Municipal Water District of Orange County

2020 Water Shortage Contingency Plan

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Acronyms and Abbreviations

%	Percent
Act	Urban Water Management Planning Act
AF	Acre-Feet
AFY	Acre-Feet per Year
Annual Assessment	Annual Water Supply and Demand Assessment
BPP	Basin Production Percentage
cfs	cubic feet per second
CRA	Colorado River Aqueduct
CVP	Central Valley Project
CWC	California Water Code
DDW	Division of Drinking Water
Delta	Sacramento-San Joaquin River Delta
DRA	Drought Risk Assessment
DVL	Diamond Valley Lake
DWR	California Department of Water Resources
EBSD	Emerald Bay Services District
EOCWD	East Orange County Water District
EOC	Emergency Operation Center
EOP	Emergency Operations Plan
ERP	Emergency Response Plan
ETWD	El Toro Water District
FVCSP	MWDOC Crossings Specific Plan
FY	Fiscal Year
GPCD	Gallons per Capita per Day
GPD	Gallons per Day
GSP	Groundwater Sustainability Plan
GSWC	Golden State Water Company
HMP	Hazard Mitigation Plan
IRP	Integrated Water Resource Plan
IRWD	Irvine Ranch Water District
LBCWD	Laguna Beach County Water District
M&I	Municipal and industrial
MAF	Million Acre-Feet
MCL	Maximum Contaminant Level
Mesa Water	Mesa Water District
MET	Metropolitan Water District of Southern California
Metropolitan Act	Metropolitan Water District Act
MGD	Million Gallons per Day
MNWD	Moulton Niguel Water District

MWDOC	Municipal Water District of Orange County
OC	Orange County
OC San	Orange County Sanitation District
OCWD	Orange County Water District
SCAB	South Coast Air Basin
SCWD	South Coast Water District
Serrano	Serrano Water District
SMWD	Santa Margarita Water District
sf	Square Foot
Supplier	Urban Water Supplier
SWP	State Water Project
SWRCB	California State Water Resources Control Board
TCWD	Trabuco Canyon Water District
UWMP	Urban Water Management Plan
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
WUE	Water Use Efficiency
YLWD	Yorba Linda Water District

1 Introduction and WSCP Overview

The Water Shortage Contingency Plan is a strategic planning document designed to prepare for and respond to water shortages. This Water Shortage Contingency Plan (WSCP) complies with California Water Code (CWC) Section 10632, which requires that every urban water 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 MWDOC'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 population and land use growth, climate change, drought, and catastrophic events. This Plan provides a structured guide for MWDOC 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, MWDOC's governing body, its staff, and retail agencies 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 MWDOC's procedures for conducting an Annual Water Supply and Demand Assessment (Annual Assessment) that is required by CWC 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. MWDOC'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 MWDOC's 2020 UWMP and can be amended, as needed, without amending the UWMP. Furthermore, the CWC does not prohibit an urban water 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. 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 water supply and demand assessment; reevaluation and improvement procedures for evaluating the WSCP.

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

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

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

Section 3 Water Shortage Contingency Plan

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 percent 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 is not required by wholesale water providers.

Section 3.7 Legal Authorities is a description of the legal authorities that enable MWDOC 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 is not required by wholesale water providers.

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

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

1.2 Integration with Other Planning Efforts

As a retail water supplier in Orange County (OC), MWDOC considered other key entities in the development of this WSCP, including the Metropolitan Water District of Southern California (MET) (regional wholesaler for Southern California and the direct supplier of imported water to MWDOC), and OCWD (OC Groundwater Basin manager and provider of recycled water in North OC). As a wholesale water provider, MWDOC also worked with its retail agencies to align WSCP strategies to ensure robust water shortage planning and response across the District. The DWR Submittal tables for MWDOC's WSCP can be found in Appendix A.

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 MWDOC's service area.

- **MWDOC's Orange County Reliability Study** 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.
- **OCWD's 2021 Water Reliability Plan** provides the latest information on groundwater management and supply projection for the OC Groundwater Basin, the primary source of groundwater for a significant number of water suppliers in OC.
- **OCWD's 2018-19 Engineer's Report** provides information on the groundwater conditions and basin utilization of the OC Groundwater Basin.
- **OCWD's 2017 Basin 8-1 Alternative Plan i** s an alternative to the Groundwater Sustainability Plan (GSP) for the OC Groundwater 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** 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 and Sewer Master Plan** of MWDOC 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

MWDOC was formed by OC voters in 1951 under the Municipal Water District Act of 1911 to provide imported water to inland areas of OC. Governed by an elected seven-member Board of Directors, MWDOC is METs third largest member agency based on assessed valuation.

MWDOC is a regional water wholesaler and resource planning agency, managing all of OCs imported water supply except for water imported to the cities of Anaheim, Fullerton, and Santa Ana. MWDOC is committed to ensuring water reliability for more than 2.34 million residents in its 600-square-mile service area. To that end, MWDOC focuses on sound planning and appropriate investments in water supply, water use efficiency, regional delivery infrastructure, and emergency preparedness.

Lying in the South Coast Air Basin (SCAB), its climate is characterized by southern Californias Mediterranean"climate with mild winters, warm summers, and moderate rainfall. In terms of land use, MWDOCs service area in the North OC is almost built out with predominantly residential units with pockets dedicated to commercial, institutional, governmental uses and open space and parks and the existing vacant lots in South OC are gradually transitioning to residential and commercial mixed-use areas. The current population of 2,342,740 is projected to increase by 8% over the next 25 years.

MWDOC is governed by an elected seven-member Board of Directors, with each board member representing a specific area of the County and elected to a four-year term by voters who reside within that part of the MWDOC service area. Each director is a member of at least one of the following standing committees: Planning and Operations; Administration and Finance; and Executive.

2.1 MWDOC Service Area

MWDOC serves more than 2.34 million residents in a 600-square-mile service area (Figure 2-1). Although MWDOC does not have its own water facilities and does not have jurisdiction over local supplies, it works to ensure the delivery of reliable water supplies to the region.

