On 5 May 2015, the SWRCB adopted Resolution 2015-0032 that mandated minimum actions by water suppliers and their customers to conserve water supplies into 2016 and assigned a mandatory water conservation savings goal to each water supplier based on their residential gallons per capita per day (R-GPCD) water use. The Office of Administrative Law approved the regulations and modified the CWC on 18 May 2015. On 2 February 2016, the SWRCB voted to extend the emergency regulations until October 2016 with some modifications. On 9 May 2016, the Governor issued Executive Order B-37-16, which directed the SWRCB to extend the emergency regulations through the end of January 2017 as well as make certain water use restrictions permanent. On 18 May 2016, the SWRCB adopted Resolution 2016-0029 that adjusted the water conservation savings goal and replaced the February 2016 emergency regulation. The SWRCB is expected to take separate action to make some of the requirements of the regulations permanent in response to the Executive Order.

The mandatory conservation standards included in CWC § 865(c) ranged from 8 percent for suppliers with an R-GPCD below 65 R-GPCD, up to 36 percent for suppliers with water use of greater than 215 R-GPCD. As with previous emergency drought regulations adopted by the SWRCB in 2014, the new water conservation regulation was primarily intended to reduce outdoor urban water use. Based on their R-GPCD, the District was required to reduce water use by 33 percent relative to its 2013 water use. Through enactment of its WSCP, the District met this reduction target. During the June 2015 through May 2016 compliance period, the District reached a cumulative savings of 33.1 percent relative to its 2013 use<sup>2</sup>. In June 2016, the District adopted its 2015 UWMP and associated WSCP update. In April 2017, the Governor Brown ended the drought State of Emergency.

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<sup>2</sup> Data from May 2016 Supplier Conservation Compliance table ([suppliercompliance\\_070616.pdf \(ca.gov\)](#))



#### 4 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.*

**CWC § 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.*

**CWC § 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.*

On an annual basis, the District will conduct a Supply-Demand Assessment (Annual Assessment) to identify whether there is likely to be a water shortage condition in the following year. For purposes of this assessment, a water shortage condition is defined as an anticipated supply shortfall of 40 percent, corresponding to Water Shortage Level 4. Each element of the Annual Assessment is described below, along with the key data inputs and methodologies for determining these elements.



1. Evaluation Criteria

The evaluation criteria that will be used to identify whether the District is likely to experience a water shortage in the coming year include:

- **Groundwater Supply** – A comparison of groundwater level elevations to well operational depths to identify any constraints on accessing the groundwater supply (e.g., dropping water levels due to limited rainfall/runoff) and to identify any potential needs to (1) lower pump depths, (2) deepen existing wells, or (3) site and drill additional supply wells.
- **Local Regulatory Conditions** – Evaluation of (1) any new Groundwater Sustainability Agency (GSA) policies (e.g., pumping allocations) or sustainability criteria that could trigger a change in groundwater volume available for pumping, and (2) any new limitations on well permitting that could limit the ability to deepen existing supply wells or drill new supply wells.
- **State Regulatory Conditions** - Evaluation of any state-mandated drought or water use restrictions known during preparation of the Annual Assessment.

These criteria will be assessed by District staff with detailed knowledge of District operations. The data used to support these assessments may include, but are not limited to, groundwater level elevations of District wells, groundwater conditions as described in the North American Subbasin GSP and associated groundwater modeling, and system demand.

2. Water Supply

On the basis of the evaluation criteria above and available supporting data, the District will quantify the projected available supply over the forthcoming year. This quantification will likely be a range, and subject to revision as new data are available and as conditions evolve.

3. Unconstrained Customer Demand

Unconstrained customer demands (i.e., the expected water use in the absence of shortage-caused reductions in water use) will be evaluated and estimated for the forthcoming year based on:

- A comparison of monthly customer demands relative to prior years (e.g., last 3 years),
- Evaluation of current and anticipated weather conditions,
- New demands anticipated during the coming year (e.g., new accounts coming online), and
- Any other potentially pertinent factors identified by the District (e.g., pandemic-related stay-at-home orders).

4. Planned Water Use for Current Year Considering Dry Subsequent Year

The District will compare the estimated unconstrained demands to the anticipated supplies for the current year, assuming that the following year will be dry using the Evaluation Criteria identified above.



