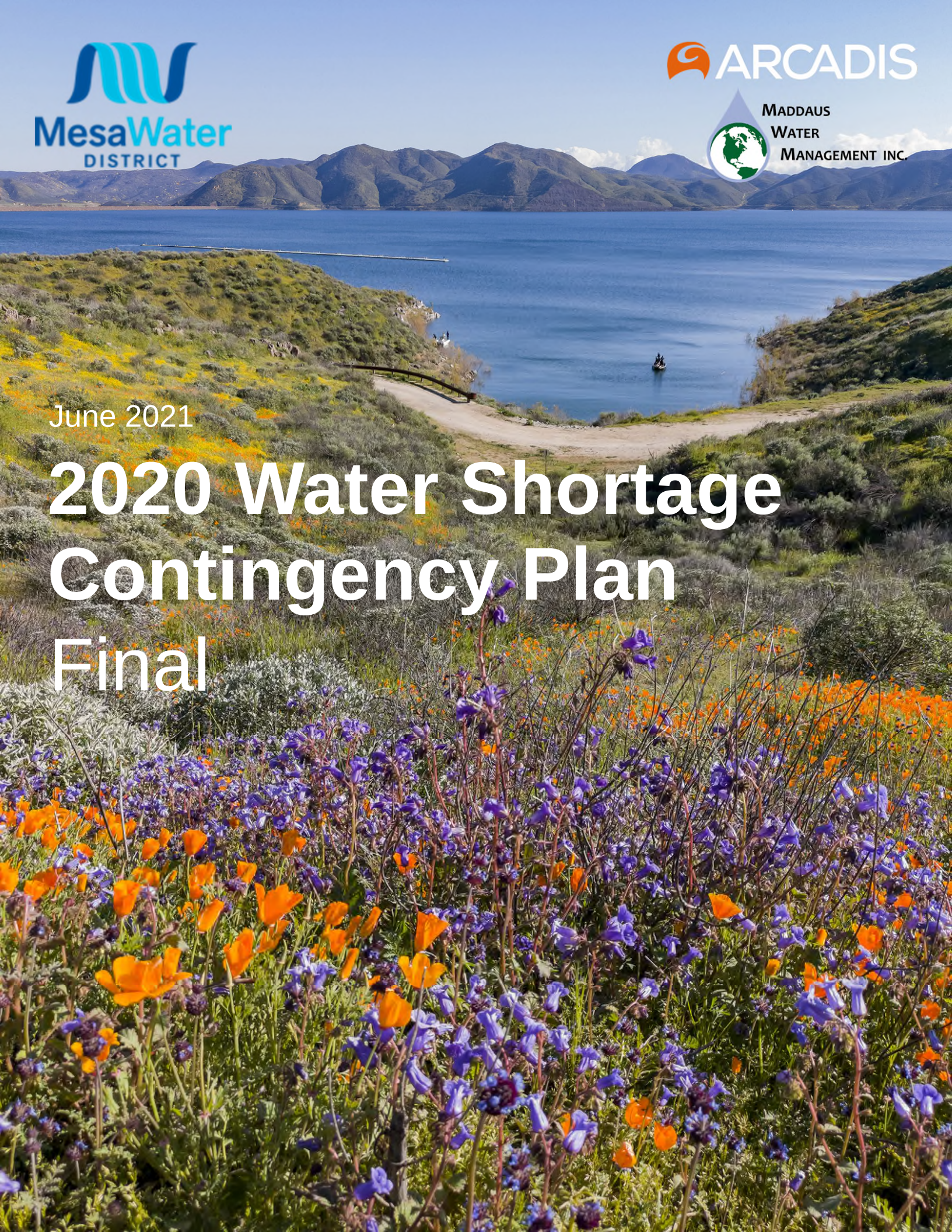

June 2021

2020 Water Shortage Contingency Plan

Final

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Prepared By:
Arcadis U.S., Inc.
320 Commerce, Suite 200
Irvine
California 92602
Phone: 714 730 9052
https://www.arcadis.com

Prepared For:
Mesa Water® District
Phil Lauri, PE, Assistant General Manager
1965 Placentia Ave.
Costa Mesa, CA 92627
Phone: 714 754 5251
https://www.mesawater.org/

Maddaus Water Management, Inc.
Danville, California 94526
Sacramento, California 95816
www.maddauswater.com

Our Ref:
30055240

Lisa Maddaus, P.E.
Technical Lead
Maddaus Water Management, Inc.

Sarina Sriboonlue, P.E.
Project Manager
Arcadis U.S., Inc.

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Acronyms and Abbreviations

%	Percent
AF	Acre-Feet
Annual Assessment	Annual Water Supply and Demand Assessment
BPP	Basin Production Percentage
CRA	Colorado River Aqueduct
DDW	Division of Drinking Water
DRA	Drought Risk Assessment
DVL	Diamond Valley Lake
DWR	California Department of Water Resources
EAP	Emergency Operations Center Actions Plan
EOC	Emergency Operation Center
EOP	Emergency Operations Plan
FY	Fiscal Year
GAP	Green Acres Project
GSP	Groundwater Sustainability Plan
HMP	Hazard Mitigation Plan
IAWP	Interim Agricultural Water Program
IRP	Integrated Water Resource Plan
M&I	Municipal and Industrial
MCL	Maximum Contaminant Level
Mesa Water	Mesa Water District
MET	Metropolitan Water District of Southern California
Metropolitan Act	Metropolitan Water District Act
MWDOC	Municipal Water District of Orange County
NIMS	National Incident Management System
OC Basin	Orange County Groundwater Basin
OCWD	Orange County Water District
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
PPT	Parts Per Trillion
Producer	Groundwater Producer
RL	Response Level
SEMS	California Standardized Emergency Management System
Supplier	Urban Water Supplier
SWP	State Water Project
SWRCB	California State Water Resources Control Board
UWMP	Urban Water Management Plan
Water Code	California Water Code

WEROC	Water Emergency Response Organization of Orange County
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan
WSDM	Water Surplus and Drought Management Plan

1 INTRODUCTION AND WSCP OVERVIEW

The Water Shortage Contingency Plan (WSCP) is a strategic planning document designed to prepare for and respond to water shortages. This WSCP complies with California Water Code (Water Code) Section 10632, which requires that every urban water supplier (Supplier) shall prepare and adopt a WSCP as part of its Urban Water Management Plan (UWMP). This level of detailed planning and preparation is intended to help maintain reliable supplies and reduce the impacts of supply interruptions.

The WSCP is Mesa Water District (Mesa Water)'s operating manual that is used to prevent catastrophic service disruptions through proactive, rather than reactive, management. A water shortage, when water supply available is insufficient to meet the normally expected customer water use at a given point in time, may occur due to a number of reasons, such as drought, climate change, and catastrophic events. This plan provides a structured guide for Mesa Water to deal with water shortages, incorporating prescriptive information and standardized action levels, along with implementation actions in the event of a catastrophic supply interruption. This way, if and when shortage conditions arise, Mesa Water's governing body, its staff, and the public can easily identify and efficiently implement pre-determined steps to manage a water shortage. A well-structured WSCP allows real-time water supply availability assessment and structured steps designed to respond to actual conditions, to allow for efficient management of any shortage with predictability and accountability.

The WSCP also describes Mesa Water's procedures for conducting an Annual Water Supply and Demand Assessment (Annual Assessment) that is required by Water Code Section 10632.1 and is to be submitted to the California Department of Water Resources (DWR) on or before July 1 of each year, or within 14 days of receiving final allocations from the State Water Project (SWP), whichever is later. Mesa Water's 2020 WSCP is included as an appendix to its 2020 UWMP which will be submitted to DWR by July 1, 2021. However, this WSCP is created separately from Mesa Water's 2020 UWMP and can be amended, as needed, without amending the UWMP. Furthermore, the Water Code does not prohibit a Supplier from taking actions not specified in its WSCP, if needed, without having to formally amend its UWMP or WSCP.

1.1 Water Shortage Contingency Plan Requirements and Organization

The WSCP provides the steps and water shortage response actions to be taken in times of water shortage conditions. The WSCP has prescriptive elements, such as an analysis of water supply reliability; the water shortage response actions for each of the six standard water shortage levels that correspond to water shortage percentages ranging from 10% to greater than 50%; an estimate of potential to close supply gap for each measure; protocols and procedures to communicate identified actions for any current or predicted water shortage conditions; procedures for an Annual Assessment; monitoring and reporting requirements to determine customer compliance; and reevaluation and improvement procedures for evaluating the WSCP.

This WSCP is organized into three main sections, with Section 3 aligned with Water Code Section 16032 requirements.

Section 1 Introduction and WSCP Overview gives an overview of the WSCP fundamentals.

Section 2 Background provides a background on Mesa Water's water service area.

Section 3 Water Shortage Contingency Preparedness and Response Planning

Section 3.1 Water Supply Reliability Analysis provides a summary of the water supply analysis and water reliability findings from the 2020 UWMP.

Section 3.2 Annual Water Supply and Demand Assessment Procedures provide a description of procedures to conduct and approve the Annual Assessment.

Section 3.3 Six Standard Water Shortage Stages explains the WSCP's six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, 50, and more than 50% shortages.

Section 3.4 Shortage Response Actions describes the WSCP's shortage response actions that align with the defined shortage levels.

Section 3.5 Communication Protocols addresses communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding any current or predicted shortages and any resulting shortage response actions.

Section 3.6 Compliance and Enforcement describes customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions.

Section 3.7 Legal Authorities is a description of the legal authorities that enable Mesa Water to implement and enforce its shortage response actions.

Section 3.8 Financial Consequences of the WSCP provides a description of the financial consequences of and responses for drought conditions.

Section 3.9 Monitoring and Reporting describes 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**.**

Section 3.10 WSCP Refinement Procedures addresses reevaluation and improvement procedures for monitoring and evaluating the functionality of the WSCP.

Section 3.11 Special Water Feature Distinction is a required definition for inclusion in a WSCP per the Water Code.

Section 3.12 Plan Adoption, Submittal, and Implementation provides a record of the process Mesa Water followed to adopt and implement its WSCP.

1.2 Integration with Other Planning Efforts

As a retail water supplier in Orange County, Mesa Water considered other key entities in the development of this WSCP, including the Municipal Water District of Orange County ([MWDOC] (regional wholesale supplier), the Metropolitan Water District of Southern California ([MET] (regional wholesaler for Southern California and the direct supplier of imported water to MWDOC), and Orange County Water District ([OCWD] (Orange County Groundwater Basin manager and provider of recycled water in North Orange County). As a MWDOC member agency, Mesa Water also developed this WSCP with input from several coordination efforts led by MWDOC.

Some of the key planning and reporting documents that were used to develop this WSCP are:

- **MWDOC's 2020 UWMP** provides the basis for the projections of the imported supply availability over the next 25 years for Mesa Water's service area.
- **MWDOC's 2020 WSCP** provides a water supply availability assessment and structured steps designed to respond to actual conditions that will help maintain reliable supplies and reduce the impacts of supply interruptions.
- **2021 Orange County Water Demand Forecast for MWDOC and OCWD Technical Memorandum (Demand Forecast TM)** provides the basis for water demand projections for MWDOC's member agencies as well as Anaheim, Fullerton, and Santa Ana.
- **MET's 2020 Integrated Water Resources Plan (IRP)** is a long-term planning document to ensure water supply availability in Southern California and provides a basis for water supply reliability in Orange County.
- **MET's 2020 UWMP** was developed as a part of the 2020 IRP planning process and was used by MWDOC as another basis for the projections of supply capability of the imported water received from MET.
- **MET's 2020 WSCP** provides a water supply assessment and guide for MET's intended actions during water shortage conditions.
- **OCWD's 2019-20 Engineer's Report** provides information on the groundwater conditions and basin utilization of the Orange County Groundwater Basin (OC Basin).
- **OCWD's 2017 Basin 8-1 Alternative** is an alternative to the Groundwater Sustainability Plan (GSP) for the OC Basin and provides significant information related to sustainable management of the basin in the past and hydrogeology of the basin, including groundwater quality and basin characteristics.
- **2020 Local Hazard Mitigation Plan (HMP)** provides the basis for the seismic risk analysis of the water system facilities.
- **Orange County Local Agency Formation Commission's 2020 Municipal Service Review for MWDOC Report** provides a comprehensive service review of the municipal services provided by MWDOC.
- **Water Master Plan** of Mesa Water provide information on water infrastructure planning projects and plans to address any required water system improvements.
- **Groundwater Management Plans** provide the groundwater sustainability goals for the basins in the MWDOC's service area and the programs, actions, and strategies activities that support those goals.