MWDOC serves imported water in OC to 28 water agencies. These entities, comprised of cities and water districts, are referred to as MWDOC member agencies and provide water to approximately 2.34 million customers. MWDOC retail agencies include:

- City of Brea
- City of Buena Park
- City of Fountain Valley
- City of Garden Grove
- City of Huntington Beach
- City of La Habra
- City of La Palma
- City of Newport Beach
- City of Orange
- East Orange County Water District (EOCWD)
- El Toro Water District (ETWD)
- Emerald Bay Services District (EBSD)
- Irvine Ranch Water District (IRWD)
- Golden State Water Company (GSWC)
- Laguna Beach County Water District (LBCWD)
- Mesa Water District (Mesa Water)
- Moulton Niguel Water District (MNWD)
- Orange County Water District (OCWD)

- City of San Clemente
- City of San Juan Capistrano
- City of Seal Beach
- City of Tustin
- City of Westminster
- Santa Margarita Water District (SMWD)
- Serrano Water District (Serrano)
- South Coast Water District (SCWD)
- Trabuco Canyon Water District (TCWD)
- Yorba Linda Water District (YLWD)

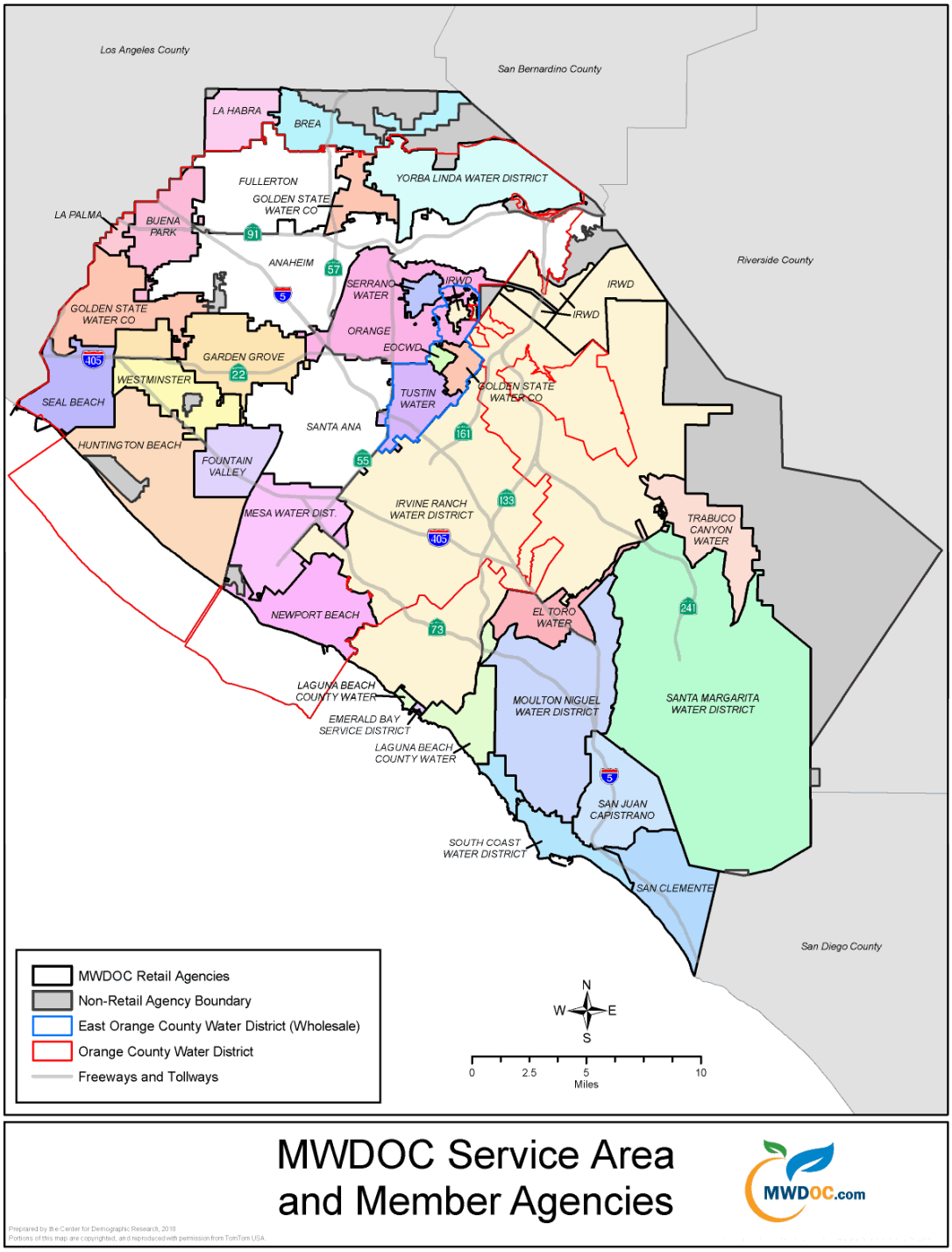

Figure 2-1: MWDOC Service Area

2.2 Relationship to MET

MWDOC became a member agency of MET in 1951 to bring supplemental imported water supplies to parts of Orange County. 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. The regional locations of METs member agencies are shown in Figure 2-2. 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 METs 26 member agencies. The allocation of directors and voting rights are determined by each agencys 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.

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.