**Annual Water Supply and Demand Assessment Procedures**  
**2020 Urban Water Management Plan**  
**Rio Linda/Elverta Community Water District**



5. Infrastructure Considerations

The District will evaluate how infrastructure capabilities and constraints may affect its ability to deliver supplies to meet expected customer water demands in the coming year. The constraints and capabilities are expected to include, among other things:

- Anticipated capital projects and upgrades,
- Anticipated maintenance and repairs.

6. Team Members and Decision Makers

- District General Manager (Team Members)
- Executive Committee (Team Members)
- Board of Directors (Team Members and Decision Makers)

7. Timeline

**Table 4-1** shows the timeline for preparing the annual assessment.



**Table 4-1 Annual Assessment Procedures Decision-Making Timeline**

Decision - Making Step	Start Date	End Date
Convening Team members	March 1	April 1
Determining water supplies by source for the current year	March 1	April 1
Calculating the water supply reliability using spreadsheet, computer model, or other method	March 1	May 1
Determining shortages and response actions	March 1	May 1
Preparing and presenting preliminary report to Board of Directors	April 15	May 15
Updating assessment based on final water supplies	April 15	May 15
Using the WSCP to activate the appropriate protocols	As needed	--
Preparing annual water shortage assessment report	As needed	--
Preparing decision-making documents for approval	June 1	June 1
Implementing WSCP actions as approved	June 1	June 1
Sending final annual water shortage assessment report to the State	July 1	July 1 <sup>(a)</sup>
NOTES: (a) No later than July 1 <sup>st</sup> of each year, beginning in 2022 (b) All actions listed above are under the responsibility of the District General Manager.		

Consistent with California Water Code (CWC) § 10632.1, the District will perform and submit an Annual Assessment to DWR by July 1<sup>st</sup> of each year beginning in 2022.



**Water Shortage Levels**  
**2020 Urban Water Management Plan**  
**Rio Linda/Elverta Community Water District**

## **5 WATER SHORTAGE LEVELS**

Consistent with the requirements of CWC § 10632(a)(3), this WSCP is based on the six water shortage levels (also referred to as “stages”) shown in **Table 5-1**. The previous WSCP categories are cross referenced to the existing six standard categories as follows:

- 2015 WSCP Stage 1 = 2020 WSCP Shortage Level 2;
- 2015 WSCP Stage 2 = 2020 WSCP Shortage Level 3;
- 2015 WSCP Stage 3 = 2020 WSCP Shortage Level 4; and
- 2015 WSCP Stage 4 = 2020 WSCP Shortage Level 5.

The six water shortage stages are intended to address shortage caused by any condition, including the catastrophic interruption of water supplies. **Table 5-1** also summarizes the water supply reductions and supply conditions associated with each stage of action.

**Table 5-1** describes the customer restrictions and prohibitions and consumption reduction methods (i.e., the actions to be taken by District staff) associated with each stage of action. Specific prohibitions and consumption reduction methods are discussed in more detail below. The monthly and cumulative annual water savings impacts associated with each restriction, prohibition and consumption reduction method were quantitatively estimated using the Drought Response Tool (DRT) for each stage of action. The DRT is a spreadsheet model used to identify water saving opportunities by customer sector and major end-use and to quantify and compare potential water saving benefits of implementing various suites of drought response actions.



**Table 5-1 Water Shortage Contingency Plan Levels (DWR Table 8-1)**

Shortage Level	Percent Shortage Range	Shortage Response Actions
1	Up to 10%	Minimal Shortage – Up to 10% (Voluntary) Includes implementation of voluntary restrictions on end uses (see Table 6-1) as well as agency actions (see Table 6-2).
2	10% to 20%	Moderate Shortage – 10% to 20% (Mandatory) Includes implementation of mandatory restrictions on end uses (see Table 6-1) as well as agency actions (see Table 6-2).
3	20% to 30%	Severe Shortage – 20% to 30% (Mandatory) Includes implementation of mandatory restrictions on end uses (see Table 6-1) as well as agency actions (see Table 6-2).
4	30% to 40%	Severe Shortage – 30% to 40% (Mandatory) Includes implementation of mandatory restrictions on end uses (see Table 6-1) as well as agency actions (see Table 6-2).
5	40% to 50%	Critical Shortage – 40% to 50% (Mandatory) Includes implementation of mandatory restrictions on end uses (see Table 6-1) as well as agency actions (see Table 6-2).
6	>50%	Critical Shortage – greater than 50% (Mandatory) Includes implementation of mandatory restrictions on end uses (see Table 6-1) as well as agency actions (see Table 6-2).
<p>NOTES: The appropriate Stage will be enacted by the Board of Directors to respond to the corresponding estimated water shortage that may result from the following: droughts, extreme weather events, natural disasters, extended power outages, regulatory droughts, and other water shortage conditions.</p>		