2 BACKGROUND INFORMATION

Mesa Water is governed by a five-member Board of Directors is located in a community that originated in about 1906. After the Costa Mesa District Merger Law was signed on June 30, 1959, Mesa Water (formerly known as the Costa Mesa County Water District) commenced operations on January 1, 1960 by acquiring the assets and obligations and assumed the responsibility of consolidating the City of Costa Mesa's Water Department, Fairview County Water District, Newport Mesa Irrigation District, and Newport Mesa County Water District.

2.1 Mesa Water Service Area

Mesa Water's water service area is located along the coast of Southern California within Orange County. Mesa Water is between one-eighth of a mile to almost six miles inland of the Pacific Ocean. It is also approximately 37 miles southeast of Los Angeles, 88 miles north of San Diego and 475 miles south of San Francisco. The service area is an 18 square mile area that includes most of the City of Costa Mesa, portions of the City of Newport Beach and a small portion of unincorporated Orange County. Mesa Water shares borders with the County of Orange, the Cities of Huntington Beach, Fountain Valley, Irvine, Santa Ana, and Newport Beach. Mesa Water operates nine wells, which includes two future wells (in construction), a nanofiltration facility, two reservoirs with a total storage of 28 million gallons, two metered interconnections, 16 emergency interconnections and manages 328.4-mile water mains system with approximately 25,032 service connections. A map of Mesa Water's water service area is shown in Figure 2-1.

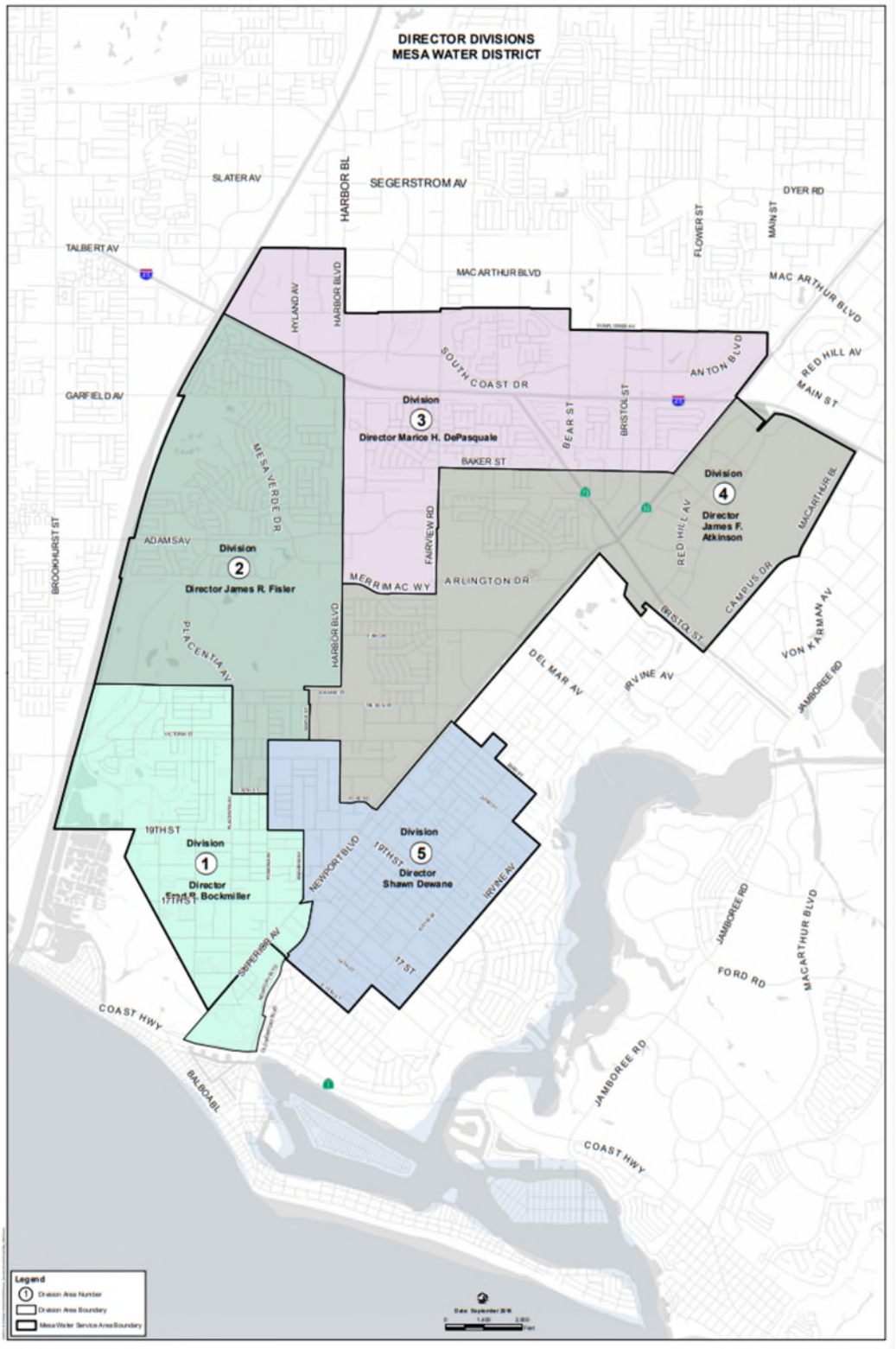

Figure 2-1: Mesa Water Service Area

Although Mesa Water supplements its water supply portfolio with recycled water, the WSCP only applies to its potable water supply. Mesa Water sells and distributes OCWD Green Acres Project (GAP) water to recycled water customers in its service area, as detailed in Section 6.6 of Mesa Water's 2020 UWMP (Mesa Water, 2021). Mesa Water will determine the recycled water demand reduction actions for recycled water based on the availability of supply and to meet necessary wastewater discharge permit requirements.

2.2 Relationship to Wholesalers

The Metropolitan Water District of Southern California: MET is the largest water wholesaler for domestic and municipal uses in California, serving approximately 19 million customers. MET wholesales imported water supplies to 26 member cities and water districts in six Southern California counties. Its service area covers the Southern California coastal plain, extending approximately 200 miles along the Pacific Ocean from the City of Oxnard in the north to the international boundary with Mexico in the south. This encompasses 5,200 square miles and includes portions of Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties. Approximately 85% of the population from the aforementioned counties reside within MET's boundaries.

MET is governed by a Board of Directors comprised of 38 appointed individuals with a minimum of one representative from each of MET's 26 member agencies. The allocation of directors and voting rights are determined by each agency's assessed valuation. Each member of the Board shall be entitled to cast one vote for each ten million dollars ($10,000,000) of assessed valuation of property taxable for district purposes, in accordance with Section 55 of the Metropolitan Water District Act (Metropolitan Act). Directors can be appointed through the chief executive officer of the member agency or by a majority vote of the governing board of the agency. Directors are not compensated by MET for their service.

MET is responsible for importing water into the region through its operation of the Colorado River Aqueduct (CRA) and its contract with the State of California for SWP supplies. Member agencies receive water from MET through various delivery points and pay for service through a rate structure made up of volumetric rates, capacity charges and readiness to serve charges. Member agencies provide estimates of imported water demand to MET annually in April regarding the amount of water they anticipate they will need to meet their demands for the next five years.

The Municipal Water District of Orange County: In Orange County, MWDOC and the cities of Anaheim, Fullerton, and Santa Ana are MET member agencies that purchase imported water directly from MET. Furthermore, MWDOC purchases both treated potable and untreated water from MET to supplement its retail agencies' local supplies.

Mesa Water is one of MWDOC's 28 member agencies receiving imported water from MWDOC. Mesa Water's location within MWDOC's service area is shown on Figure 2-2.

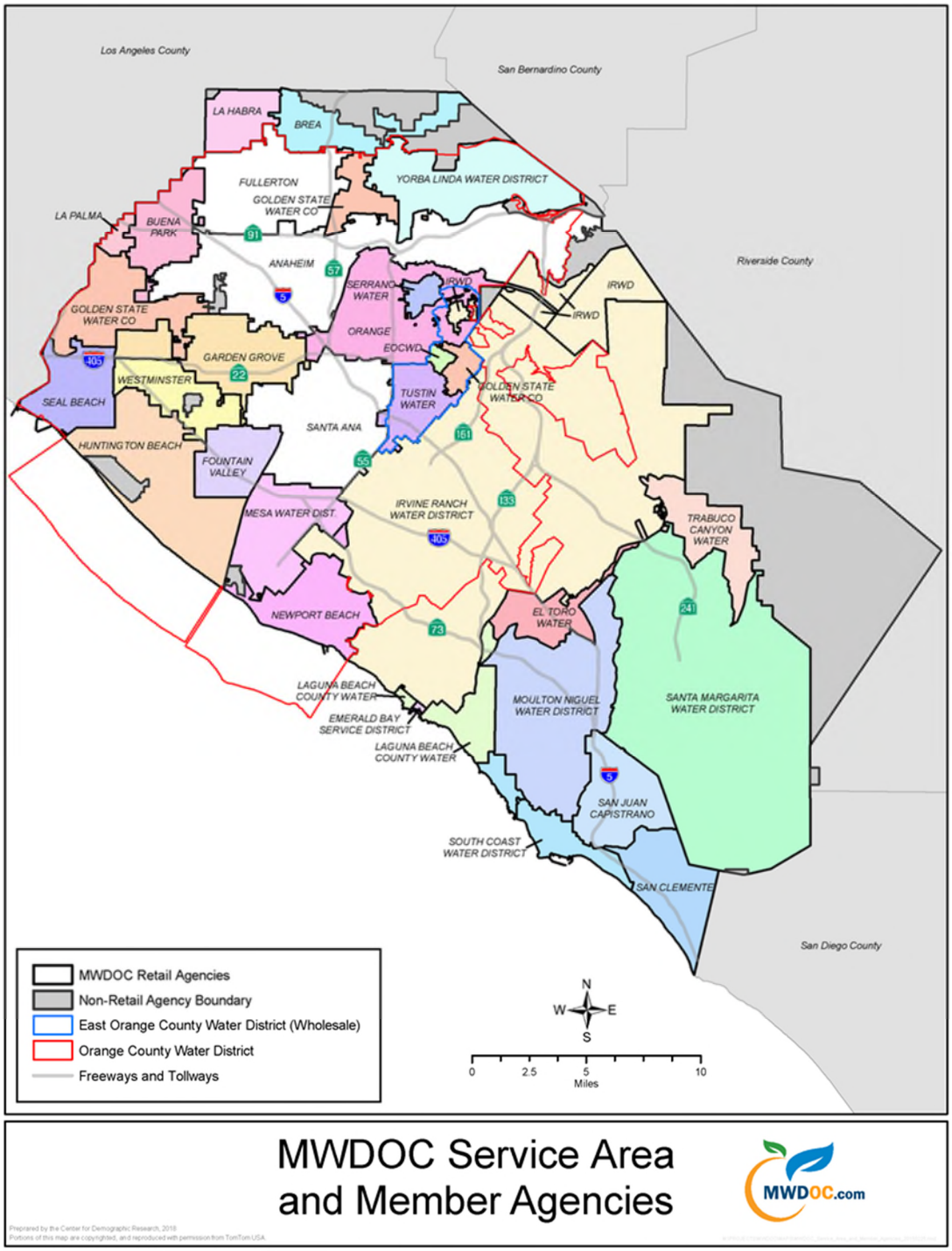

Figure 2-2: Regional Location of Mesa Water and Other MWDOC Member Agencies

2.3 Relationship with Wholesaler Water Shortage Planning

The WSCP is designed to be consistent with MET's Water Shortage and Demand Management (WSDM) Plan, MWDOC's Water Supply Allocation Plan (WSAP), and other emergency planning efforts as described below. MWDOC's WSAP is integral to the WSCP's shortage response strategy in the event that MET or MWDOC determines that supply augmentation (including storage) and lesser demand reduction measures would not be sufficient to meet a projected shortage levels needed to meet demands.

2.3.1 MET Water Surplus and Drought Management Plan

MET evaluates the level of supplies available and existing levels of water in storage to determine the appropriate management stage annually. Each stage is associated with specific resource management actions to avoid extreme shortages to the extent possible and minimize adverse impacts to retail customers should an extreme shortage occur. The sequencing outlined in the WSDM Plan reflects anticipated responses towards MET's existing and expected resource mix.

Surplus stages occur when net annual deliveries can be made to water storage programs. Under the WSDM Plan, there are four surplus management stages that provides a framework for actions to take for surplus supplies. Deliveries in DVL and in SWP terminal reservoirs continue through each surplus stage provided there is available storage capacity. Withdrawals from DVL for regulatory purposes or to meet seasonal demands may occur in any stage.