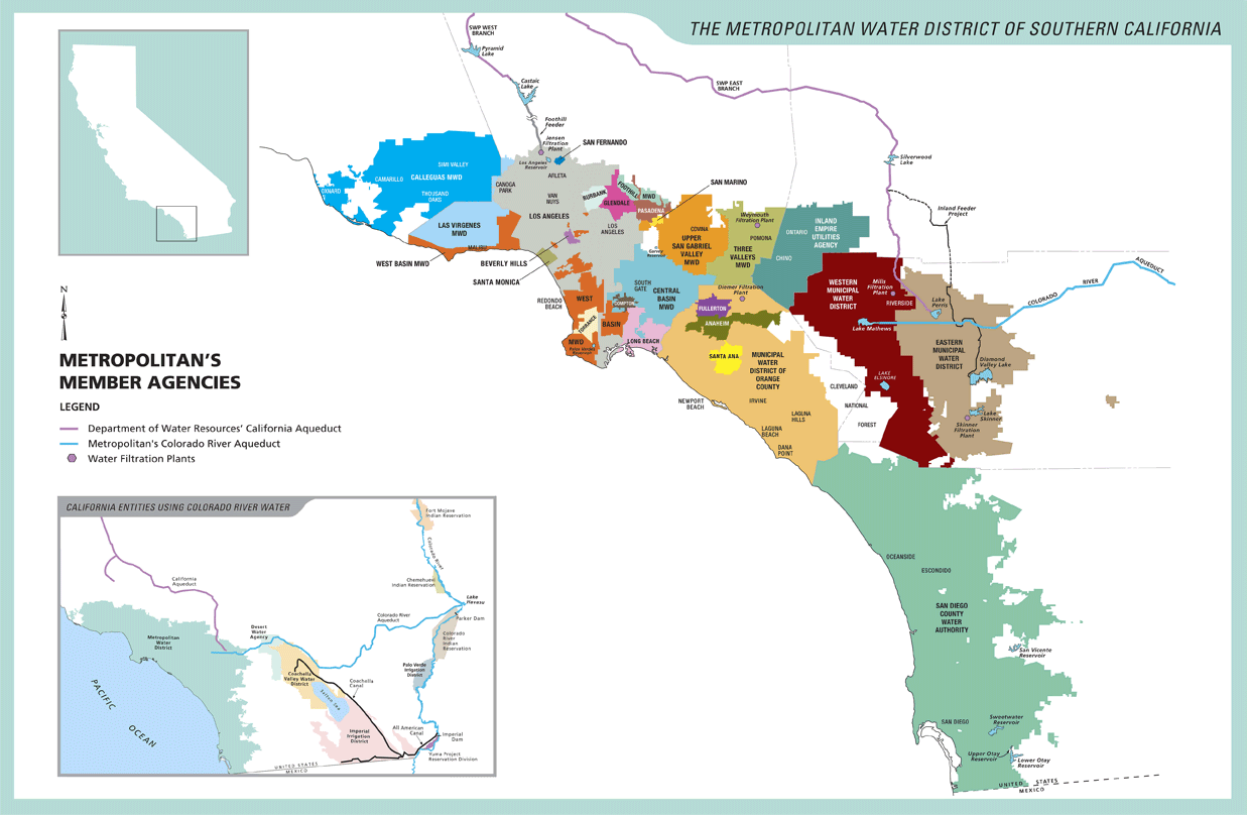

Figure 2-2: Regional Location of MET's Member Agencies

2.3 Relationship with MET Water Shortage Planning

The WSCP is designed to be consistent with MET's Water Shortage and Demand Management (WSDM) Plan, MET's Water Supply Allocation Plan (MET WSAP), MWDOC's Water Supply Allocation Plan (WSAP), and other emergency planning efforts as described below. MET and MWDOC's WSAPs are integral to the WSCP's shortage response strategy. In the event that MET determines that supply augmentation (including dedicated drought storage supply) and demand reduction measures would not be sufficient to meet a projected supply needs, MET will determine shortage conditions exist and assign a water shortage level needed to meet MWDOC service area reduced demands. In turn, MWDOC will need to further assess the shortage conditions within their service area to meet Retailer agencies'demands and as required activate MWDOC's WSAP. If applicable, MWDOC will also need to need invoke water shortage level conditions appropriate to meet projected Retailer demands as described further in Section 2.3.3 below.

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 Diamond Valley Lake (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.
- Severe Shortage: MET can meet full-service demands only by using stored water, transfers, and possibly calling for extraordinary conservation.
- Extreme Shortage: MET must allocate available supply to full-service customers.

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).

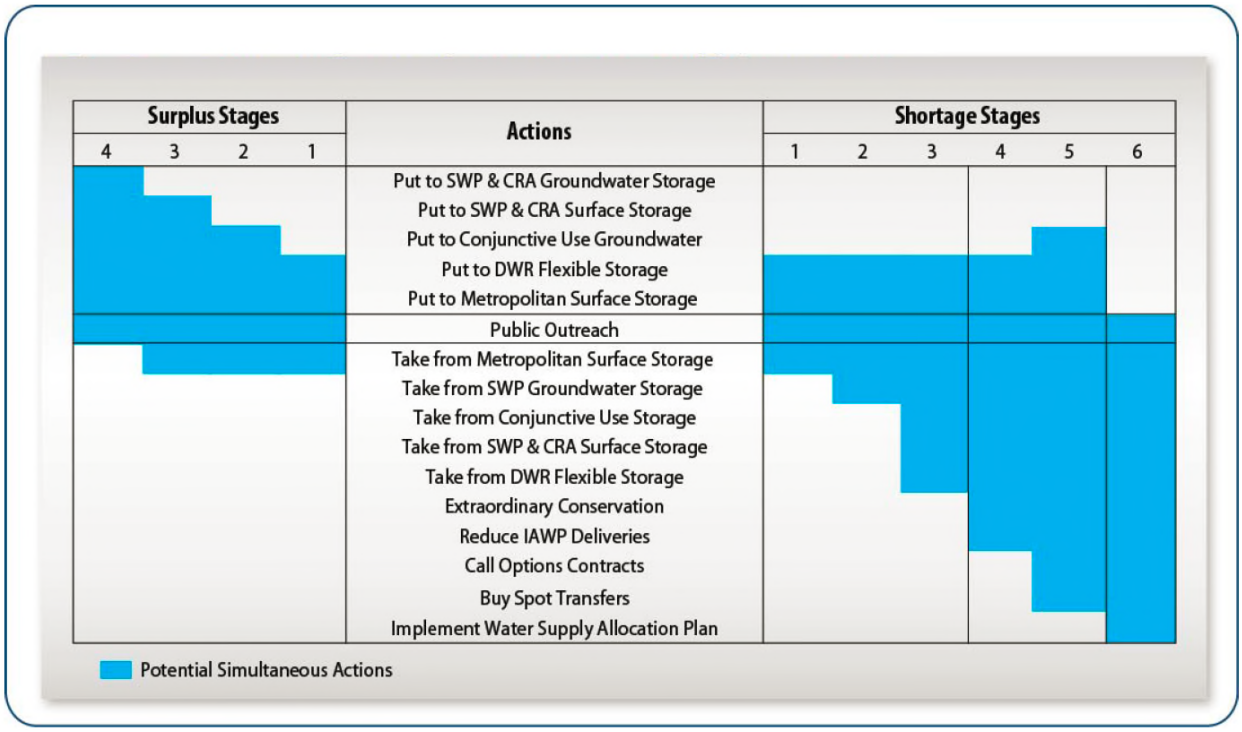

Figure 2-3: Resource Stages, Anticipated Actions, and Supply Declarations

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, 2021a2021).

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 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.

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 CWC Section 10632 and is part of MET's 2015 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 up to 50%. 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.

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, 2021b2021).

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 2015. The MWDOC WSAP outlines how MWDOC will determine and implement each of its retail agencies' 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:

- **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 (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 Planning

MWDOC's WSCP is a detailed guide of how MWDOC 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 CWC Section 10632 (a)(1), the WSCP shall provide an analysis of water supply reliability conducted pursuant to CWC Section 10635, and the key issues that may create a shortage condition when looking at MWDOC'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 MWDOC with a solid basis on which to develop appropriate and feasible response actions in the event of a water shortage. In the 2020 UWMP, MWDOC 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.

MWDOC also conducted a Drought Risk Assessment (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 MWDOC is capable of meeting all of its member agencies'demands from 2021 through 2045 for a normal year, a single dry year, and a drought lasting five consecutive dry years with significant supplemental dedicated drought supplies from MET and ongoing conservation program efforts from its member agencies. MET's projections take into account the imported demands from Orange County and as so, MET's water reliability assessments determine that demands within MWDOC can be met, and the development of numerous local sources further augments the reliability of the imported water system. As a result, there is no projected shortage condition due to drought that will trigger agency demand reductions until MET notifies MWDOC of its implementation of its WSAP. More information is available in MWDOC's 2020 UWMP Section 6 and 7.

3.2 Annual Water Supply and Demand Assessment Procedures

Per CWC Section 10632.1, MWDOC will conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and by July 1st of each year, beginning in 2022, submit an annual water shortage assessment with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan.

MWDOC 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 MWDOC 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 MWDOC'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 MWDOC will take to formally approve the Annual Assessment determination of water supply reliability each year.