## 6 SHORTAGE RESPONSE ACTIONS

This section describes the response actions the District will take to deal with the shortages associated with each of the six stages enumerated in Section 5. Demand reduction measures, supply augmentation, and other actions are discussed below and in Table 6-1 and Table 6-2. The monthly and cumulative annual water savings impacts associated with each restriction, prohibition and consumption reduction method were quantitatively estimated using the DRT for each stage of action described further in Section 6.7 and included in Attachment 1.

### 6.1 Supply Augmentation

The District relies exclusively on groundwater to meet its water needs and does not have access to surface water or water supply augmentation through other means. Existing wells could be modified or new wells could be drilled to increase pumping capacity.

### 6.2 Demand Reduction

Consumption reduction methods are actions that are taken by the District to reduce water demand within the service area. As shown in Table 6-1 below, the WSCP lists the demand reduction actions that the District will implement during each stage of action, to reduce the District's own water consumption and encourage reduction in water use by its customers. A main focus of the District's planned demand reduction measures is to increase public outreach and keep customers informed of the water shortage emergency and actions they can take to reduce consumption. The public outreach efforts that the District will implement to respond to a water shortage are described in Section 7.



**Table 6-1 Demand Reduction Actions (DWR Table 8-2)**

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? (a)	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
Non-Drought	Other	--	<ol style="list-style-type: none"> <li>1. Hoses must be equipped with a shut-off valve for washing vehicles, sidewalks, walkways, or buildings.</li> <li>2. Restrict water use for ornamental fountains or recommend the use of re-circulated or recycled water.</li> <li>3. Potable water shall not be applied in any manner to any driveway, sidewalk, or other hard surface except when necessary to address immediate health or safety concerns.</li> <li>4. Potable water shall not be used to water outdoor landscapes in a manner that causes more than incidental runoff onto non-irrigated areas, walkways, roadways, parking lots, or other hard surfaces.</li> <li>5. Potable water cannot be applied to outdoor landscapes during and up to 48 hours after measurable rainfall.</li> <li>6. Potable water shall not be used to irrigate ornamental turf on public street medians.</li> <li>7. Encourage restaurants and other food service operations to serve water to customers only upon request during a period for which the Governor has issued a proclamation of a state of emergency.</li> <li>8. Encourage users to wash only full loads of laundry.</li> <li>9. Broken or defective plumbing and irrigation systems must be repaired or replaced within a reasonable period.</li> <li>10. Recreational water features shall be covered when not in use.</li> <li>11. Single-pass cooling systems on new construction shall not be allowed.</li> <li>12. Prohibit unauthorized use of hydrants.</li> <li>13. All water using equipment must be in working order.</li> <li>14. Encourage greywater use for irrigating landscape where possible.</li> </ol>	Yes



**Table 6-1 Demand Reduction Actions (DWR Table 8-2)**

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? (a)	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
			15. Other measures as may be approved by the State Water Resources Control Board or the District.	
1	Other	5%	1. Continue with “no drought” restrictions and prohibitions except where superseded by more stringent requirements. 2. Require repair of all leaks within 24 hours. 3. Require covers for all recreational water features such as pools. 4. Prohibit Commercial vehicle washing except with use of recycled water. 5. Other measures as may be approved by the State Water Resources Control Board or the District.	Yes
2	Other	15%	1. Continue with Stage 1 restrictions and prohibitions except where superseded by more stringent requirements. 2. Audit and reduce system water losses. 3. Limit irrigation to 3 days/week, 15 minutes/day, between 8PM and 6AM for Dedicated Irrigation, Residential users, and Commercial users. 4. Prohibit single-pass cooling systems. 5. Other measures as may be approved by the State Water Resources Control Board or the District.	Yes
3	Other	25%	1. Continue with Stage 2 restrictions and prohibitions except where superseded by more stringent requirements. 2. Limit irrigation to 2 days/week, 15 minutes/day, between 9PM and 6AM for Dedicated Irrigation, Residential users, and Commercial users. 3. Prohibit Residential washing of vehicles except with use of recycled water. 4. Other measures as may be approved by the State Water	Yes