The WSDM Plan distinguishes between shortages, severe shortages, and extreme shortages. The differences between each term are listed below:

- **Shortage**: MET can meet full-service demands and partially meet or fully meet interruptible demands using stored water or water transfers as necessary (Stages 1-3).
- **Severe Shortage**: MET can meet full-service demands only by making withdrawals from storage, calling on its water transfers, and possibly calling for extraordinary conservation and reducing deliveries under the Interim Agricultural Water Program (IAWP) (Stages 4-5).
- **Extreme Shortage**: MET must allocate available imported supplies to full-service customers (Stage 6).

There are six shortage management stages to guide resource management activities. These stages are defined by shortfalls in imported supply and water balances in MET's storage programs. When MET must make net withdrawals from storage to meet demands, it is considered to be in a shortage condition. Figure 2-3 gives a summary of actions under each surplus and shortage stages when an allocation plan is necessary to enforce mandatory cutbacks. The goal of the WSDM plan is to avoid Stage 6, an extreme shortage (MET, 1999).

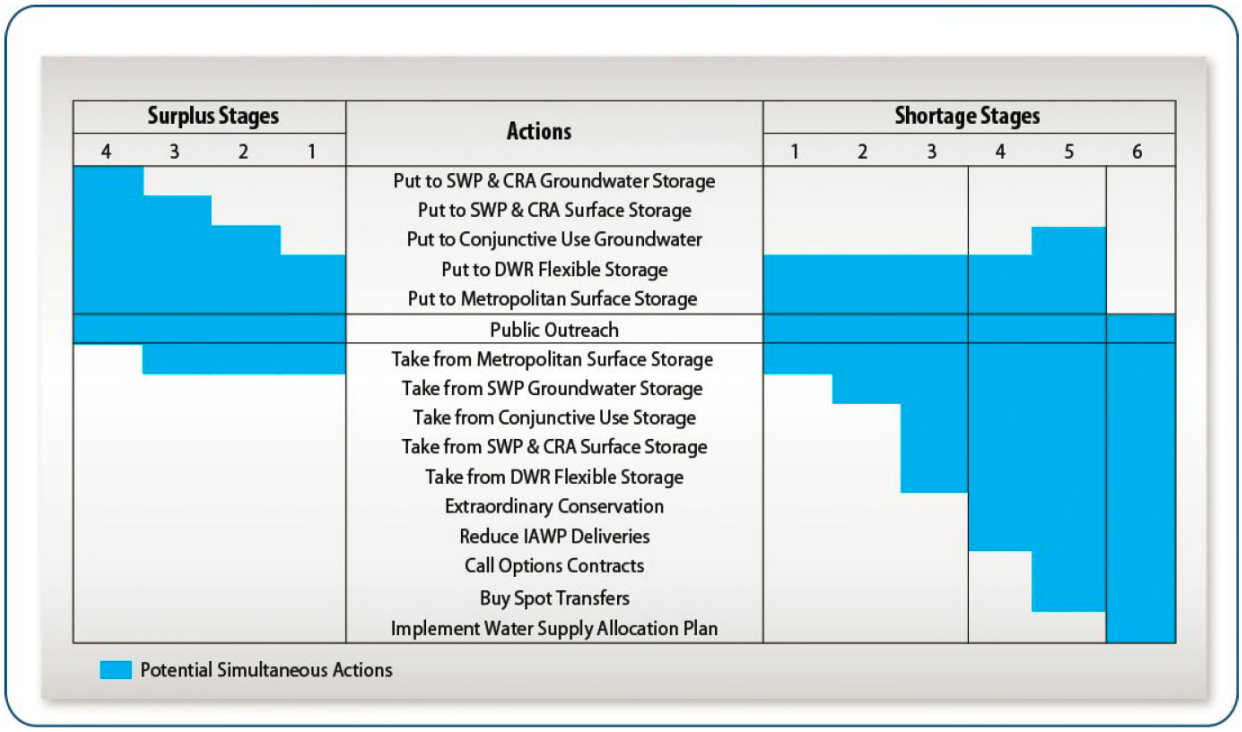

Figure 2-3: Resource Stages, Anticipated Actions, and Supply Declarations
Source: MET, 1999.

MET's Board of Directors adopted a Water Supply Condition Framework in June 2008 in order to communicate the urgency of the region's water supply situation and the need for further water conservation practices. The framework has four conditions, each calling increasing levels of conservation. Descriptions for each of the four conditions are listed below:

- Baseline Water Use Efficiency: Ongoing conservation, outreach, and recycling programs to achieve permanent reductions in water use and build storage reserves.
- Condition 1 Water Supply Watch: Local agency voluntary dry-year conservation measures and use of regional storage reserves.
- Condition 2 Water Supply Alert: Regional call for cities, counties, member agencies, and retail water agencies to implement extraordinary conservation through drought ordinances and other measures to mitigate use of storage reserves.
- Condition 3 Water Supply Allocation: Implement MET's WSAP.

As noted in Condition 3, should supplies become limited to the point where imported water demands cannot be met, MET will allocate water through the WSAP (MET, 2021a).

2.3.2 MET Water Supply Allocation Plan

MET's imported supplies have been impacted by a number of water supply challenges as noted earlier. In case of extreme water shortage within the MET service area is the implementation of its WSAP.

MET's Board of Directors originally adopted the WSAP in February 2008 to fairly distribute a limited amount of water supply and applies it through a detailed methodology to reflect a range of local conditions and needs of the region's retail water consumers (MET, 2021a).

The WSAP includes the specific formula for calculating member agency supply allocations and the key implementation elements needed for administering an allocation. MET's WSAP is the foundation for the urban water shortage contingency analysis required under Water Code Section 10632 and is part of MET's 2020 UWMP.

MET's WSAP was developed in consideration of the principles and guidelines in MET's 1999 WSDM Plan with the core objective of creating an equitable "needs-based allocation." The WSAP's formula seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level for shortages of MET supplies of greater than 50% cutbacks. The formula takes into account a number of factors, such as the impact on retail customers, growth in population, changes in supply conditions, investments in local resources, demand hardening aspects of water conservation savings, recycled water, extraordinary storage and transfer actions, and groundwater imported water needs.

The formula is calculated in three steps: 1) based period calculations, 2) allocation year calculations, and 3) supply allocation calculations. The first two steps involve standard computations, while the third step contains specific methodology developed for the WSAP.

Step 1: Base Period Calculations – The first step in calculating a member agency's water supply allocation is to estimate their water supply and demand using a historical based period with established water supply and delivery data. The base period for each of the different categories of supply and demand is calculated using data from the two most recent non-shortage years.

Step 2: Allocation Year Calculations – The next step in calculating the member agency's water supply allocation is estimating water needs in the allocation year. This is done by adjusting the base period estimates of retail demand for population growth and changes in local supplies.

Step 3: Supply Allocation Calculations – The final step is calculating the water supply allocation for each member agency based on the allocation year water needs identified in Step 2.

In order to implement the WSAP, MET's Board of Directors makes a determination on the level of the regional shortage, based on specific criteria, typically in April. The criteria used by MET includes current levels of storage, estimated water supplies conditions, and projected imported water demands. The allocations, if deemed necessary, go into effect in July of the same year and remain in effect for a 12-month period. The schedule is made at the discretion of the Board of Directors (MET, 2021b).

As demonstrated by the findings in MET's 2020 UWMP both the Water Reliability Assessment and the Drought Risk Assessment (DRA) demonstrate that MET is able to mitigate the challenges posed by hydrologic variability, potential climate change, and regulatory risk on its imported supply sources through the significant storage capabilities it has developed over the last two decades, both dry-year and emergency storage (MET, 2021a).

Although MET's 2020 UWMP forecasts that MET will be able to meet projected imported demands throughout the projected period from 2025 to 2045, uncertainty in supply conditions can result in MET needing to implement its WSAP to preserve dry-year storage and curtail demands (MET, 2021b).

2.3.3 MWDOC Water Supply Allocation Plan

To prepare for the potential allocation of imported water supplies from MET, MWDOC worked collaboratively with its 28 retail agencies to develop its own WSAP that was adopted in January 2009 and amended in 2016. The MWDOC WSAP outlines how MWDOC will determine and implement each of its retail agency's allocation during a time of shortage.

The MWDOC WSAP uses a similar method and approach, when reasonable, as that of the MET's WSAP. However, MWDOC's plan remains flexible to use an alternative approach when MET's method produces a significant unintended result for the member agencies. The MWDOC WSAP model follows five basic steps to determine a retail agency's imported supply allocation.

Step 1: Determine Baseline Information – The first step in calculating a water supply allocation is to estimate water supply and demand using a historical based period with established water supply and delivery data. The base period for each of the different categories of demand and supply is calculated using data from the last two non-shortage years.

Step 2: Establish Allocation Year Information – In this step, the model adjusts for each retail agency's water need in the allocation year. This is done by adjusting the base period estimates for increased retail water demand based on population growth and changes in local supplies.

Step 3: Calculate Initial Minimum Allocation Based on MET's Declared Shortage Level – This step sets the initial water supply allocation for each retail agency. After a regional shortage level is established, MWDOC will calculate the initial allocation as a percentage of adjusted Base Period Imported water needs within the model for each retail agency.

Step 4: Apply Allocation Adjustments and Credits in the Areas of Retail Impacts and Conservation– In this step, the model assigns additional water to address disparate impacts at the retail level caused by an across-the-board cut of imported supplies. It also applies a conservation credit given to those agencies that have achieved additional water savings at the retail level as a result of successful implementation of water conservation devices, programs and rate structures.

Step 5: Sum Total Allocations and Determine Retail Reliability – This is the final step in calculating a retail agency's total allocation for imported supplies. The model sums an agency's total imported allocation with all of the adjustments and credits and then calculates each agency's retail reliability compared to its Allocation Year Retail Demand.

The MWDOC WSAP includes additional measures for plan implementation, including the following (MWDOC, 2016):

- **Appeal Process –** An appeals process to provide retail agencies the opportunity to request a change to their allocation based on new or corrected information. MWDOC anticipates that under most circumstances, a retail agency's appeal will be the basis for an appeal to MET by MWDOC.
- **Melded Allocation Surcharge Structure –** At the end of the allocation year, MWDOC would only charge an allocation surcharge to each retail agency that exceeded their allocation if MWDOC exceeds its total allocation and is required to pay a surcharge to MET. MET enforces allocations to retail agencies through an allocation surcharge to a retail agency that exceeds its total annual allocation at the end of the 12-month allocation period. MWDOC's surcharge would be assessed

according to the retail agency's prorated share (acre-feet [AF] over usage) of MWDOC amount with MET. Surcharge funds collected by MET will be invested in its Water Management Fund, which is used to in part to fund expenditures in dry-year conservation and local resource development.

- **Tracking and Reporting Water Usage –** MWDOC will provide each retail agency with water use monthly reports that will compare each retail agency's current cumulative retail usage to their allocation baseline. MWDOC will also provide quarterly reports on its cumulative retail usage versus its allocation baseline.
- **Timeline and Option to Revisit the Plan –** The allocation period will cover 12 consecutive months and the Regional Shortage Level will be set for the entire allocation period. MWDOC only anticipates calling for allocation when MET declares a shortage; and no later than 30 days from MET's declaration will MWDOC announce allocation to its retail agencies.

3 WATER SHORTAGE CONTINGENCY PREPAREDNESS AND RESPONSE PLANNING

Mesa Water's WSCP is a detailed guide of how Mesa Water intends to act in the case of an actual water shortage condition. The WSCP anticipates a water supply shortage and provides pre-planned guidance for managing and mitigating a shortage. Regardless of the reason for the shortage, the WSCP is based on adequate details of demand reduction and supply augmentation measures that are structured to match varying degrees of shortage will ensure the relevant stakeholders understand what to expect during a water shortage situation.

3.1 Water Supply Reliability Analysis

Per Water Code Section 10632 (a)(1), the WSCP shall provide an analysis of water supply reliability conducted pursuant to Water Code Section 10635, and the key issues that may create a shortage condition when looking at Mesa Water's water asset portfolio.

Understanding water supply reliability, factors that could contribute to water supply constraints, availability of alternative supplies, and what effect these have on meeting customer demands provides Mesa Water with a solid basis on which to develop appropriate and feasible response actions in the event of a water shortage. In the 2020 UWMP, Mesa Water conducted a Water Reliability Assessment to compare the total water supply sources available to the water supplier with long-term 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 (Mesa Water, 2021).

Mesa Water also conducted a DRA to evaluate a drought period that lasts five consecutive water years starting from the year following when the assessment is conducted. An analysis of both assessments determined that Mesa Water is capable of meeting all customers' demands from 2021 through 2045 for a normal year, a single dry year, and a drought lasting five consecutive years with significant imported water supplemental dedicated drought supplies from MWDOC/MET and ongoing conversation program efforts. Mesa Water receives the majority of its water supply from groundwater from the OC Basin, as well as supplemental supplies from local recycled water from the OCWD GAP that adds reliability for non-potable water demand.