3.2.1.1 MWDOC Steps to Approve the Annual Assessment Determination

The MWDOC Annual Assessment will be predicated on MET's WSDM supply demand tracking, which is reported monthly to their Board of Directors. MET WSDM planning involves the examination of developing demand and supply conditions for the calendar year, as well as considerations of potential actions consistent with the WSDM Plan. Additionally, MWDOC staff simultaneously provides water supplies and demand reports to its Board of Directors to inform them of emerging demand and supply conditions. These monthly analyses provide key information for MWDOC and MET to manage resources to meet a range of estimated demands and adjust to changing conditions throughout the year.

For many of MWDOC's member agencies, their primary source of water is produced locally from groundwater basins, recycle water projects, surface reservoirs, and groundwater recovery projects. Their remaining source to meet retail demands comes from the purchase of imported water from MWDOC. However, some member agencies, particularly in South Orange County, rely heavily on imported water due to limited local supplies. As described below, MWDOC surveys each member agency to project near term and long-term consumptive and replenishment imported water demands.

Annually, MWDOC surveys its member agencies for anticipated water demands and supplies for the upcoming year. MWDOC utilizes this information to plan for the anticipated imported water supplies for the MWDOC service area. This information is then shared and coordinated with MET and is incorporated into their analysis of their service area's annual imported water needs. Based on the year's supply conditions and WSDM actions, MET will present a completed Annual Assessment for its member agencies' review from which they will then seek Board approval in April of each year. Additionally, MET expects that any triggers or specific shortage response actions that result from the Annual Assessment would be approved by their Board at that time. Based upon MET's Assessment and taking into consideration information provided to MWDOC through the annual survey, MWDOC will provide each member agency an anticipated estimate of imported supplies by member agency to be incorporated into each agency's annual supply and demand assessment. MWDOC will then adopt its completed Annual Assessment prior to the July 1 deadline, so MWDOC's member agencies will be able to submit their annual assessment by the July 1 DWR deadline. Figure 3-1 provides a breakdown of the decision-making process.

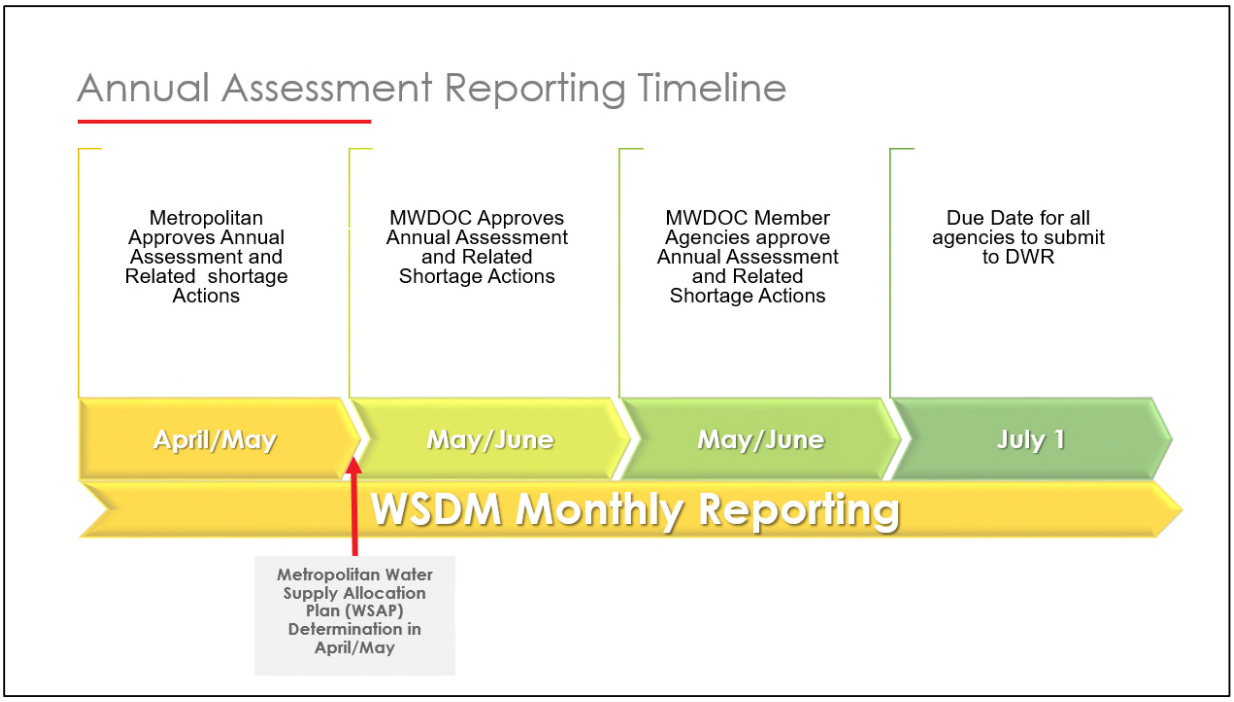

Figure 3-1: Sample Annual Assessment Reporting Timeline

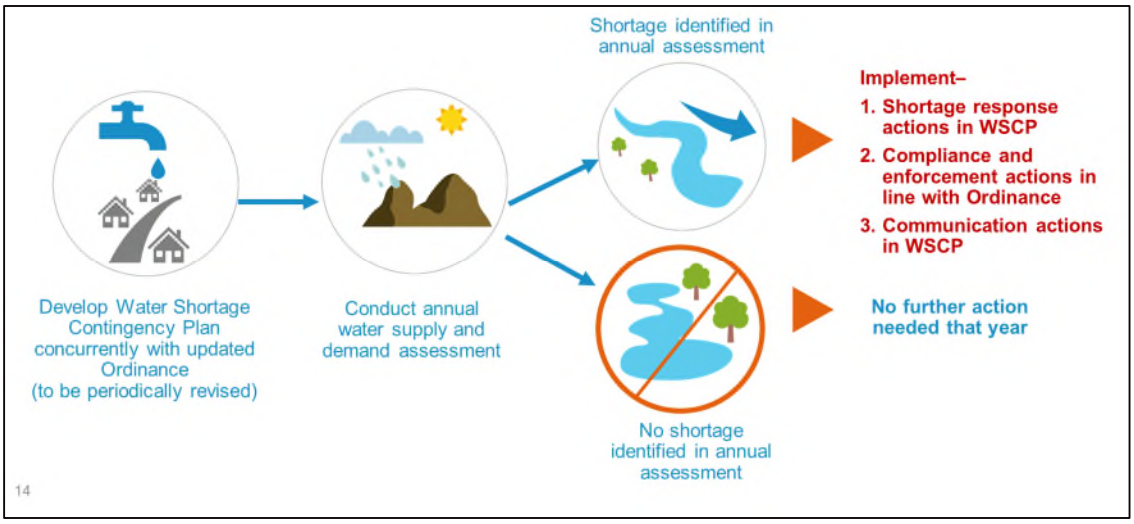

Figure 3-2: Water Shortage Contingency Plan Actions

3.2.2 Data and Methodologies

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

3.2.2.1 Assessment Methodology

MWDOC 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, MET imported water supplies, planned water use, and infrastructure considerations. The balance between projected in-service area supplies, coupled with MET imported supplies, and anticipated unconstrained demand will be used to determine what, if any, shortage stage is expected under the WSCP framework. 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.