**Table 6-1 Demand Reduction Actions (DWR Table 8-2)**

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? (a)	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
			Resources Control Board or the District.	
4	Other	35%	<ol style="list-style-type: none"> <li>1. Continue with Stage 3 restrictions and prohibitions except where superseded by more stringent requirements.</li> <li>2. Decrease frequency and length of line flushing.</li> <li>3. No new connections allowed unless already approved</li> <li>4. Conduct account surveys for Dedicated Irrigation accounts, high water using Commercial users, and high water using Residential users.</li> <li>5. Other measures as may be approved by the State Water Resources Control Board or the District.</li> </ol>	Yes
5	Other	45%	<ol style="list-style-type: none"> <li>1. Continue with Stage 4 restrictions and prohibitions except where superseded by more stringent requirements.</li> <li>2. Moratorium on new connections.</li> <li>3. Limit irrigation to 1 days/week, 10 minutes/day, between 9PM and 6AM for Dedicated Irrigation accounts, Residential users, and Commercial users.</li> <li>4. Establish water budget with 50% reduction for Dedicated Irrigation accounts, 10% reductions for Residential and 10% for Commercial Users.</li> <li>5. Other measures as may be approved by the State Water Resources Control Board or the District.</li> </ol>	Yes
6	Other	55%	<ol style="list-style-type: none"> <li>1. Continue with Stage 5 restrictions and prohibitions except where superseded by more stringent requirements.</li> <li>2. Establish water budget with 100% reduction for Dedicated Irrigation accounts, 30% reductions for Commercial Users, and 25%</li> </ol>	Yes





**Table 6-1 Demand Reduction Actions (DWR Table 8-2)**

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? (a)	Additional Explanation or Reference	Penalty, Charge, or Other Enforcement?
			reductions for Residential users. 3. Other measures as may be approved by the State Water Resources Control Board or the District.	
<p><b>NOTES:</b>                      (a) The percentages listed in this table are the cumulative savings for each shortage level with implementation of corresponding supply augmentation and other agency actions in Table 6-2. Detailed saving estimates based on end use, response action, and implementation rates can be found in Attachment 1.                      (b) Table 6-1 lists each demand reduction action as “other” because they represent a suite of demand reduction actions for each shortage level that include multiple categories of demand reduction actions provided in the DWR drop down menu.</p>				



Table 6-2 Supply Augmentation and Other Actions (DWR Table 8-3)			
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 (optional)
1	Other	5%	1. The District implement media campaigns, including: <ul style="list-style-type: none"> <li>• Publicize the water shortage and conservation measures using a media campaign, newspaper articles, and website.</li> <li>• Promote water conservation programs.</li> <li>• Hold water efficiency workshops and public events.</li> <li>• Distribute water bill inserts with information about water shortage and conservation.</li> </ul>
2	Other	15%	1. Continue with action and measures from Stage 1 except where superseded by more stringent requirements. 2. Accelerate leak detection and repair program. 3. Suspend routine flushing of water mains except when necessary to address immediate health or safety concerns. 4. Reduce distribution system pressures.
3	Other	25%	1. Continue with action and measures from Stage 2 except where superseded by more stringent requirements.
4	Other	35%	1. Continue with action and measures from Stage 3 except where superseded by more stringent requirements.
5	Other	45%	1. Continue with action and measures from Stage 4 except where superseded by more stringent requirements.
6	Other	55%	1. Continue with action and measures from Stage 5 except where superseded by more stringent requirements.
NOTES: (a) The percentages listed in this table are the cumulative savings for each shortage level with implementation of corresponding demand reduction actions in Table 6-1. Detailed saving estimates based on end use, response action, and implementation rates can be found in Attachment 1. (b) Table 6-2 lists each supply augmentation method or other actions by water supplier action as “other” because they represent a suite of actions by the water supplier for each shortage level that include multiple categories of actions provided in the DWR drop down menu.			