As a result, there is no projected shortage condition due to drought that will trigger customer demand reduction actions unless Mesa Water exceeds its pumping capacity and until MWDOC notifies Mesa Water of insufficient imported supplies for supply augmentation in an emergency situation. More information is available in Mesa Water's 2020 UWMP Section 6 and 7 (Mesa Water, 2021).

3.2 Annual Water Supply and Demand Assessment Procedures

Per Water Code Section 10632.1, Mesa Water will conduct an Annual Assessment pursuant to subdivision (a) of Section 10632 and by July 1st of each year, beginning in 2022, submit an Annual Assessment with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the Supplier's WSCP.

Mesa Water must include in its WSCP the procedures used for conducting an Annual Assessment. The Annual Assessment is a determination of the near-term outlook for supplies and demands and how a perceived shortage may relate to WSCP shortage stage response actions in the current calendar year. This determination is based on

information available to Mesa Water at the time of the analysis. Starting in 2022, the Annual Assessment will be due by July 1 of every year.

This section documents the decision-making process required for formal approval of Mesa Water's Annual Assessment determination of water supply reliability each year and the key data inputs and the methodologies used to evaluate the water system reliability for the coming year, while considering that the year to follow would be considered dry.

3.2.1 Decision-Making Process

The following decision-making process describes the functional steps that Mesa Water will take to formally approve the Annual Assessment determination of water supply reliability each year.

3.2.1.1 Steps to Approve the Annual Assessment Determination

The Annual Assessment will be predicated on the OCWD Basin Production Percentage (BPP) and on MWDOC's Annual Assessment outcomes.

Mesa Water receives groundwater from OCWD. The OC Basin is not adjudicated and as such, pumping from the OC Basin is managed through a process that uses financial incentives to encourage groundwater producers (Producers) to pump a sustainable amount of water. The framework for the financial incentives is based on establishing the BPP, the percentage of each Producer's total water supply that comes from groundwater pumped from the OC Basin. The BPP is set uniformly for all Producers by OCWD on an annual basis in by OCWD Board of Directors. Based on the projected water demand and water modeled water supply, over the long-term, OCWD anticipates sustainably supporting a BPP of 85%; however, volumes of groundwater and imported water may vary depending on OCWD's actual BPP projections. A supply reduction that may result from the annual BPP projection will be included in the Annual Assessment.

As a MWDOC member agency, Mesa Water will consider the MWDOC Annual Assessment findings; however, the primary outcome will be determined by the OCWD BPP projections. The Annual Assessment findings will determine the approval process. If a shortage is identified, the Annual Assessment will be taken to the District Board for approval and formally submitted to DWR prior to the July 1 deadline. If no shortage is identified, the Annual Assessment will be approved by the General Manager and formally submitted to DWR prior to the July 1 deadline.

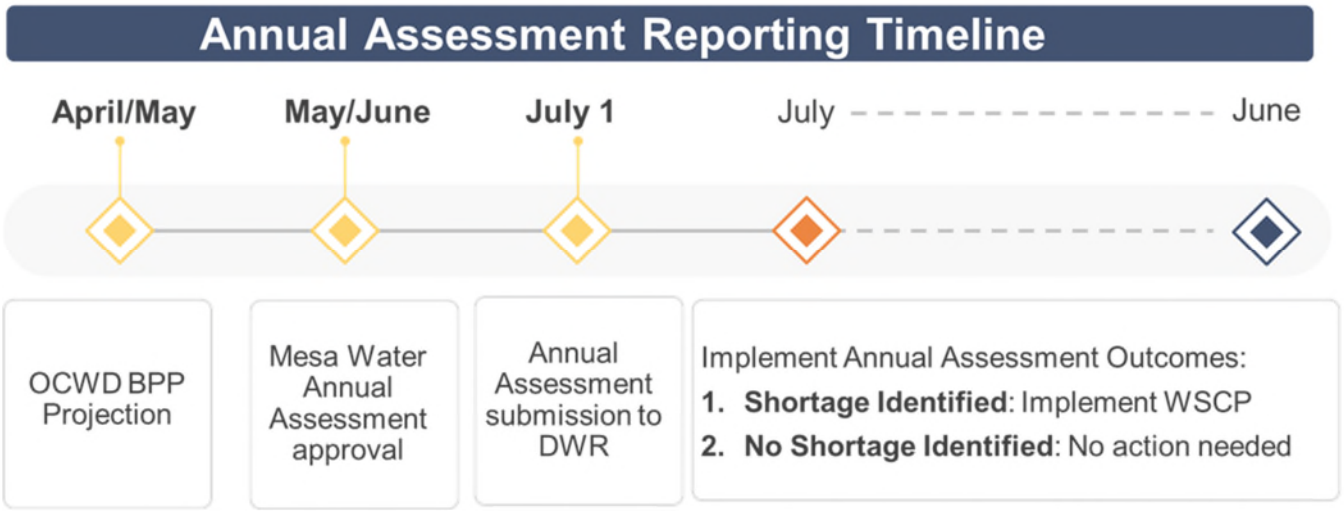

Figure 3-1: Annual Assessment Reporting Timeline

3.2.2 Data and Methodologies

The following paragraphs document the key data inputs and methodologies that are used to evaluate the water system reliability for the coming year, while considering that the year to follow would be considered dry.

3.2.2.1 Assessment Methodology

Mesa Water will evaluate water supply reliability for the current year and one dry year for the purpose of the Annual Assessment. The Annual Assessment determination will be based on considerations of unconstrained water demand, local water supplies, MWDOC imported water supplies, planned water use, and infrastructure considerations. The balance between projected in-service area supplies, coupled with MWDOC imported supplies, and anticipated unconstrained demand will be used to determine what, if any, shortage stage is expected under the WSCP framework as presented in Figure 3-2. The WSCP's standard shortage stages are defined in terms of shortage percentages. Shortage percentages will be calculated by dividing the difference between water supplies and unconstrained demand by total unconstrained demand. This calculation will be performed separately for anticipated current year conditions and for assumed dry year conditions.

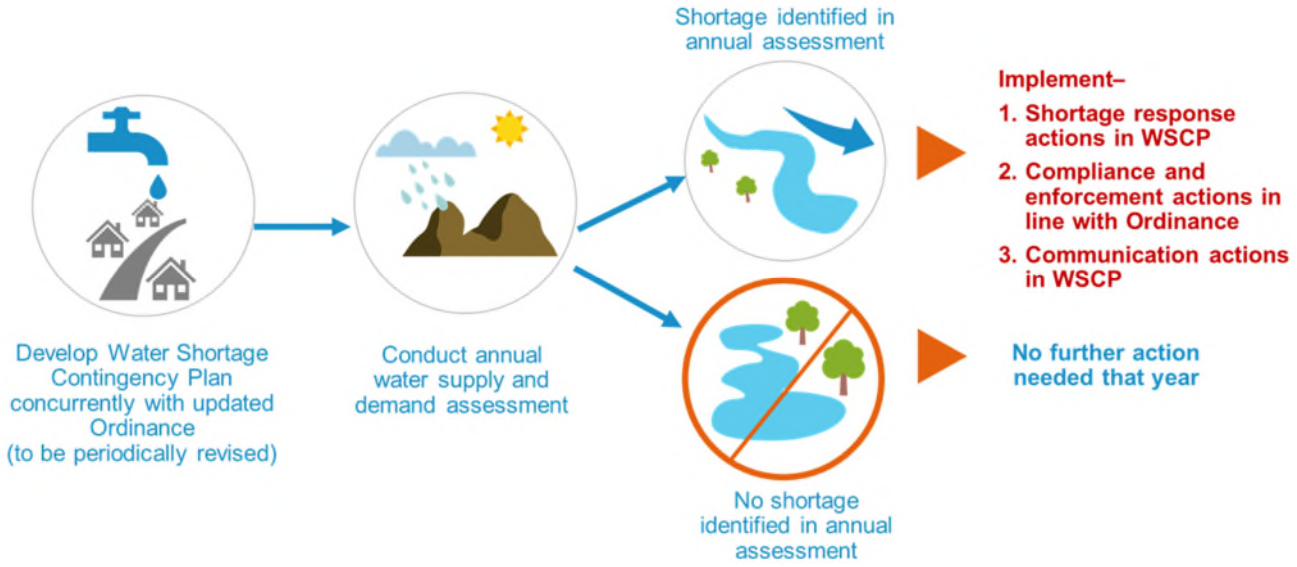

Figure 3-2: Water Shortage Contingency Plan Annual Assessment Framework

3.2.2.2 Locally Applicable Evaluation Criteria

Within Orange County, there are no significant local applicable criteria that directly affect reliability. Through the years, the water agencies in Orange County have made tremendous efforts to integrate their systems to provide flexibility to interchange with different sources of supplies. There are emergency agreements in place to ensure all parts of the County have an adequate supply of water. In the northern part of the County, agencies have the ability to meet a majority of their demands through groundwater with very little limitation, except for the OCWD BPP.

Mesa Water will also continue to monitor emerging supply and demand conditions related to supplemental imported water from MWDOC/MET and take appropriate actions consistent with the flexibility and adaptiveness inherent to the WSCP. Mesa Water's Annual Assessment was based on Mesa Water's service area, water sources, water supply reliability, and water use as described in Water Code Section 10631, including available data from state, regional, or local agency population, land use development, and climate change projections within the service area of Mesa Water. Some conditions that affect MWDOC's wholesale supply and demand, such as groundwater replenishment, surface water and local supply production, can differ significantly from earlier projections throughout the year.

However, if a major earthquake on the San Andreas Fault occurs, it has the potential to damage all three key regional water aqueducts and disrupt imported supplies for up to six months. The region would likely impose a water use reduction ranging from 10-25% until the system is repaired. However, MET and MWDOC have taken proactive steps to handle such disruption, such as constructing DVL, which mitigates potential impacts. DVL, along with other local reservoirs, can store a six to twelve-month supply of emergency water (MET, 2021b).

3.2.2.3 Water Supply

As detailed in Mesa Water's 2020 UWMP, Mesa Water meets all of its customers' demands with a combination of local groundwater and recycled water. Mesa Water's main source of water supply is groundwater from the OC Basin, with recycled water making up the rest of Mesa Water's water supply portfolio, and imported water from

MET through MWDOC available in the event of an emergency. In fiscal year (FY) 2019-20, Mesa Water relied on 94% groundwater (75% from clear wells and 19% from desalinated groundwater), 6% recycled water, and 0% imported water. It is projected that by 2045, Mesa Water will continue to be 100% reliable on local supplies, with the water supply portfolio remaining approximately the same, and shifting to 95% groundwater and 5% recycled water (Mesa Water, 2021).

3.2.2.4 Unconstrained Customer Demand

The WSCP and Annual Assessment define unconstrained demand as expected water use prior to any projected shortage response actions that may be taken under the WSCP. Unconstrained demand is distinguished from observed demand, which may be constrained by preceding, ongoing, or future actions, such as emergency supply allocations during a multi-year drought. WSCP shortage response actions to constrain demand are inherently extraordinary; routine activities such as ongoing conservation programs and regular operational adjustments are not considered as constraints on demands.

Mesa Water's DRA reveals that its supply capabilities are expected to balance anticipated total water use and supply, assuming a five-year consecutive drought from FY 2020-21 through FY 2024-25 (Mesa Water, 2021). Water demands in a five-year consecutive drought are calculated as a six percent increase in water demand above a normal year for each year of the drought (CDM Smith, 2021).

3.2.2.5 Planned Water Use for Current Year Considering Dry Subsequent Year

Water Code Section 10632(a)(2)(B)(ii) requires the Annual Assessment to determine "current year available supply, considering hydrological and regulatory conditions in the current year and one dry year."

The Annual Assessment will include two separate estimates of Mesa Water's annual water supply and unconstrained demand using: 1) current year conditions, and 2) assumed dry year conditions. Accordingly, the Annual Assessment's shortage analysis will present separate sets of findings for the current year and dry year scenarios. The Water Code does not specify the characteristics of a dry year, allowing discretion to the Supplier. Mesa Water will use its discretion to refine and update its assumptions for a dry year scenarios in each Annual Assessment as information becomes available and in accordance with best management practices.

Supply and demand analyses for the single-dry year case was based on conditions affecting the SWP as this supply availability fluctuates the most among MET's, and therefore MWDOC and Mesa Water's, sources of supply. FY 2013-14 was the single driest year for SWP supplies with an allocation of 5% to Municipal and Industrial (M&I) uses. Unique to this year, the 5% SWP allocation was later reduced to 0%, before ending up at its final allocation of 5%, highlight the stressed water supplies for the year. Furthermore, on January 17, 2014 Governor Brown declared the drought State of Emergency citing 2014 as the driest year in California history. Additionally, within MWDOC's service area, precipitation for FY 2013-14 was the second lowest on record, with 4.37 inches of rain, significantly impacting water demands.