3.2.2.2 Locally Applicable Evaluation Criteria

The information and analyses that comprise the Annual Assessment are based on ongoing planning processes that include the monthly WSDM supply-demand reporting. The Annual Assessment represents a mid-year evaluation at a given point in time; even after formal approval and submittal of the Annual Assessment determination by July 1, MWDOC will continue to monitor emerging supply and demand conditions and take appropriate actions consistent with the flexibility and adaptiveness inherent to the Water Shortage Contingency Plan. 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.

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 Basin Production Percentage (BPP). For the agencies in southern Orange County, most of their demands are met with imported water where their limitation is based on the capacity of their system, which is very robust.

However, if a major earthquake on the San Andreas Fault occurs, it will 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 has 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

MWDOC is the regional wholesaler of imported water that provides treated and untreated water purchased from MET for Municipal and Industrial (M&I) (direct) and non-M&I (indirect) uses within its service area. Imported water represents 35% of total water supply in MWDOC's service area. As detailed in MWDOC's 2020 UWMP, water supplies within MWDOC's service area are from local and imported sources. Local supplies developed by other entities and retail agencies include groundwater, recycled water, and surface water, accounting for 65% of the service area's water supplies. In North Orange County, imported water from MWDOC is supplemental, as agencies can pump a significant amount of their water demand from the OC Basin as set by the BPP; however, member agencies in South Orange County rely more heavily on imported water due to limited local resources.

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.

MWDOC's DRA reveals that its supply capabilities are expected to balance anticipated total water use and supply, assuming a five-year consecutive drought with a six percent increase in potable water demand above a normal year from 2021 through 2045. MWDOC purchases a fixed amount of untreated imported water from MET for use in groundwater recharge for the OC Basin and surface storage in Irvine Lake, which accounts for its non-potable demand that does not experience a six percent increase in demand, as these volumes are not affected by changes in hydrological conditions. MWDOC purchases a fixed amount of untreated imported water from MET for use in groundwater recharge for the OC Basin and surface storage in Irvine Lake, which accounts for its non-potable demand that does not experience a six percent increase in demand, as these volumes are not directly affected by changes in hydrological conditions.

3.2.2.5 Planned Water Use for Current Year Considering Dry Subsequent Year

CWC 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 MWDOC'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 CWC does not specify the characteristics of a dry year, allowing discretion to the Supplier. MWDOC will use its discretion to refine and update its assumptions for a dry year scenario in each Annual Assessment as information becomes available and in accordance with best management practices.

In MWDOC's 2020 UWMP, the "single dry year" is characterized to resemble conditions as a year in which conditions reflect the lowest water supply available to the Supplier. 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's, sources of supply. Fiscal Year 2013-14 was the single driest year for SWP supplies with an allocation of 5% to 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.

3.2.2.6 Infrastructure Considerations

With the sale of the Allen-McColloch Pipeline to MET in 1995, MWDOC no longer owns or operates a distribution system. However, as the regional wholesale agency, MWDOC closely coordinates with MET and its member agencies on any planned infrastructure work that may impact water supply availability. 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. Throughout each year, MET regularly carries out preventive and corrective maintenance of its facilities within the MWDOC service area that may require shutdowns. MET plans and performs shutdowns to inspect and repair pipelines and facilities and support capital improvement projects. These shutdowns involve a high level of planning and coordination between MWDOC, MWDOC's Member Agencies, and MET. These shutdowns are scheduled to ensure that major portions of the distribution system are not out of service at the same time. Operational flexibility within MET's system and the cooperation of member agencies allow shutdowns to be successfully completed while continuing to meet all system demands.

Table 3-1: Water Shortage Contingency Plan Levels

DWR 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 –Condition exists when MWDOC notifies its water users that no supply reductions are anticipated in this year. MWDOC proceeds with planned water efficiency best practices to support consumer demand reduction in line with state mandated requirements and local MWDOC goals for water supply reliability.
1	Up to 10%	A Level 1 Water Supply Shortage – Condition exists when no supply reductions are anticipated, a consumer imported demand reduction of up to 10% is recommended to make more efficient use of water and respond to existing water conditions. Upon the declaration of a Water Aware condition, MWDOC shall implement the mandatory Level 1 conservation measures identified in this WSCP. The type of event that may prompt MWDOC to declare a Level 1 Water Supply Shortage may include, among other factors, a finding that its wholesale water provider (MET) calls for extraordinary water conservation efforts.
2	Up to 20%	A Level 2 Water Supply Shortage – Condition exists when MWDOC notifies its member agencies that due to drought or other supply reductions, a consumer imported 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, MWDOC shall implement the mandatory Level 2 conservation measures identified in this WSCP.

DWR Submittal Table 8-1 Water Shortage Contingency Plan Levels		
3	Up to 30%	A Level 3 Water Supply Shortage – Condition exists when MWDOC declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its member agencies that up to 30% consumer imported demand reduction is required to ensure sufficient supplies for human consumption, sanitation, and fire protection. MWDOC must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
4	Up to 40%	A Level 4 Water Supply Shortage - Condition exists when MWDOC declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its member agencies that up to 40% consumer imported demand reduction is required to ensure sufficient supplies for human consumption, sanitation, and fire protection. MWDOC must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
5	Up to 50%	A Level 5 Water Supply Shortage - Condition exists when MWDOC declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its member agencies that up to 50% or more consumer imported demand reduction is required to ensure sufficient supplies for human consumption, sanitation, and fire protection. MWDOC 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 MWDOC declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its member agencies that greater than 50% or more consumer imported demand reduction is required to ensure sufficient supplies for human consumption, sanitation, and fire protection. MWDOC must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
NOTES:		

3.3 Six Standard Water Shortage Levels

Per CWC Section 10632 (a)(3)(A), MWDOC 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 MWDOC would implement to meet the severity of the impending shortages.

3.4 Shortage Response Actions

CWC Section 10632 (a)(4) requires the WSCP to specify shortage response actions that align with the defined shortage levels. MWDOC 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 to demonstrate to the that choose suite of shortage response actions can be expected to deliver the expected outcomes necessary to meet the requirements of a given shortage level. This table also identifies the enforcement action, if any, associated with each demand reduction measure.

MWDOC's demand reduction actions correspond to shortage Levels 0 through 6, with coordination with the Water Emergency Response Organization of Orange County (WEROC) anticipated to begin at Level 4 or greater. At Level 0, MWDOC has ongoing long-term conservation savings measures including providing rebates for landscape irrigation efficiency, plumbing fixtures and devices, and turf replacement and providing programmatic support to retail agencies to reduce system water loss. For Shortage Levels 1 through 6, MWDOC will continuously expand public awareness campaigns to encourage consumers to reduce their water usage and implement voluntary demand reduction and its WSAP to further reduce the imported water shortage gap at each level, reaching up to greater than 50% of the shortage gap at Level 6.