### 6.2.1 Prohibitions on End Uses

Restrictions and prohibitions associated with each stage of action are presented in **Table 6-1**. As discussed above, these responses focus on the reduction of non-essential water uses such as ornamental landscape irrigation, and preserve water uses that are essential to the health, safety, welfare, and economic vitality of the District’s customers.

In addition, several mandatory prohibitions are enforced at all times as part of the Non-Drought Stage to eliminate water waste, which include each of the prohibitions on end uses that are anticipated to be mandated by the SWRCB in response to Executive Order B-37-16. Prohibitions in subsequent stages go beyond the SWRCB requirements and become increasingly restrictive. Should mandatory State regulations overlap or conflict with the District’s stage of actions, the more stringent regulations will be enforced.

### 6.2.2 Defining Water Features

**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.*

As required by CWC Section 10632, the District distinguishes between “decorative water features” such as ponds, lakes, and fountains that are artificially supplied with water and “recreational water features” such as swimming pools and spas. Prohibitions on water use for decorative water features are listed separately from those for recreational water features (see **Table 6-1**).

### 6.3 **Operational Changes**

The WSCP lists the operational changes that the District will implement during each stage of action including measures to: (1) reduce system losses through a reduction in line flushing and fire training exercises, (2) increase enforcement and patrols, (3) develop water budgets, and in certain conditions, (4) implement a moratorium on new services.

### 6.4 **Mandatory Restrictions**

The water shortage response actions included in **Table 6-1** include a variety of mandatory customer water use restrictions that will be necessary to achieve the targeted demand reductions for the different shortage stages. The types of restrictions and the manner and degree of enforcement for these restrictions vary by stage and are discussed in Section 8.



## 6.5 Catastrophic Supply Interruption Plan

Catastrophic supply interruptions may be caused by a regional power outage, an earthquake, or other disaster. The District includes a system-wide Catastrophic Supply Interruption Plan in the current policy and procedure manual. Potential catastrophic events and responses are summarized below:

- Localized short-term power failure - Emergency generators at selected well start up to maintain system pressure. Request customers to reduce water uses with announcements via radio, television and internet. Coordinate with Sacramento Municipal Utility District (SMUD).
- Regional long-term power failure - Emergency generators at selected wells operate until fuel supply is exhausted. Back up fuel requested. Order customers to curtail water uses with direct phone calls, and announcements via radio, television and internet. Issue boil water order. Coordinate with SMUD.
- Malicious Act or Major explosion near facilities - Valve off tank or pipelines. Utilize additional wells to maintain system pressure. Request use of emergency connection with neighboring utilities. Request customers to reduce water uses with announcements via radio, television and internet. Request assistance from Office of Emergency Services.
- Flood from Dry Creek or breach of levee along Natomas East Main Drainage Canal - Wells removed from service. Other wells used to pump water. Possible “boil water” order. Order customers to curtail water use. Request use of emergency connection with neighboring utilities. Alert customers with direct phone calls, and announcements via radio. Coordinate with Sacramento Area Flood Control Agency (SAFCA).

Earthquake – in most earthquakes, only weaker masonry buildings would be damaged – District staff would be responsible for control and repair of damage. Help from Northern California utilities is unlikely since they would be responding to their own situations and aiding water suppliers closest to the epicenter.

## 6.6 Seismic Risk 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.*

Per the CWC§ 10632.5, suppliers are required to include a seismic risk assessment and mitigation plan as part of their WSCP. The District is located within Sacramento County, which is in a limited seismic risk area



per the 2016 Sacramento Countywide Local Hazard Mitigation Plan Update (LHMP).<sup>3</sup> The District is at minimal risk of an earthquake per the LHMP; as such, no actions are planned to mitigate such an event.

## 6.7 Shortage Response Action Effectiveness

In order to evaluate and ensure that effective actions will be implemented with the proper level of intensity, the District employed the DRT, an Excel spreadsheet model developed by EKI Environment and Water, Inc. The DRT model calculates monthly savings anticipated by implementing each stage of action as detailed below.

### 6.7.1 Baseline Water Use Profile

Using the DRT, the District developed a baseline water use profile that reflected usage patterns within the District's service area by major water use sector during 2019 that was used to guide development of the WSCP. Key findings from this analysis are presented below.