The water demand forecasting model developed for the Demand Forecast TM isolated the impacts that weather and future climate can have on water demand through the use of a statistical model. The impacts of hot/dry weather conditions are reflected as a percentage increase in water demands from the normal year condition (average of FY 2017-18 and FY 2018-19). For a single dry year condition (FY 2013-14), the model projects a 6% increase in demand for the OC Basin area where Mesa Water's service area is located (CDM Smith, 2021). Detailed information of the model is included in Mesa Water's 2020 UWMP.

Mesa Water has documented that it is 100% reliable for single dry year demands from 2025 through 2045 with a demand increase of 6% from normal demand with significant reserves held by MET, local groundwater supplies, and conservation (Mesa Water, 2021).

3.2.2.6 Infrastructure Considerations

The Annual Assessment will include consideration of any infrastructure issues that may pertain to near-term water supply reliability, including repairs, construction, and environmental mitigation measures that may temporarily constrain capabilities, as well as any new projects that may add to system capacity.

3.2.2.7 Other Factors

For the Annual Assessment, any known issues related to water quality would be considered for their potential effects on water supply reliability. Mesa Water adheres to the regulatory requirements for groundwater monitoring. As of early 2021, Mesa Water wells are not affected by PFAS and are not part of routine regulatory monitoring for PFAS.

3.3 Six Standard Water Shortage Levels

Per Water Code Section 10632 (a)(3)(A), Mesa Water must include the six standard water shortage levels that represent shortages from the normal reliability as determined in the Annual Assessment. The shortage levels have been standardized to provide a consistent regional and statewide approach to conveying the relative severity of water supply shortage conditions. This is an outgrowth of the severe statewide drought of 2012-2016, and the widely recognized public communication and state policy uncertainty associated with the many different local definitions of water shortage Levels.

The six standard water shortage levels correspond to progressively increasing estimated shortage conditions (up to 10, 20, 30, 40, 50, and greater than 50% shortage compared to the normal reliability condition) and align with the response actions the Supplier would implement to meet the severity of the impending shortages.

Table 3-1: Water Shortage Contingency Plan Levels

Submittal Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions**
0	0% (Normal)	A Level 0 Water Supply Shortage – Mesa Water proceeds with planned water efficiency best practices to support consumer demand reduction in line with state mandated requirements and Mesa Water goals for water supply reliability. Permanent water waste prohibitions are in place as stipulated in Mesa Water's Water Shortage Contingency Response Ordinance.

Submittal Table 8-1 Water Shortage Contingency Plan Levels		
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions**
1	Up to 10%	A Level 1 Water Supply Shortage – Condition exists when Mesa Water notifies its water users that due to drought or other supply reductions, a consumer demand reduction of up to 10% is necessary to make more efficient use of water and respond to existing water conditions. Upon the declaration of a Water Aware condition, Mesa Water shall implement the mandatory Level 1 conservation measures identified in this ordinance.
2	11% to 20%	A Level 2 Water Supply Shortage – Condition exists when Mesa Water notifies its water users that due to drought or other supply reductions, a consumer demand reduction of up to 20% is necessary to make more efficient use of water and respond to existing water conditions. Upon declaration of a Level 2 Water Supply Shortage condition, Mesa Water shall implement the mandatory Level 2 conservation measures identified in this ordinance.
3	21% to 30%	A Level 3 Water Supply Shortage – Condition exists when Mesa Water declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 30% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. Mesa Water must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
4	31% to 40%	A Level 4 Water Supply Shortage – Condition exists when Mesa Water declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 40% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. Mesa Water must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
5	41% to 50%	A Level 5 Water Supply Shortage - Condition exists when Mesa Water declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. Mesa Water must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
6	>50%	A Level 6 Water Supply Shortage – Condition exists when Mesa Water declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that greater than 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. Mesa Water must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
NOTES:		

3.4 Shortage Response Actions

Water Code Section 10632 (a)(4) requires the WSCP to specify shortage response actions that align with the defined shortage levels. Mesa Water has defined specific shortage response actions that align with the defined shortage levels in DWR Tables 8-2 and 8-3 (Appendix A). These shortage response actions were developed with consideration to the system infrastructure and operations changes, supply augmentation responses, customer-class or water use-specific demand reduction initiatives, and increasingly stringent water use prohibitions.

3.4.1 Demand Reduction

The demand reduction measures that would be implemented to address shortage levels are described in DWR Table 8-2 (Appendix A). This table indicates which actions align with specific defined shortage levels and estimates the extent to which that action will reduce the gap between supplies and demands. DWR Table 8-2 (Appendix A) demonstrates that the chosen suite of shortage response actions can be expected to deliver the expected outcomes necessary to meet the requirements of a given shortage level (e.g., target of an additional 10% water savings). This table also identifies the enforcement action, if any, associated with each demand reduction measure.

3.4.2 Supply Augmentation

The supply augmentation actions are described in DWR Table 8-3 (Appendix A). These augmentations represent short-term management objectives triggered by the MET's WSDM Plan and do not overlap with the long-term new water supply development or supply reliability enhancement projects. Supply Augmentation is made available to Mesa Water through MET and OCWD. Mesa Water has the ability to pump additional groundwater from the OC Basin or purchase additional imported water from MET as a MET member agency.

MET's reliability portfolio of water supply programs including existing water transfers, storage and exchange agreements to supplement gaps in Mesa Water's supply/demand balance. MET has developed significant storage capacity (over 5 million AF) in reservoirs and groundwater banking programs both within and outside of the Southern California region. Additionally, MET can pursue additional water transfer and exchange programs with other water agencies to help mitigate supply/demand imbalances and provide additional dry-year supply sources.

3.4.3 Operational Changes

During shortage conditions, operations may be affected by supply augmentation or demand reduction responses. Mesa Water will consider their operational procedures when it completes its Annual Assessment or as needed to identify changes that can be implemented to address water shortage on a short-term basis, such as temporarily altering maintenance cycles, deferring planned system outages, and adjusting the flow and routing of water through its system to more effectively distribute available supply across the service area.

3.4.4 Additional Mandatory Restrictions

Water Code Section 10632(a)(4)(D) calls for "additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions" to be included among the WSCP's shortage response actions. Mesa Water will identify additional mandatory restrictions as needed based on the existing Ordinance No. 32, Water Shortage Response Ordinance (Appendix B). Mesa

Water intends to update any mandatory restrictions in a subsequently adopted ordinance which will supersede the existing ordinance.

3.4.5 Emergency Response Plan (Hazard Mitigation Plan)

A catastrophic water shortage would be addressed according to the appropriate water shortage level and response actions. It is likely that a catastrophic shortage would immediately trigger Shortage Level 6 and response actions have been put in place to mitigate a catastrophic shortage. In addition, there are several Plans that address catastrophic failures and align with the WSCP, including MET's WSDM and WSAP, Mesa Water's HMP, and the Water Emergency Response Organization of Orange County (WEROC)'s Emergency Operations Plan (EOP).

3.4.5.1 MET's WSDM and WSAP

MET has comprehensive plans for stages of actions it would undertake to address a catastrophic interruption in water supplies through its WSDM and WSAP. MET also developed an Emergency Storage Requirement to mitigate against potential interruption in water supplies resulting from catastrophic occurrences within the Southern California region, including seismic events along the San Andreas Fault. In addition, MET is working with the state to implement a comprehensive improvement plan to address catastrophic occurrences outside of the Southern California region, such as a maximum probable seismic event in the Sacramento-San Joaquin River Delta that would cause levee failure and disruption of SWP deliveries.

3.4.5.2 Water Emergency Response Organization of Orange County Emergency Operations Plan

In 1983, the Orange County water community identified a need to develop a plan on how agencies would respond effectively to disasters impacting the regional water distribution system. The collective efforts of these agencies resulted in the formation of WEROC to coordinate emergency response on behalf of all Orange County water and wastewater agencies, develop an emergency plan to respond to disasters, and conduct disaster training exercises for the Orange County water community. WEROC was established with the creation of an indemnification agreement between its member agencies to protect each other against civil liabilities and to facilitate the exchange of resources. WEROC is unique in its ability to provide a single point of contact for representation of all water and wastewater utilities in Orange County during a disaster. This representation is to the county, state, and federal disaster coordination agencies. Within the Orange County Operational Area, WEROC is the recognized contact for emergency response for the water community, including Mesa Water.

As a member of WEROC, Mesa Water will follow WEROC's EOP in the event of an emergency and coordinate with WEROC to assess damage, initiate repairs, and request and coordinate mutual aid resources in the event that Mesa Water is unable to provide the level of emergency response support required by the situation.

The EOP defines the actions to be taken by WEROC Emergency Operations Center (EOC) staff to reduce the loss of water and wastewater infrastructure; to respond effectively to a disaster; and to coordinate recovery operations in the aftermath of any emergency involving extensive damage to Orange County water and wastewater utilities. The EOP includes activation notification protocol that will be used to contact partner agencies to inform them of the situation, activation status of the EOC, known damage or impacts, or resource needs. The EOP is a standalone document that is reviewed annually and approved by the Board every three years.

WEROC is organized on the basis that each member agency is responsible for developing its own EOP in accordance with the California Standardized Emergency Management System (SEMS), National Incident Management System (NIMS), and Public Health Security and Bioterrorism Preparedness and Response Act of 2002 to meet specific emergency needs within its service area.

The WEROC EOC is responsible for assessing the overall condition and status of the Orange County regional water distribution and wastewater collection systems including MET facilities that serve Orange County. The EOC can be activated during an emergency situation that can result from both natural and man-made causes, and can be activated through automatic, manual, or standby for activation.

WEROC recognized four primary phases of emergency management, which include:

- **Preparedness:** Planning, training, and exercises that are conducted prior to an emergency to support and enhance response to an emergency or disaster.
- **Response:** Activities and programs designed to address the immediate and short-term effects of the onset of an emergency or disaster that helps to reduce effects to water infrastructure and speed recovery. This includes alert and notification, EOC activation, direction and control, and mutual aid.
- **Recovery:** This phase involved restoring systems to normal, in which short-term recovery actions are taken to assess the damage and return vital life-support systems to minimum operating standards, while long-term recovery actions have the potential to continue for many years.
- **Mitigation/Prevention:** These actions prevent the occurrence of an emergency or reduce the area's vulnerability in ways that minimize the adverse impacts of a disaster or emergency. MWDOC's HMP outlines threats and identifies mitigation projects.

The EOC Action Plans (EAP) provide frameworks for EOC staff to respond to different situations with the objectives and steps required to complete them, which will in turn serve the WEROC member agencies. In the event of an emergency which results in a catastrophic water shortage, Mesa Water will declare a water shortage condition of up to Level 6 for the impacted area depending on the severity of the event, and coordination with WEROC is anticipated to begin at Level 4 or greater (WEROC, 2018).

3.4.6 Mesa Water District Emergency Response Plan

Mesa Water will also refer to its current American Water Infrastructure Act Risk and Resilience Assessment and Emergency Response Plan in the event of a catastrophic supply interruption.

3.4.7 Seismic Risk Assessment and Mitigation Plan

Per the Water Code Section 10632.5, Suppliers are required to assess seismic risk to water supplies as part of their WSCP. The plan also must include the mitigation plan for the seismic risk(s). Given the great distances that imported supplies travel to reach Orange County, the region is vulnerable to interruptions along hundreds of miles of aqueducts, pipelines and other facilities associated with delivering the supplies to the region. Additionally, the infrastructure in place to deliver supplies are susceptible to damage from earthquakes and other disasters.

In lieu of conducting a seismic risk assessment specific to Mesa Water's 2020 UWMP, Mesa Water has included the previously prepared regional HMP by MWDOC as the regional imported water wholesaler that is required under the federal Disaster Mitigation Act of 2000 (Public Law 106-390).

MWDOC's HMP identified that the overarching goals of the HMP were the same for all of its member agencies, which include:

- Goal 1: Minimize vulnerabilities of critical infrastructure to minimize damages and loss of life and injury to human life caused by hazards.
- Goal 2: Minimize security risks to water and wastewater infrastructure.
- Goal 3: Minimize interruption to water and wastewater utilities.
- Goal 4: Improve public outreach, awareness, education, and preparedness for hazards in order to increase community resilience.
- Goal 5: Eliminate or minimize wastewater spills and overflows.
- Goal 6: Protect water quality and supply, critical aquatic resources, and habitat to ensure a safe water supply.
- Goal 7: Strengthen Emergency Response Services to ensure preparedness, response, and recovery during any major or multi-hazard event.

MWDOC's HMP evaluates hazards applicable to all jurisdictions in its entire planning area, prioritized based on probability, location, maximum probable extent, and secondary impacts. The identification of hazards is highly dependent on the location of facilities within Mesa Water's jurisdiction and takes into consideration the history of the hazard and associated damage, information provided by agencies specializing in a specific hazard, and relies upon Mesa Water's expertise and knowledge.