3.4.2 Supply Augmentation

Supply Augmentation actions 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 MWDOC through MET. MWDOC relies on MET's reliability portfolio of water supply programs including existing water transfers, storage, and exchange agreements to supplement gaps in the supply/demand balance. MET has developed significant storage capacity (over 5 MAF) 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.

MWDOC will work in close coordination with MET on their supply augmentation projects during normal conditions and shortage Levels 1 through 6 to ensure reliability of imported water for the service area. MWDOC's supply augmentation actions are described in DWR Table 8-3 (Appendix A).

3.4.3 Operational Changes

During shortage conditions, water operations in Orange County may be affected depending on the specific condition or situation. As noted in section 3.2.2.6, MWDOC does not own any infrastructure, nor does it direct the operations of infrastructure in Orange County. MWDOC will coordinate and facilitate operational changes that may result from shortage conditions or arise from an emergency situation.

3.4.4 Additional Mandatory Restrictions

CWC 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. These prohibitions are in addition to the proposed State Board regulation in California Code of Regulations, title 23, division 3, a new chapter 3.5 on Conservation and the Prevention of Waste and Unreasonable Use; and within chapter 3.5, a new article 2 pertaining to Wasteful and Unreasonable Uses. Mandatory prohibitions include:

- Hosing off sidewalks, driveways, and other hardscapes;
- Washing automobiles with hoses not equipped with a shut-off nozzle;
- Using non-recirculated water in a fountain of other decorative water feature;
- Watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation;
- Irrigating ornamental turf on public street medians.

MWDOC currently does not have any additional restrictions above the Statewide Mandatory prohibitions. However, State law gives substantial discretion to wholesale and retail water agencies to promulgate regulations and restrictions to conserve and allocate water in the event of a water shortage.

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 and MWDOC's Hazard Mitigation Plan (HMP) and Emergency Response Plan (ERP).

3.4.5.1 MET's Water Surplus and Drought Management and Water Supply Allocation Plans

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 (Delta) that would cause levee failure and disruption of SWP deliveries.

3.4.5.2 Water Emergency Response of Orange County

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 MWDOC.

3.4.5.3 MWDOC's Emergency Response Plan

MWDOC will follow its ERP in the event of a catastrophic supply interruption. The objectives of MWDOC's ERP are listed below:

- Protect public health by maintaining water quality standards.
- Maintain, restore, or establish water services to meet requirements of emergency services and the essential needs of the community.
- Assess damage and initiate repairs within the service area and report damage to the WEROC.
- Request and coordinate mutual aid resources through WEROC.

MWDOC is responsible for managing the response effort within the service area in the event of an emergency. In order to avoid duplicating requests and efforts, MWDOC can use the California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS). SEMS and NIMS implement an organized system of information flow to ensure a timely and coordinated effort in response to any sort of disaster.

MWDOC's emergency plan is activated once the Emergency Operations Center (EOC) is notified by telephone, oral delivered message, or radio. MWDOC's plan may be activated automatically under rare circumstances where communication is not possible such as during a significant earthquake or state of war emergency.

MWDOC may initiate a mutual aid request in the event that MWDOC is unable to provide the level of emergency response support required by the situation. MWDOC is a part of several mutual assistance programs such as WEROC and Water Agency Response Network (WARN).

MWDOC may find it necessary to release information to the public in order to safeguard public health and safety. MWDOC personnel and supervisors shall discuss any water quality issues as soon as possible to determine if a maximum contaminant level (MCL) has been exceeded or other water system violation has occurred.

MWDOC distributes to all news media the necessary public notification to the affected service area. If the affected area is deemed to be small (10 percent or less than the total service area), the use of sound trucks and/or informational flyer distribution is considered an appropriate means of public notification. There are three unsafe water notices that can be issued to MWDOC. They are listed below.

- Boil Water Notice: The water supply is contaminated with microbes that can be rendered safe by boiling or disinfecting the affected water. This is the most commonly used notice.
- Do Not Drink Notice: The water supply contains an acute contaminant that cannot be rendered safe by boiling or disinfecting the affected water.
- Do Not Use Notice: The water supply contains a contaminant that is unknown or exposure to the water supply can impact the health of the consumer.

3.4.6 Seismic Risk Assessment and Mitigation Plan

Per CWC 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 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.

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. 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, and the areas most susceptible to damage include Yorba Linda Water District and the Cities of La Habra and Buena Park. Liquefaction is also possible throughout much of Orange County, with the most extensive liquefaction zones occurring in coastal areas including the Cities of Huntington Beach and Newport Beach. Based on the amount of seismic activity that occurs within the region, there is no doubt that communities within MWDOC's service area will continue to experience future earthquake events, and it is a reasonable assumption that a major event will occur within a 30-year timeframe.

It was determined that the overarching mitigation goals were the same for all of MWDOC's member agencies, and thus, one set of goals were identified for MWDOC's HMP, 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.

The process used by the Planning Team to identify hazard mitigation actions for MWDOC's HMP include the below. 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.

- Review of the Risk Assessment presented in Section 3 of the HMP (Appendix D).
- Review of the Capabilities Assessment presented for each member agency in the Jurisdictional Annexes.
- Team discussion of new concerns and issues that need to be addressed to reduce hazards to critical water and wastewater infrastructure.

For detailed hazard identification and prioritization and mitigation strategies of MWDOC and its member agencies, refer to MWDOC's HMP (Appendix D).

3.4.7 Shortage Response Action Effectiveness

For each specific Shortage Response Action identified in the plan, the WSCP 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, MWDOC 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. Per CWC Section 10632 (a)(5), MWDOC 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 water supply and demand assessment described pursuant to Section 10632.1; any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1; and any other relevant communications.

This section includes specific communications protocols that would be triggered to address each shortage level and response actions implemented. This element is 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 and/or emergency communications protocols to address earthquakes, fires, infrastructure failures, civil unrest, and other catastrophic events.

Strategic communication is an ongoing activity where the purpose, audience, message, tools, and channels may change at any given moment. 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, MWDOC will activate the communication protocol detailed in the WEROC Emergency Operations Plan. In a non-emergency water shortage situation, MWDOC will implement the procedures identified in the Strategic Communications Program and Plan.

3.5.1 WEROC Emergency Operations Plan

This Plan defines the actions to be taken by WEROC 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 EOC Plan 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 EOC Plan is a standalone document that is reviewed annually and approved by the Board every three years.

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. The WEROC EOC activation decision steps include the following:

- **Categorize incident:** Using information gathered from one or more sources, the WEROC primary contact will categorize the incident as a natural disaster, manmade disaster, terrorist threat, or terrorist physical attack.
- **Initial determination of situation:** WEROC and MWDOC management will make an initial determination of the situation based on scope and severity of incident, damage to affected agencies, and potential impacts.
- **WEROC activation level:** WEROC and MWDOC management will determine the appropriate level of WEROC activation.
- **Groups that will be notified:** When the EOC is activated, at a minimum, WEROC EOC staff, affected water utilities, MET's EOC at Eagle Rock, the Operational Area EOC, the Division of Drinking Water, health care agency, and California Department of Public Health should be notified.