#### *Residential Per Capita Demand*

The District's baseline R-GPCD in 2019 was approximately 111 R-GPCD. As shown in **Table 6-3**, this R-GPCD is significantly greater than the statewide average of 85 R-GPCD.

#### *Proportion of Outdoor Water Use*

As shown in **Table 6-3** and associated charts, outdoor water use, which can generally be considered as a "discretionary water use", was estimated to be approximately 52 percent of the District's consumption during this time period.

The DRT estimates indoor water use to be equivalent to the lowest monthly water use for each sector, accounting for the number of days in each month. Outdoor water use for each sector was estimated to be the difference between the total water use and the estimated indoor water use. If District customers tend to irrigate more heavily during winter months, an underestimation of the proportion of outdoor water use would occur.

The proportion of outdoor water use within both residential and commercial sectors (52 percent and 54 percent, respectively) indicates that there is a potential to achieve significant potable water savings across these sectors, simply by focusing on outdoor uses. As further shown in **Table 6-4** and its associated charts, the seasonal variation in baseline potable water use reflects increased irrigation demands during the summer and fall months. Therefore, the greatest potential for reductions in non-essential water use are expected during these months.

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<sup>3</sup> The Sacramento County LHMP could be found on the County's Water Resources website:  
[https://waterresources.saccounty.net/Local%20Hazard%20Mitigation%20Plan%202017/Executive%20Summary.p  
df](https://waterresources.saccounty.net/Local%20Hazard%20Mitigation%20Plan%202017/Executive%20Summary.pdf)

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**Table 6-3 Baseline Residential Per Capita Water Demand**

	Baseline Residential Per Capita Water Demand (R-GPCD)
Rio Linda/Elverta Community Water District (a)	111
Statewide Average (b)	85
NOTES: (a) District R-GPCD calculated using 2019 production data. (b) State-wide R-GPCD for 2019 obtained from data provided at California State Water Resources Control Board Water Conservation Portal - Conservation Reporting, <a href="http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml">http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.shtml</a> , accessed March 2021.	



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Table 6-4 Baseline Water Use Profile

Sector	End-Use	Baseline (2019) Water Use													Annual percent of Total by Sector
		January	February	March	April	May	June	July	August	September	October	November	December	Annual	
Residential	Indoor	14	11	12	16	23	33	38	45	39	26	23	15	293	48%
	Outdoor	15	12	13	17	25	35	42	48	43	28	25	16	318	52%
	<i>Subtotal Residential</i>	28	22	25	33	47	68	80	93	82	54	47	31	611	77%
CII	Indoor	2	2	2	2	3	5	6	7	6	4	3	2	42	46%
	Outdoor	2	2	2	2	3	6	7	8	7	4	4	2	50	54%
	<i>Subtotal CII</i>	4	3	4	4	6	11	13	15	13	8	7	4	92	12%
Dedicated Irrigation	Outdoor	0	0	0	0	0	1	1	2	1	1	1	0	7	1%
Non-Revenue	Non-Revenue	4	5	6	9	14	18	21	-1	-1	3	2	4	84	11%
Total	Indoor	15	12	14	18	25	38	45	52	45	30	26	17	336	42%
	Outdoor	17	14	15	19	28	42	50	58	51	34	29	18	375	47%
	Non-Revenue	4	5	6	9	14	18	21	-1	-1	3	2	4	84	11%
	<b>Total</b>	<b>35</b>	<b>31</b>	<b>35</b>	<b>46</b>	<b>67</b>	<b>97</b>	<b>115</b>	<b>109</b>	<b>96</b>	<b>66</b>	<b>58</b>	<b>39</b>	<b>795</b>	<b>100%</b>

NOTES:

(a) Volumes are in units of MG.

(b) Indoor water use was estimated to be the lowest monthly water use for each sector, accounting for the number of days in each month. Outdoor water use for each sector was estimated to be the difference between the total water use and the estimated indoor water use.



### 6.7.2 Shortage Response Action Effectiveness

The DRT provides a quantitative framework that allows the District to systematically estimate the monthly and cumulative annual demand reductions expected to result from particular combinations of drought response actions and associated implementation rates. Data inputs to the DRT include total production, class-specific water use, population, and assumptions regarding the split between indoor and outdoor water use for each customer class.