Earthquake fault rupture and seismic hazards, including ground shaking and liquefaction, are among the highest ranked hazards to the region as a whole because of its long history of earthquakes, with some resulting in considerable damage. A significant earthquake along one of the major faults could cause substantial casualties, extensive damage to infrastructure, fires, damages and outages of water and wastewater facilities, and other threats to life and property.

Nearly all of Orange County is at risk of moderate to extreme ground shaking, with liquefaction possible throughout much of Orange County but the most extensive liquefaction zones occur in coastal areas. Based on the amount of seismic activity that occurs within the region, there is no doubt that communities within Orange County will continue to experience future earthquake events, and it is a reasonable assumption that a major event will occur within a 30-year timeframe.

The mitigation actions identify the hazard, proposed mitigation action, location/facility, local planning mechanism, risk, cost, timeframe, possible funding sources, status, and status rationale, as applicable. Mitigation actions for MWDOC's member agencies for seismic risks may include (MWDOC, 2019):

- Secure above ground assets in all buildings, booster stations, pressure reducing stations, emergency interties, water systems, and pipelines.
- Conduct assessment of infrastructure to ensure seismic retrofitting is in place.
- Replace aging infrastructure throughout the District.
- Install backup power for critical facilities to ensure operability during emergency events.
- Enhance emergency operability by implementing communication infrastructure improvements.

3.4.8 Shortage Response Action Effectiveness

For each specific Shortage Response Action identified in the WSCP, the plan also estimates the extent to which that action will reduce the gap between supplies and demands identified in DWR Table 8-2 (Appendix A). To the

extent feasible, Mesa Water has estimated percentage savings for the chosen suite of shortage response actions, which can be anticipated to deliver the expected outcomes necessary to meet the requirements of a given shortage level.

3.5 Communication Protocols

Timely and effective communication is a key element of the WSCP implementation. In the context of water shortage response, the purpose may be an emergency water shortage situation, such as may result from an earthquake, or a longer-term, non-emergency, shortage condition, such as may result from a drought. In an emergency, Mesa Water will activate the communication protocol detailed in the Emergency Response Plan. In a non-emergency water shortage situation, Mesa Water will implement the communication protocols described below.

Per Water Code Section 10632 (a)(5), Mesa Water has established communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments regarding any current or predicted shortages as determined by the Annual Assessment described pursuant to Section 10632.1; any shortage response actions triggered or anticipated to be triggered by the Annual Assessment described pursuant to Section 10632.1; and any other relevant communications.

Non-emergency water shortage communication protocols are focused on communicating the water shortage contingency planning actions that can be derived from the results of the Annual Assessment, and it would likely trigger based upon the decision-making process in Section 3.2. Prior to water shortage level declaration, Mesa Water will pursue outreach to inform customers of water shortage levels and definitions, targeted water savings for each drought stage, guidelines that customers are to follow during each level, and sources of current information on Mesa Water's supply and demand response status.

The type and degree of communication will vary with each shortage level in order to inform stakeholders of the current water shortage level status and associated shortage response actions, as defined in Section 3.4.1. Predefined communication objectives and tools will ensure Mesa Water's ability to message necessary events and information to ensure compliance with shortage response actions. These communication objectives and tools are summarized in Table 3-2.

The Mesa Water's Public Relations department will lead public information and outreach efforts in close coordination with other MWDOC and MET. Mesa Water will share information and provide guidance to its customers as well as monitor the customer response and attitude toward both voluntary and mandatory customer response guidelines. Mesa Water's customer outreach is required to successfully achieve targeted water savings during each shortage level.

Table 3-2: Communication Procedures

Shortage level	Communication Objectives	Communication Tools
1	Compliance with response actions, 10% reduction in water use	Communications at this stage will highlight water efficiency best practices and will include the following communication tools and tactics, but are not limited to:

Shortage level	Communication Objectives	Communication Tools
		– Information on Mesa Water's website – Information in Mesa Water's newsletter, News on Tap
2	Compliance with response actions, 20% reduction in water use	Communications at this stage will highlight water efficiency best practices and will include the following communication tools and tactics, but are not limited to: Same as shortage Level 1, in addition to: – Social Media – Educational outreach (via community events or partnerships)
3	Compliance with response actions, 30% reduction in water use	In conjunction with Table 3-1: Water Shortage Contingency Plan Levels, this stage is now a water shortage emergency. Same as shortage Level 1-2, in addition to: – Text and email notification alerts via Mesa Water Notify – Water bill inserts – Direct mail to homes and businesses (postcards or other mailers) – Direct communication with high water users – Press release/ media outreach – Communication coordination with local emergency or water member agencies, including but not limited to WEROC, ACWA, OCWD, MWDOC, for messaging and broader county communications plan – Communication coordination with City of Costa Mesa and other related agencies (Police Dept, Fire Dept, as needed) – Communication coordination with area Hospitals, Newport-Mesa Unified School District, Colleges, Costa Mesa Chamber of

Shortage level	Communication Objectives	Communication Tools
		Commerce and other key stakeholders and partners
4	Compliance with response actions, 40% reduction in water use	Same as shortage Level 1-3, in addition to: – Radio and/or public service announcements – Increased presence at local events – Publications and handouts
5	Compliance with response actions, 50% reduction in water use	Same as shortage Level 1-4, in addition to: – Neighborhood Canvasing – Neighborhood Meetings or Pop-ups – Advertisements (print and digital) in local publications, key businesses and landmarks – Increased communication coordination with local emergency or water member agencies, including but not limited to WEROC, ACWA, OCWD, MWDOC – Increased communication coordination with City of Costa Mesa and other related agencies (Police Dept, Fire Dept as needed)
6	Compliance with response actions, >50% reduction in water use	Same as shortage Level 1-5, in addition to: – Increased Neighborhood Canvasing – Increased Neighborhood Meetings or Pop-ups

3.6 Compliance and Enforcement

Per the Water Code Section 10632 (a)(6), Mesa Water has defined customer compliance, enforcement, appeal, and exemption procedures for triggered shortage response actions. Procedures to ensure customer compliance are described in Section 3.5 Communication Protocols and customer enforcement, appeal, and exemption procedures are defined in the existing Ordinance No. 32, Water Shortage Response Ordinance (Appendix B). Mesa Water intends to update any enforcement procedures in a subsequently adopted ordinance which will supersede the existing ordinance.

3.7 Legal Authorities

Per Water Code Section 10632 (a)(7)(A), Mesa Water has provided a description of the legal authorities that empower Mesa Water to implement and enforce its shortage response in Ordinance No. 32, Water Shortage Response Ordinance (Appendix B).

Per Water Code Section 10632 (a)(7) (B), Mesa Water shall declare a water shortage emergency condition to prevail within the area served by such wholesaler 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.

Per Water Code Section 10632 (a)(7)(C), Mesa Water shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency under California Government Code, California Emergency Services Act (Article 2, Section 8558). Table 3-3 identifies the contacts for all cities or counties for which the Supplier provides service in the WSCP, along with developed coordination protocols, can facilitate compliance with this section of the Water Code in the event of a local emergency as defined in subpart (c) of Government Code Section 8558.

Table 3-3: Agency Contacts and Coordination Protocols

Contact	Agency	Coordination Protocols
Public Works Director	County of Orange	Phone/email
City Manager	City of Costa Mesa	Phone/email
City Manager	City of Newport Beach	Phone/email

3.8 Financial Consequences of WSCP

Per Water Code Section 10632(a)(8), Suppliers must include a description of the overall anticipated financial consequences to the Supplier of implementing the WSCP. This description must include potential reductions in revenue and increased expenses associated with implementation of the shortage response actions. This should be coupled with an identification of the anticipated mitigation actions needed to address these financial impacts.

During a catastrophic interruption of water supplies, prolonged drought, or water shortage of any kind, Mesa Water will experience a reduction in revenue due to reduced water sales. Throughout this period of time, expenditures may increase or decrease with varying circumstances. Expenditures may increase in the event of significant damage to the water system, resulting in emergency repairs. Expenditures may also decrease as less water is pumped through the system, resulting in lower power costs. Water shortage mitigation actions will also impact revenues and require additional costs for drought response activities such as increased staff costs for tracking, reporting, and communications.

Mesa Water receives water revenue from a service charge and a commodity charge based on consumption. The service charge recovers costs associated with providing water to the serviced property. The service charge does

not vary with consumption and the commodity charge is based on water usage. Rates have been designed to recover the full cost of water service in the charges. Therefore, the total cost of purchasing water would decrease as the usage or sale of water decreases. In the event of a drought emergency, Mesa Water will impose excessive water use penalties on its customers, which may include additional costs associated with reduced water revenue, staff time taken for penalty enforcement, and advertising the excessive use penalties. The excessive water use penalties are further described in Ordinance No. 32, Water Shortage Contingency Response Ordinance (Appendix B).

However, there are significant fixed costs associated with maintaining a minimal level of service. Mesa Water will monitor projected revenues and expenditures should an extreme shortage and a large reduction in water sales occur for an extended period of time. To overcome these potential revenue losses and/or expenditure impacts, Mesa Water may use reserves. If necessary, Mesa Water may reduce expenditures by delaying implementation of its Capital Improvement Program and equipment purchases to reallocate funds to cover the cost of operations and critical maintenance, adjust the work force, implement a drought surcharge, and/or make adjustments to its water rate structure.

Based on current water rates, a volumetric cutback of 50% and above of water sales may lead to a range of reduction in revenues. The impacts to revenues will depend on a proportionate reduction in variable costs related to supply, pumping, and treatment for the specific shortage event. Mesa Water has set aside reserve funding as a Drought Reserve Fund to mitigate short-term water shortage situation.

3.9 Monitoring and Reporting

Per Water Code Section 10632(a)(9), Mesa Water is required to provide a description of the monitoring and reporting requirements and procedures that have been implemented to ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

Monitoring and reporting key water use metrics is fundamental to water supply planning and management. Monitoring is also essential in times of water shortage to ensure that the response actions are achieving their intended water use reduction purposes, or if improvements or new actions need to be considered (see Section 3.10). Monitoring for customer compliance tracking is also useful in enforcement actions.

Under normal water supply conditions, potable water production figures are recorded monthly. Monthly reports are prepared and monitored. This data will be used to measure the effectiveness of any water shortage contingency level that may be implemented. Mesa Water has initiated a real-time Meter Technology Project that allows monitoring and reporting of its largest customers' water consumption to ensure conservation measures and water shortage mitigation is effective.

Mesa Water will participate in monthly member agency manager meetings with both MWDOC and OCWD to monitor and discuss monthly water allocation charts. This will enable Mesa Water to be aware of import and groundwater use on a timely basis as a result of specific actions taken responding to Mesa Water's WSCP.

3.10 WSCP Refinement Procedures

Per Water Code Section 10632 (a)(10), Mesa Water must provide 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.

Mesa Water's WSCP is prepared and implemented as an adaptive management plan. Mesa Water will use the monitoring and reporting process defined in section 3.9 to refine the WSCP. In addition, if certain procedural refinements or new actions are identified by Mesa Water staff, or suggested by customers or other interested parties, Mesa Water will evaluate their effectiveness, incorporate them into the WSCP, and implement them quickly at the appropriate water shortage level.

It is envisioned that the WSCP will be periodically re-evaluated to ensure that its shortage risk tolerance is adequate and the shortage response actions are effective and up to date based on lessons learned from implementing the WSCP. The WSCP will be revised and updated during the UWMP update cycle to incorporate updated and new information. For example, new supply augmentation actions will be added, and actions that are no longer applicable for reasons such as program expiration will be removed. However, if revisions to the WSCP are warranted before the UWMP is updated, the WSCP will be updated outside of the UWMP update cycle. In the course of preparing the Annual Assessment each year, Mesa Water staff will consider the functionality the overall WSCP and will prepare recommendations for Mesa Water's Board of Directors if changes are found to be needed.

3.11 Special Water Feature Distinction

Per Water Code Section 10632 (b), Mesa Water has defined water features in 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, in Ordinance No. 32, Water Shortage Response Ordinance (Appendix B).

3.12 Plan Adoption, Submittal, and Availability

Per Water Code Section 10632 (a)(c), Mesa Water provided notice of the availability of the draft 2020 UWMP and draft 2020 WSCP and notice of the public hearing to consider adoption of the WSCP. The public review drafts of the 2020 UWMP and the 2020 WSCP were posted prominently on Mesa Water's website in advance of the public hearing on June 10, 2021. Copies of the draft WSCP were also made available for public inspection at Mesa Water Clerk's and Utilities Department offices and public hearing notifications were published in local newspapers. A copy of the published Notice of Public Hearing is included in Appendix C.