For full details on the WEROC EOC procedures, refer to the WEROC Emergency Operations Plan (EOP) (Appendix C).

3.5.2 Strategic Communications Program and Plan

Strategic Communications Program and Plan serves as a blueprint, establishing a baseline understanding for how MWDOC's programs will provide information and value to its various stakeholders, partners, and employees during normal and shortage conditions. The MWDOC Public Affairs Department (Department), tasked to elevate public awareness, garner support, and establish confidence in the District's initiatives, attends the monthly general manager meetings where supply conditions are shared and is therefore kept up-to-date on shortage actions. The Department is tasked with providing transparent, reliable, and accurate information to the public, our partners, and our member agencies. With 28 member agencies in the District's service area, MWDOC utilizes various communications tools and channels to reach and unify such a vast and diverse group of stakeholders and audiences. Upon declaration of a shortage condition, the Department will collaborate agencies and internal staff to implement the communication protocols defined in the Strategic Communications Program and Plan.

The MWDOC Strategic Communications Program and Plan aligns the District's identified goals and objectives with the respective audiences, and outlines the appropriate communications tools and channels used to connect them all together, defines an implementation plan, and then monitors the program for effectiveness.

3.5.2.1 Goals & Objectives

The Board of Directors, executive management, and the District's Mission Statement have defined MWDOCS three primary goals and associated objectives in the Strategic Communications Program and Plan. Water shortage communication will follow the protocols designed to communicate Goal #2, Objective 2.2:

- **Goal #2:** Examine, develop, and implement sound policies and programs that support Orange County water investments, and provide recognized value to the region.
- **Objective 2.2:** Be the trusted, leading voice for the region on water reliability, water policy, efficient water use, water education, and emergency preparedness and response.

3.5.2.2 Target Audiences

The ability to understand MWDOC's identified audience groups will make it possible to logically align messaging with the appropriate communications tools and channels to reach the District's during a water shortage. The Department has identified several key audience groups for communication purposes as defined in the Strategic Communications Program and Plan.

3.5.2.3 Communications Tools and Channels

During a normal and water shortage condition, MWDOC will utilize a defined set of communication tools and channels based to reach the relevant audiences as defined in the Strategic Communications Program and Plan.

3.5.2.4 Implementation, Assignments, and Schedules

Public sector organizations shoulder a unique responsibility to be transparent, accountable, and have a positive impact on the community. A carefully developed and executed communications plan can establish trust and credibility for our stakeholders, partners, audience members, and employees during a water shortage.

To effectively communicate water shortage, water shortage communication will include basic strategic targets such as goals, intended audiences, messages, and tools. To ensure the benefit or value received is worth the time, money, talent, and effort expended by the District and its staff, the water shortage communication planning should start with the question "Why are we doing this?" This is an important question during water shortage as it likely the situation will change and evolve, sometimes rapidly. Once defined, all strategic water shortage targets will be followed by an *implementation plan* which identifies tactics and logistics, and eventually, active monitoring, evaluation, and amending.

Assignments are essential to maintaining productivity and accountability as well as collectively accomplishing the goals of a project. The MWDOC Public Affairs Department has developed a Programs and Responsibility flowchart which breaks down the Department's primary roles and assignments by team member (See Strategic Communications Program and Plan). Additionally, the MWDOC Public Affairs Department has developed a series of logistical checklists to efficiently plan, implement, and control the flow of information during water shortage, and will continue to do so as the situation evolves. Furthermore, the Department uses robust program management software tools such as Asana and CoSchedule to stay in touch with impending deadlines and to keep everything, including assignments and checklists, organized and in one place.

3.5.2.5 Monitor, Evaluate, and Amend

The effectiveness of the MWDOC Strategic Communications Program and Plan depends on a large variety of factors including technological advancements or changes, the rise and fall of audience engagement, current news or media concentration, political changes in leadership and focus, and even the weather. The Strategic Communications Program and Plan identifies Key Performance Indicators (KPI), metrics and measurements that the MWDOC Public Affairs Department currently uses to track program effectiveness. Program and activity evaluation is constant, and through this evaluation process the District's messaging and activities are shaped and refined.

3.5.2.6 Water Shortage Communication

The type and degree of communication varies with each shortage level, thus predefined and actionable communication protocols improve MWDOC's ability to message necessary events. These communication protocols and procedures are summarized in Table 3-2.

Table 3-2: Communication Procedures

Communications Procedures Matrix				
Level 0 Permanent Water Waste Prohibitions	**Level 1 Up to 10% Voluntary Conservation**	**Level 2 Up to 20% Mandatory Conservation**	**Levels 3-4 Up to 30% or 40% Mandatory Conservation**	**Levels 5-6 Up to 50% or >50% Mandatory Conservation**
Standard outreach efforts in effect (media relations, social media, websites, etc.)	Update message platform to reflect conditions and needed actions from public	Update campaign and messages to generate immediate actions/behaviors by public	Update campaign and messages to raise awareness for more severe water-saving actions/behaviors by public	Update campaign and messages to reflect extreme or emergency condition and likely need to focus water use on health/safety needs
Promote ongoing WUE programs/tools/ partnerships designed to achieve long-term water management goals	Announce status change to key stakeholders, general public (News release, social media, etc.)	Announce status change to key stakeholders, general public (News release, social media, etc.)	Announce status change to key stakeholders, general public (News release, social media, etc.)	Announce status change to key stakeholders, general public (News release, social media, etc.)

Communications Procedures Matrix				
Standard coordination with member agencies	Include increased conservation messages on MWDOC.com and in standard outreach efforts; provide regular condition updates to stakeholders/media	Supplement Level 1 activities with additional tactics (mass media ads, partnerships, events,, etc.) as needed; provide regular condition updates to stakeholders/media	Supplement Level 2 outreach with additional tactics (supplemental ads, etc.) as needed; provide regular updates to stakeholders/media on conditions	Supplement Level 3-4outreach with additional tactics as needed; provide regular condition updates to stakeholders/media on conditions
As-needed Board reports on public communication andwater-use efficiency outreach activities	Enhance promotion ofongoing WUE programs/tools; deploy targeted advertising	Conduct issue briefings with electedofficials, other key civic and business leaders	Conduct specialized outreach to reduce discretionary outdooruse while minimizing landscape damage	Suspend promotion oflong-term WUE programs/ tools to focus on imminent needs
	Increase coordinationwith member agencies	Continue promotion ofongoing WUE programs/tools	Promote available water assistance resources for vulnerable populations; specialized outreach to impacted industries	Continue enhanced coordination with member agencies asneeded (daily or weekly briefings or email updates, etc.)
		Enhance coordination with member agenciesas needed	Continue enhanced coordination with member agencies asneeded	Analyze water use andother data to determine any appropriate supplemental actions
	Analyze water use andother data to determine any appropriate supplemental actions	Analyze water use andother data to determine any appropriate supplemental actions	Analyze water use andother data to determine any appropriate supplemental actions	

3.6 Compliance and Enforcement

Per the CWC Section 10632 (a)(6), wholesale water providers are subject to these requirements.