For each drought response action, the user specifies:

- The customer class(es) and end use(s) that are affected;
- The percent savings for that end use for each account that implements the action. These are based on evaluations reported in the literature, or where such studies are not available, on best estimates based on the District's experience; and
- The percentage of accounts assumed to implement the action, which is presumed to be the result of the intensity level of the District's program implementation, including but not limited to, marketing and enforcement activities.

An additional critical DRT user input is a set of constraints on demand reductions to ensure that usage levels do not endanger health and safety or result in unacceptable economic impacts. The DRT will not permit estimated usage reductions to violate these constraints, regardless of the demand reduction actions selected. The constraints are:

- A minimum residential indoor per capita daily usage of 25 gallons,
- A maximum residential outdoor usage reduction of 100 percent,
- A maximum Commercial, industrial, and institutional (CII) indoor usage reduction of 30 percent, and
- A maximum CII outdoor usage reduction of 100 percent.

Based on the foregoing data, the DRT model calculates the resulting monthly savings. The District adjusted the combination of actions and implementation levels to achieve the targeted savings levels at each of the six stages of action.

For each stage of action, the modeling targeted the mid-range of the required demand reduction range, ergo:

- 5 percent for Stage 1,
- 15 percent for Stage 2,
- 25 percent for Stage 3,
- 35 percent for Stage 4,
- 45 percent for Stage 5, and
- 55 percent for Stage 6.

The key DRT inputs and outputs for each of the stages of action are reproduced in **Attachment 1**.

**Table 6-1** shows the water shortage reduction actions, savings assumptions, and implementation rates that are required for the District to achieve the required annual demand reductions for each of the six stages of action. At each stage, there are two types of demand-reduction actions identified:

- Restrictions on customer water usage; and



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- Consumption reduction actions by the District to encourage decreased water usage.

Many actions are implemented across a number of stages, some at increasing implementation levels. Therefore the actions in **Table 6-1** and **Table 6-2** are listed as a row under the first stage at which they are implemented. The percentages shown in the tables represent savings of the end uses.

## 7 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.*

The District General Manager will recommend to the Board of Directors the extent of the conservation required through the implementation and/or termination of particular water conservation stages and the Board will order implementation or termination of the appropriate water conservation stage. The District customers will be notified of any upgrade or downgrade in water use policy stage by public announcement.

The provisions of each water shortage stage of action are triggered upon the Board of Directors determination that a Governing Authority has required the District to achieve a voluntary or mandatory reduction in water use because of water shortage conditions.

The stage of action will become effective after the Board of Directors declares a particular stage of action and the District has published notice of this determination. Once effective, the provisions of a water shortage stage of action will stay in effect until: (1) a different stage of action is declared; or (2) the Board of Directors determine that the water shortfall condition no longer exists and the District has published notice of this determination.

After the termination of the water shortage conditions, District will oversee any remaining termination and WSCP review activities. These activities could include:

- Publicize gratitude for the community's cooperation.
- Restore water utility operations, organization, and services to pre-event levels.
- Document the event and response and compile applicable records for future reference.
- Collect cost accounting information, assess revenue losses and financial impact, and review deferred projects or programs.
- Debrief staff to review effectiveness of actions, to identify the lessons learned, and to enhance response and recovery efforts in the future.
- Update the WSCP, as needed.

**8 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.

The District is authorized to enforce the requirements of the WSCP. Enforcement of the District’s water use restrictions and prohibitions is focused on soliciting cooperation from water customers who are unaware of the restrictions or have failed to comply with the provisions of the WSCP.

The following section discusses penalties associated with excessive water use. The penalties discussed herein do not repeal any power granted under state law, federal law, or municipal ordinances. The following penalties discussed in **Table 8-1** shall be issued along with written notification to the occupant of the site, or to any person in control of said site, or posted at the site in an easily visible location. Each day the violation is delinquent shall result in a separate offense and fully punishable.

The District General Manager, or their appointed representative, may issue waivers pursuant to the requirements of the WSCP on the basis of hardship, health and safety matters, unjustifiable repair costs, overall benefit to the public, protection of sensitive or endangered plant species or habitats, or compliance with other state, federal or local laws

**Table 8-1 Procedure for Imposing Administrative Fees**

Offense within a 12-month period	Administrative Fee
First	No Fee
Second	\$50
Third	\$75
Additional Offenses	\$125; if appropriate installation of flow restrictor.