Mesa Water held the public hearing for the draft 2020 UWMP and draft WSCP on June 10, 2021 at the Board meeting. Mesa Water Board reviewed and approved the 2020 UWMP and the WSCP at its June 10, 2021 meeting after the public hearing. See Appendix D for the resolution approving the WSCP.

By July 1, 2021, Mesa Water's adopted 2020 UWMP and WSCP was filed with DWR, California State Library, and the County of Orange. Mesa Water will make the WSCP available for public review on its website no later than 30 days after filing with DWR.

Based on DWR's review of the WSCP, Mesa Water will make any amendments in its adopted WSCP, as required and directed by DWR.

If Mesa Water revises its WSCP after UWMP is approved by DWR, then an electronic copy of the revised WSCP will be submitted to DWR within 30 days of its adoption.

4 REFERENCES

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Appendix A

DWR Submittal Tables

Table 8-1: Water Shortage Contingency Plan Levels

Table 8-2: Demand Reduction Actions

Table 8-3: Supply Augmentation and Other Actions

Submittal Table 8-1
Water Shortage Contingency Plan Levels

Shortage Level	Percent Shortage Range	Shortage Response Actions (*Narrative description*)
0	0% (Normal)	A Level 0 Water Supply Shortage – Mesa Water proceeds with planned water efficiency best practices to support consumer demand reduction in line with state mandated requirements and Mesa Water goals for water supply reliability. Permanent water waste prohibitions are in place as stipulated in Mesa Water's Water Shortage Contingency Response Ordinance.
1	Up to 10%	A Level 1 Water Supply Shortage – Condition exists when Mesa Water notifies its water users that due to drought or other supply reductions, a consumer demand reduction of up to 10% is necessary to make more efficient use of water and respond to existing water conditions. Upon the declaration of a Water Aware condition, Mesa Water shall implement the mandatory Level 1 conservation measures identified in this ordinance.
2	11% to 20%	A Level 2 Water Supply Shortage – Condition exists when Mesa Water notifies its water users that due to drought or other supply reductions, a consumer demand reduction of up to 20% is necessary to make more efficient use of water and respond to existing water conditions. Upon declaration of a Level 2 Water Supply Shortage condition, Mesa Water shall implement the mandatory Level 2 conservation measures identified in this ordinance.
3	21% to 30%	A Level 3 Water Supply Shortage – Condition exists when Mesa Water declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 30% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. Mesa Water must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
4	31% to 40%	A Level 4 Water Supply Shortage - Condition exists when Mesa Water declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 40% consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. Mesa Water must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
5	41% to 50%	A Level 5 Water Supply Shortage - Condition exists when Mesa Water declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that up to 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. Mesa Water must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
6	>50%	A Level 6 Water Supply Shortage – Condition exists when Mesa Water declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its residents and businesses that greater than 50% or more consumer demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. Mesa Water must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.

NOTES:

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
0	Landscape - Other landscape restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**Irrigation During Rain Events:** The application of potable water to outdoor landscapes during and up to forty-eight (48) hours after measurable rainfall is prohibited.	Yes
0	Landscape - Prohibit certain types of landscape irrigation	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**Irrigated Medians:** The use of potable water to irrigate ornamental turf on public street medians is prohibited.	Yes
0	Landscape - Restrict or prohibit runoff from landscape irrigation	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**No Excessive Water Flow or Runoff:** No person shall cause or allow watering or irrigating of any lawn, landscape or other vegetated area in a manner that causes or allows excessive runoff from the property. Additionally, to the extent prohibited by any Statewide statute, or regulation adopted by any State agency with jurisdiction to adopt such regulations, including, but no limited to, the State Water Resources Control Board, no person shall cause or allow water to flow or runoff their property onto adjacent property, non-irrigated areas, private and public walkways, driveways, roadways, gutters or ditches, parking lots, or structures.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
0	Other - Prohibit use of potable water for washing hard surfaces	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**No Washing Down Hard or Paved Surfaces:** Washing down hard or paved surfaces, including but not limited to sidewalks, walkways, driveways, parking areas, tennis courts, patios or alleys, is prohibited except when necessary to alleviate safety or sanitary hazards, and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a fully functioning, positive self-closing water shut-off device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low-volume high-pressure water broom.	Yes
0	Water Features - Restrict water use for decorative water features, such as fountains	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**Re-circulating Water Required for Water Fountains and Decorative Water Features:** Operating a water fountain or other decorative water feature that does not use re-circulated water is prohibited.	Yes
0	Other - Require automatic shut of hoses	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**Limits on Washing Vehicles:** Using water to wash or clean a vehicle, including but not limited to any automobile, truck, van, bus, motorcycle, boat or trailer, whether motorized or not is prohibited, except by use of a hand-held bucket or similar container or a hand-held hose equipped with a fully functioning, positive self-closing water shut-off nozzle or device that causes it to cease dispensing water immediately when not in use. This subsection does not apply to any commercial car washing facility.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
0	Other	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**No Installation of Single Pass Cooling Systems:** Installation of single pass cooling systems is prohibited in buildings requesting new water service from Mesa Water District.	Yes
0	CII - Other CII restriction or prohibition	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**No Installation of Non-re-circulating in Commercial Car Wash and Laundry Systems:** Installation of non-re-circulating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems.	Yes
0	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	**Commercial Car Wash Systems:** All commercial conveyor car wash systems must utilize re-circulating water systems, or must secure a waiver of this requirement from Mesa Water Distirct.	Yes
1	Landscape - Limit landscape irrigation to specific times	5%	**Limits on Watering Hours:** Watering or irrigating of lawn, landscape, or other vegetated area with potable water is prohibited between the hours of 8:00 a.m. and 5:00 p.m. Pacific Standard Time on any day. Hand-held watering cans, buckets, or similar containers reasonably used to convey water for irrigation purposes are not subject to these time restrictions. Similarly, a hand-held hose equipped with a fully functioning, positive self-closing water shut-off nozzle or device may be used during the otherwise restricted period. If necessary, and for very short periods of time for the express purpose of adjusting or repairing it, one may operate an irrigation system during the otherwise restricted period.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
1	Landscape - Limit landscape irrigation to specific days	10%	**Designated Watering Days:** Watering or irrigating of lawn, landscape, or other vegetated area is limited up to a maximum of five (5) days per week on a schedule established and posted by Mesa Water District by a Resolution of the Board of Directors. This provision does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system, and then only while under the supervision of a competent person.	Yes
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	3%	**Obligation to Fix Leaks, Breaks or Malfunctions**: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within ninty-six (96) hours of notification by Mesa Water District, or turned off, unless other arrangements are made with the District.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
2	Landscape - Limit landscape irrigation to specific days	10%	**Designated Watering Days:** Watering or irrigating of lawn, landscape, or other vegetated area is limited up to a maximum of four (4) days per week on a schedule established and posted by Mesa Water District by a Resolution of the Board of Directors. This provision does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system, and then only while under the supervision of a competent person.	Yes
2	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	3%	**Obligation to Fix Leaks, Breaks or Malfunctions**: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within seventy-two (72) hours of notification by Mesa Water District, or turned off, unless other arrangements are made with the District.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
3	Landscape - Limit landscape irrigation to specific days	10%	**Designated Watering Days:** Watering or irrigating of lawn, landscape, or other vegetated area is limited up to a maximum of three (3) days per week on a schedule established and posted by Mesa Water District by a Resolution of the Board of Directors. This provision does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system, and then only while under the supervision of a competent person.	Yes
3	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	3%	**Obligation to Fix Leaks, Breaks or Malfunctions**: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within forty-eight (48) hours of notification by Mesa Water District, or turned off, unless other arrangements are made with the District.	Yes
3	Water Features - Restrict water use for decorative water features, such as fountains	2%	**Limits on Filling Ornamental Fountains, Lakes, and Ponds**: Filling or re-filling ornamental fountains, lakes, and ponds is prohibited, except to the extent needed to sustain aquatic life, provided that such animals have been actively managed within the water feature prior to declaration of a supply shortage level under this Conservation Program.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
4	Landscape - Limit landscape irrigation to specific days	10%	**Designated Watering Days:** Watering or irrigating of lawn, landscape, or other vegetated area is limited up to a maximum of two (2) days per week on a schedule established and posted by Mesa Water District by a Resolution of the Board of Directors. This provision does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system, and then only while under the supervision of a competent person.	Yes
4	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	3%	**Obligation to Fix Leaks, Breaks or Malfunctions**: All leaks, breaks, or other malfunctions in the water user's plumbing or distribution system must be repaired within twenty four (24) hours of notification by Mesa Water District, or turned off, unless other arrangements are made with the District.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
5	Landscape - Limit landscape irrigation to specific days	10%	**Designated Watering Days:** Watering or irrigating of lawn, landscape, or other vegetated area is limited up to a maximum of one (1) day per week on a schedule established and posted by Mesa Water District by a Resolution of the Board of Directors. This provision does not apply to watering or irrigating by use of a hand-held bucket or similar container, a hand-held hose equipped with a positive self-closing water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system, and then only while under the supervision of a competent person.	Yes
5	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	3%	**Car Washing at Commercial Facilities Only:** Washing of motor vehicles, trailers, boats, aircraft and other types of mobile equipment shall be done only at a commercial car wash with water recycling facilities. No restrictions apply where the healthy, safety, and welfare of the public is contingent upon frequent vehicle cleaning, such as with refuse trucks and vehicles used to transport food and perishables.	Yes
5	Other water feature or swimming pool restriction	2%	**No Initial Filling or Re-Filling of Swimming Pools & Spas:** Filling and Re-Filling of residential swimming pools or outdoor spas with water is prohibited.	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool. Select those that apply.*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only*** *Drop Down List*
6	Landscape - Prohibit all landscape irrigation	10%	**No Watering or Irrigating:** Watering or irrigating of lawn, landscape, or other vegetated area is prohibited. This restriction does not apply to the following categories of use: Maintenance of vegetation, including trees and shrubs, that are watered using a hand-held bucket or similar container, hand-held hose equipped with a positive self–closing water shut-off nozzle or device; Maintenance of existing landscape necessary for fire protection; Maintenance of existing landscape for soil erosion control; Maintenance of plant materials identified to be rare or essential to the well-being of protected species. Maintenance of landscape within active public parks and playing fields, day care centers, golf course greens, and school grounds, provided that such irrigation does not exceed a maximum of two (2) days per week according to the schedule established in Section 8(b)(1) and time restrictions in Section 6(a); Actively irrigated environmental mitigation projects.	Yes
NOTES:				

Submittal Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier ***Drop down list*** *These are the only categories that will be accepted by the WUEdata online submittal tool*	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
1 through 6	Other Purchases	0 - 100%	Additional groundwater pumping in the Orange County Groundwater Basin
1 through 6	Other Purchases	0 - 100%	Additional imported water purchases through MWDOC
1 through 6	Other Purchases	0 - 100%	Interties with City of Santa Ana, City of Newport Beach, and IRWD
NOTES:			

Appendix B

Ordinance No. 32, Water Shortage Contingency Response Ordinance

Below is the weblink to the current ordinance (last accessed on May 24, 2021)
https://www.mesawater.org/save-water/conservation-requirements

Appendix C

Notice of Public Hearing

MesaWater DISTRICT®

Dedicated to Satisfying our Community's Water Needs

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Atkinson, Andelson, Loya, Ruud & Romo
Legal Counsel

1965 Placentia Avenue
Costa Mesa, CA 92627
tel 949.631.1200
fax 949.574.1036
info@MesaWater.org
MesaWater.org

April 7, 2021

Lori Ann Farrell Harrison
City Manager
City of Costa Mesa
P.O.Box 1200
Costa Mesa, CA 92628

Subject: Mesa Water 2020 Urban Water Management Plan Update

Mesa Water District (Mesa Water®) is in the process of preparing and updating its 2020 Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009, commonly referred to as SBX7-7. An update of Mesa Water's UWMP is required every five (5) years.

Water Code section 10621(b) requires an urban water supplier updating its UWMP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing. This letter serves as Mesa Water's notice that it is preparing and updating its 2020 UWMP, to be adopted and submitted to the California Department of Water Resources before the July 1, 2021 deadline. Additionally, Mesa Water will be adopting its Water Shortage Contingency Plan as part of the 2020 UWMP.

Mesa Water is also considering an Addendum to Mesa Water's 2015 UWMP to demonstrate consistency with the Delta Plan Policy to Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit. 23, § 5003). Mesa Water's 2015 UWMP Addendum and a copy of Mesa Water's draft 2020 UWMP will be available for review on the Mesa Water website (www.MesaWater.org). Mesa Water will hold noticed public hearing regarding its 2020 UWMP, Water Shortage Contingency Plan, and 2015 UWMP Addendum on June 10, 2021.