## Legal Authorities

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## 9 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.*

*(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.*

As discussed above, the District has authority to require water rationing and conservation and to enforce penalties. The District General Manager will notify the Board of Directors the need to upgrade or downgrade in water use policy stages and the Board of Directors will declare a water shortage emergency. The District General Manager is legally authorized to enforce the Water Shortage Contingency Plan (WSCP). Appropriate District staff will also coordinate with Sacramento County and appropriate agencies (e.g., Groundwater Sustainability Agencies in the North American Subbasin) about any possible proclamation of a local emergency. Relevant code sections and an adopted WSCP Resolution are included as Attachment 2.

The District's WSCP update was adopted on 18 July 2022 [[To be updated after adoption]]. The adoption is included as Attachment 2.

## 10 FINANCIAL CONSEQUENCES OF WSCP

**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.*

The District employs a two-tiered, conservation-oriented, inclining block water rate structure for residential customers. The District's current tiered water rate structure is designed to encourage efficient water use, even during normal water supply conditions. Since the District bills its customers per unit volume of water consumed, the District would experience a reduction in revenue upon implementation of the Water Shortage Contingency Plan (WSCP). To compensate for the expected revenue reduction caused by water conservation, the District reserves the authority to implement temporary water rate increases, as adopted by resolution of the District's Board of Directors. Additionally, the District's Board of Directors may adopt a resolution to establish a water rate structure, including excess water use surcharges, that provides incentives to conserve water. Individual customers may seek a waiver of excess water use surcharges through a variance process.

The District also reserves the authority to reduce expenses during implementation of the WSCP, using the following potential mitigation actions:

- Reducing or deferring operation and maintenance expenses; and
- Deferring capital improvement projects.

Other potential actions to mitigate revenue impacts of the WSCP include:

- Increasing any fixed readiness-to-serve charges; and
- Using financial reserves.

## 11 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.*

The District monitors water use through production data at each well and customer meter readings. Each customer account is metered.

Pursuant to California Code of Regulations (CCR) Title 23 §991, the District reports monthly water use and production to the SWRCB.<sup>4</sup> Effective October 1, 2020, during a governor declared drought emergency or when an urban water supplier invokes a water shortage level to respond to a drought greater than 10 percent, each supplier is required to submit an expanded report that contains the supplier’s actions and statistics in achieving planning reductions. During a supply shortage, the District will continue to monitor water use on this schedule to determine the effectiveness of the customer response to the implementation of the WSCP. Actual water savings achieved by implementing the WSCP will be determined by comparing water consumption records while the WSCP is in place with an appropriate baseline consumption.

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<sup>4</sup> Water supplier monthly reports can be accessed at [https://www.waterboards.ca.gov/water\\_issues/programs/conservation\\_portal/conservation\\_reporting.html](https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html)

## 12 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.*

As part of the Annual Assessment, the District's team members will review the results of prior monitoring and reporting to determine the effectiveness of the WSCP. If modifications to shortage response actions are needed, the District General Manager will present the proposed modifications to the District's Board of Directors and request changes to the WSCP by resolution.

The WSCP is implemented as an adaptive management plan. The District will evaluate the need to revise its WSCP every year after performing its Annual Assessment. The evaluation will consider effectiveness of WSCP actions and any anticipated water supply shortages assessed by the Annual Assessment. If the WSCP is revised, the District's Board of Directors will adopt a new resolution adopting the revised WSCP, and if necessary, declare a water shortage level to implement.

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**13 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.*

The District informed the public and the appropriate agencies of: (1) its intent to prepare a WSCP, (2) where the WSCP was available for public review, and (3) when the public hearing regarding the WSCP would be held. All notifications were completed in compliance with the stipulations of Section 6066 of the Government Code **[[To be confirmed after adoption]]**.

A copy of the adopted 2020 WSCP including any amendments will be provided to the Department of Water Resources (DWR), and the California State Library within 30 days of the adoption (Attachment 2). An electronic copy of the adopted 2020 WSCP will be submitted to the DWR using the DWR online submittal tool.

A copy of the adopted 2020 WSCP will be available for public review in the District office (730 L Street, Rio Linda, CA 95673) during normal business hours and on the Rio Linda/Elverta Community Water District website (<http://www.rlcwd.com/>) within 30 days after filing the plan with DWR.