Mesa Water invites you to submit comments and consult with Mesa Water regarding its 2020 UWMP update, Water Shortage Contingency Plan, and 2015 UWMP Addendum.

If you have any input for the matters contained in this notice letter, require additional information, or would like to set up a meeting to discuss Mesa Water's 2020 UWMP update, please contact me at (949) 631-1206, or by email at PaulS@MesaWater.org.

Sincerely,

Paul E. Shoenberger, P.E.
General Manager

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1965 Placentia Avenue
Costa Mesa, CA 92627
tel 949.631.1200
fax 949.574.1036
info@MesaWater.org
MesaWater.org

April 7, 2021

Andrew Do
Board of Supervisors Chairman
County of Orange
10 Civic Center Plaza
Santa Ana, CA 92701

Subject: Mesa Water 2020 Urban Water Management Plan Update

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Sincerely,

Paul E. Shoenberger, P.E.
General Manager

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Costa Mesa, CA 92627
tel 949.631.1200
fax 949.574.1036
info@MesaWater.org
MesaWater.org

April 7, 2021

Rob Hunter
General Manager
Municipal Water District of Orange County
18700 Ward Street
Fountain Valley, CA 92708

Subject: Mesa Water 2020 Urban Water Management Plan Update

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Sincerely,

Paul E. Shoenberger, P.E.
General Manager

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1965 Placentia Avenue
Costa Mesa, CA 92627
tel 949.631.1200
fax 949.574.1036
info@MesaWater.org
MesaWater.org

April 7, 2021

Grace K. Leung
City Manager
City of Newport Beach
100 Civic Center Drive
Newport Beach, CA 92660

Subject: Mesa Water 2020 Urban Water Management Plan Update

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Water Code section 10621(b) requires an urban water supplier updating its UWMP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing. This letter serves as Mesa Water's notice that it is preparing and updating its 2020 UWMP, to be adopted and submitted to the California Department of Water Resources before the July 1, 2021 deadline. Additionally, Mesa Water will be adopting its Water Shortage Contingency Plan as part of the 2020 UWMP.

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If you have any input for the matters contained in this notice letter, require additional information, or would like to set up a meeting to discuss Mesa Water's 2020 UWMP update, please contact me at (949) 631-1206, or by email at PaulS@MesaWater.org.

Sincerely,

Paul E. Shoenberger, P.E.
General Manager

MesaWater DISTRICT®

Dedicated to Satisfying our Community's Water Needs

BOARD OF DIRECTORS

Marice H. DePasquale
President
Division III

Shawn Dewane
Vice President
Division V

Jim Atkinson
Director
Division IV

Fred R. Bockmiller, P.E.
Director
Division I

James R. Fisler
Director
Division II

Paul E. Shoenberger, P.E.
General Manager

Denise Garcia
District Secretary

Marwan Khalifa, CPA, MBA
District Treasurer

Atkinson, Andelson, Loya, Ruud & Romo
Legal Counsel

1965 Placentia Avenue
Costa Mesa, CA 92627
tel 949.631.1200
fax 949.574.1036
info@MesaWater.org
MesaWater.org

April 7, 2021

James Treadaway
Public Works Director
County of Orange
601 North Ross Street
Santa Ana, CA 92701

Subject: Mesa Water 2020 Urban Water Management Plan Update

Mesa Water District (Mesa Water®) is in the process of preparing and updating its 2020 Urban Water Management Plan (UWMP) in compliance with the Urban Water Management Planning Act and the Water Conservation Act of 2009, commonly referred to as SBX7-7. An update of Mesa Water's UWMP is required every five (5) years.

Water Code section 10621(b) requires an urban water supplier updating its UWMP to notify cities and counties within its service area of the update at least sixty (60) days prior to holding a public hearing. This letter serves as Mesa Water's notice that it is preparing and updating its 2020 UWMP, to be adopted and submitted to the California Department of Water Resources before the July 1, 2021 deadline. Additionally, Mesa Water will be adopting its Water Shortage Contingency Plan as part of the 2020 UWMP.

Mesa Water is also considering an Addendum to Mesa Water's 2015 UWMP to demonstrate consistency with the Delta Plan Policy to Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit. 23, § 5003). Mesa Water's 2015 UWMP Addendum and a copy of Mesa Water's draft 2020 UWMP will be available for review on the Mesa Water website (www.MesaWater.org). Mesa Water will hold noticed public hearing regarding its 2020 UWMP, Water Shortage Contingency Plan, and 2015 UWMP Addendum on June 10, 2021.

Mesa Water invites you to submit comments and consult with Mesa Water regarding its 2020 UWMP update, Water Shortage Contingency Plan, and 2015 UWMP Addendum.

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April 7, 2021

Kristine Ridge
City Manager
City of Santa Ana
20 Civic Center Plaza
Santa Ana, CA 92701

Subject: Mesa Water 2020 Urban Water Management Plan Update

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Sincerely,

Paul E. Shoenberger, P.E.
General Manager

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MESA WATER DISTRICT

AFFIDAVIT OF POSTING OF NOTICE

I, Denise Garcia, do hereby declare as follows:

1. I am a citizen of the United States and a resident of the County of Orange.

2. I am the District Secretary of Mesa Water District, which has its principal office located at 1965 Placentia Avenue, Costa Mesa, California, County of Orange.

3. On May 27, 2021, I caused a copy of the notice entitled Notice of Public Hearing for the purpose of receiving public comments regarding Mesa Water District's 2020 Urban Water Management Plan and the Amendment to the 2015 Urban Water Management Plan to be posted at the following locations within the boundaries of the District:

   A. Mesa Water District
   1965 Placentia Avenue
   Costa Mesa, CA 92627

   B. Costa Mesa City Hall
   77 Fair Drive
   Costa Mesa, CA 92626

The notice was also posted on Mesa Water District's website www.MesaWater.org.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 27th day of May 2021 at Costa Mesa, California.

By: Denise Garcia
Denise Garcia
District Secretary

PUBLIC HEARING

NOTICE OF PUBLIC HEARING
MESA WATER DISTRICT
Thursday, June 10, 2021
3:30 p.m. or as soon thereafter as the agenda permits
Board Meeting Room
Mesa Water District
1965 Placentia Avenue
Costa Mesa, California
(In person public attendance permitted)

The Board of Directors of Mesa Water District invites the community to attend a public hearing for the purpose of receiving public comments regarding Mesa Water District's 2020 Urban Water Management Plan and the Amendment to the 2015 Urban Water Management Plan.

Any person desiring to make comments or present information to the Board may make an oral presentation at the public hearing, or submit written comments for the Board's consideration by sending or delivering them to the District office (at the above-referenced address) prior to the conclusion of the public hearing. Any written comments must be received not later than the conclusion of the public hearing in order to be considered.

For information on the Board of Directors meeting format, and how to participate in such Board meeting/public hearing, please visit Mesa Water's internet website at https://www.mesawater.org/ and view information under the heading "Board Meeting Agendas and Minutes" or contact the District Secretary, as discussed below.

Mesa Water District's 2020 Urban Water Management Plan and the Amendment to the 2015 Urban Water Management Plan will be discussed

and comments will be received at such time and place.

A copy of the draft 2020 Urban Water Management Plan and the Amendment to the 2015 Urban Water Management Plan will be available for review on Mesa Water's District website beginning May 27, 2021. For more information, or if you would like assistance in presenting your comments to the Board of Directors at the public hearing, please contact Denise Garcia, District Secretary, at telephone (949) 631-1205.

Published Daily Pilot May 27 and June 3, 2021.

Los Angeles Times
MEDIA GROUP

PROOF OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Orange

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the action for which the attached notice was published. I am an Inside Sales Associate of the Orange Coast Daily Pilot, which was adjudged a newspaper of general circulation on Jan 14, 1938, Cases A6214 for the City of Costa Mesa, County of Orange, and State of California. Attached to this Affidavit is a true and complete copy as was printed and published on the following date(s):
May 27, 2021 and June 3, 2021

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Fountain Valley, California
on this 23rd day of June, 2021.

Pon Phaniphon

10540 Talbert Avenue
Fountain Valley, CA 92708

Los Angeles Times
MEDIA GROUP

Sold To:
Mesa Water District LA – CA11568367
1965 Placentia Avenue
Costa Mesa, CA 92627-3420

Bill To:
Mesa Water District LA – CA11568367
1965 Placentia Avenue
Costa Mesa, CA 92627-3420

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Published Daily Pilot May 27 and June 3, 2021.

Appendix D

Adopted WSCP Resolution

RESOLUTION NO. 1542

RESOLUTION OF THE MESA WATER DISTRICT BOARD OF DIRECTORS APPROVING THE ADOPTION OF THE 2020 WATER SHORTAGE CONTINGENCY PLAN

WHEREAS, the Mesa Water District (Mesa Water) is a county water district organized and operating pursuant to the provisions of the laws of the State of California (State or California); and

WHEREAS, the California Legislature enacted Assembly Bill 797 (California Water Code Section 10610 *et seq.*, known as the Urban Water Management Planning Act, as amended) during the 1983-1984 Regular Session, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan and Water Shortage Contingency Plan, the primary objective of which is to ensure the appropriate level of reliability in its water service to meet the needs of its customers during normal, dry, and multiple dry years, and to ensure the conservation and efficient use of water; and

WHEREAS, following the end of the most recent drought, the California Legislature modified the Urban Water Management Planning Act in 2018 to include additional water shortage planning requirements; and

WHEREAS, significant amendments to the California Water Code, specifically to California Water Code Section 10632, now mandate new elements to Urban Water Management Plans, including Water Shortage Contingency Plans, which include an annual drought risk assessment, evaluation of State Water Shortage Levels and Statewide water use prohibitions; and

WHEREAS, Mesa Water is an urban water supplier providing water to a population over 100,000; and

WHEREAS, Mesa Water's Urban Water Management Plan (UWMP) shall be periodically reviewed at least once every five years and Mesa Water shall make amendments or changes to the UWMP which are indicated by the review; and

WHEREAS, the UWMP must be updated, adopted, and submitted to the California Department of Water Resources by July 1, 2021; and

WHEREAS, the UWMP must be submitted to the California Department of Water Resources, the California State Library, and the cities and county within which Mesa Water provides water supplies, and shall be provided with a copy of the UWMP,

including the Water Shortage Contingency Plan (Contingency Plan), no later than 30 days after adoption thereof; and

WHEREAS, Mesa Water prepared for public review a draft Contingency Plan as part of the UWMP and held a properly noticed public hearing on June 10, 2021, with respect to the UWMP, including the Contingency Plan included therein, during which Mesa Water received community input on the UWMP and the Contingency Plan, considered the economic impacts of the UWMP and the Contingency Plan, and adopted a method for determining Mesa Water's urban water use target; and

WHEREAS, the Board of Directors (Board) of Mesa Water were furnished with copies of the Contingency Plan as part of their consideration of such Contingency Plan; and

WHEREAS, the Board has determined that the adoption of the Contingency Plan, as part of the UWMP, as provided for under California Water Code Section 10632, at this time, is appropriate.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE MESA WATER DISTRICT DOES HEREBY RESOLVE, DETERMINE, AND ORDER AS FOLLOWS:

Section 1. The foregoing recitals are true and correct and are incorporated herein by this reference.

Section 2. The Board of Directors hereby adopts the Contingency Plan, as part of the UWMP, which the Contingency Plan is incorporated herein by this reference, and will implement the Contingency Plan in accordance with the terms set forth therein.

Section 3. The District Secretary of Mesa Water is hereby directed to submit the Contingency Plan, as part of the UWMP, to the California Department of Water Resources, the California State Library, and any city or county within which Mesa Water provides water supplies, no later than 30 days from the date of adoption hereof, in accordance with California Water Code Section 10644(a)(1).

Section 4. The General Manager, District Secretary, and other Mesa Water staff are authorized and directed to take all other and further actions necessary or desirable to carry out the directives of this Resolution.

RESOLUTION NO. 1542

ATTACHMENT A

RESOLUTION OF THE MESA WATER DISTRICT BOARD OF DIRECTORS APPROVING THE ADOPTION OF THE 2020 WATER SHORTAGE CONTINGENCY PLAN

Water Shortage Contingency Plan
June 2021

ADOPTED, SIGNED, and APPROVED this 10th day of June 2021 by a roll call vote.

AYES: DIRECTORS: Atkinson, Bockmiller, Fisler, Dewane, DePasquale
NOES: DIRECTORS:
ABSENT: DIRECTORS:
ABSTAIN: DIRECTORS:

Marice H. DePasquale
President, Board of Directors

Denise Garcia
District Secretary

Arcadis U.S., Inc.
320 Commerce, Suite 200
Irvine
California 92602
Phone: 714 730 9052
www.arcadis.com

Maddaus Water Management, Inc.
Danville, California 94526
Sacramento, California 95816
www.maddauswater.com