3.7 Legal Authorities

Per CWC Section 10632 (a)(7)(A), MWDOC has provided a description of the legal authorities that empower MWDOC to implement and enforce its shortage response in (Appendix X). Per CWC Section 10632 (a)(7)(A), MWDOC has provided a description of the legal authorities that empower MWDOC to implement and enforce its shortage response in Appendix X.

Per CWC Section 10632 (a)(7) (B), MWDOC 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 CWC Section 10632 (a)(7)(C), MWDOC shall coordinate with any agency 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 CWC 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
Assistant General Manager, Water Services	Anaheim Public Utilities	Notification, Coordination, and provide supportive actions
Public Works Director	City of Brea	Notification, Coordination, and provide supportive actions
Director of Public Works/City Engineer	City of Buena Park	Notification, Coordination, and provide supportive actions
Director of Public Works/City Engineer	City of Fountain Valley	Notification, Coordination, and provide supportive actions
Director of Public Works	City of Fullerton	Notification, Coordination, and provide supportive actions
Director of Public Works	City of Garden Grove	Notification, Coordination, and provide supportive actions
Director of Public Works	City of Huntington Beach	Notification, Coordination, and provide supportive actions

Contact	Agency	Coordination Protocols
Director of Public Works	City of La Habra	Notification, Coordination, and provide supportive actions
Public Works & Community Services Director	City of La Palma	Notification, Coordination, and provide supportive actions
Utilities Director	City of Newport Beach	Notification, Coordination, and provide supportive actions
Director of Public Works	City of Orange	Notification, Coordination, and provide supportive actions
Public Works Director	City of San Clemente	Notification, Coordination, and provide supportive actions
Director of Public Works	City of San Juan Capistrano	Notification, Coordination, and provide supportive actions
Acting Public Works Director	City of Santa Ana	Notification, Coordination, and provide supportive actions
Director of Public Works	City of Seal Beach	Notification, Coordination, and provide supportive actions
Director of Public Works	City of Tustin	Notification, Coordination, and provide supportive actions
Director of Public Works	City of Westminster	Notification, Coordination, and provide supportive actions
General Manager	East Orange County Water District	Notification, Coordination, and provide supportive actions
General Manager	El Toro Water District	Notification, Coordination, and provide supportive actions
General Manager	Emerald Bay Service District	Notification, Coordination, and provide supportive actions

Contact	Agency	Coordination Protocols
General Manager, Orange County	Golden State Water Company	Notification, Coordination, and provide supportive actions
General Manager	Irvine Ranch Water District	Notification, Coordination, and provide supportive actions
General Manager	Laguna Beach County Water District	Notification, Coordination, and provide supportive actions
General Manager	Mesa Water	Notification, Coordination, and provide supportive actions
General Manager	Moulton Niguel Water District	Notification, Coordination, and provide supportive actions
General Manager	Orange County Water District	Notification, Coordination, and provide supportive actions
General Manager	Santa Margarita Water District	Notification, Coordination, and provide supportive actions
General Manager	Serrano Water District	Notification, Coordination, and provide supportive actions
General Manager	South Coast Water District	Notification, Coordination, and provide supportive actions
General Manager	Trabuco Canyon Water District	Notification, Coordination, and provide supportive actions
General Manager	Yorba Linda Water District	Notification, Coordination, and provide supportive actions
Public Works Director	Orange County	Notification
Public Works Director	City of Aliso Viejo	Notification
Director of Public Services	City of Costa Mesa	Notification
Public Works Director	City of Cypress	Notification
Public Works Director	City of Dana Point	Notification

Contact	Agency	Coordination Protocols
Public Works Director	City of Irvine	Notification
Public Works Director	City of Laguna Beach	Notification
Public Works Director	City of Laguna Hills	Notification
Public Works Director	City of Laguna Niguel	Notification
City Engineer	City of Laguna Woods	Notification
Public Works Director	City of Lake Forest	Notification
City Engineer	City of Los Alamitos	Notification
Public Works Director	City of Mission Viejo	Notification
Public Works Director	City of Placentia	Notification
Public Works Director	City of Rancho Santa Margarita	Notification
Public Works Director	City of Stanton	Notification
Public Works Director	City of Villa Park	Notification
Public Works Director	City of Yorba Linda	Notification

3.8 Financial Consequences of WSCP

Per CWC 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.

MWDOC's rates and fees fall into three general categories: (1) the pass through of costs from MET for imported water rates and charges; (2) specific charges for MWDOC services contracted by our Member Agencies (Choice Budget); and (3) charges for MWDOC services that apply to all our Member Agencies (Core Budget). Below is a more detail description on each category:

1. The pass-through rates and charges from Metropolitan are billed on a monthly basis to our Member Agencies with the majority of the cost allocation based on their volumetric purchases. MWDOC does not collect any revenue from these charges.
2. The Choice Budget fees are primarily associated with the water education school program and the water use efficiency program, including conservation rebates. MWDOC Member Agencies elect to subscribe to specific programs and can opt-out of program participation. These fees are assessed to recover the entire cost of these "choice" programs. Any additional revenue collected is either reimbursed to the participating agencies at the end of the year or credited the following year. No additional revenue is collected for MWDOC.

3. MWDOC's Core Budget includes all other programs and functions provided to our Member Agencies. Among them are: Water Reliability Planning, Metropolitan Activities, Government Affairs, Public Affairs, Water Use Efficiency, Emergency Response, Board Functions, Finance, Information Technology, and Administration.

MWDOC's Core budget is funded through a fixed charge assessed on each agency's retail meter and a fixed groundwater service charge, which are both collected at the beginning of each fiscal year. Because MWDOC's rate structure is completely fixed and does not fluctuate with volumetric sales, the implementation of the WSCP will not impact MWDOC's revenues. There may be an increase in MWDOC's expenditures as it relates to additional public and media outreach. However, as experienced in the last drought of 2014-2015, MWDOC coordinated such outreach efforts with its member agencies and most costs were shared among the participating agencies. Therefore, any additional expenditures are not anticipated to be significant and can be recovered by MWDOC reserves.

MWDOC's choice budget would also not be adversely impacted by implementation of the WSCP. Although we anticipate during a shortage there will be an increase in funding to support the implementation of Member Agency WSCPs, as described above programs, MWDOC's Choice Budget are selected by our member agencies to participate and pay their share according to the service received.

Lastly, the pass through rates and charges from MET do not have a financial impact on MWDOC and will not be adversely impacted by the implementation of the WSCPs.

3.9 Monitoring and Reporting

Per CWC Section 10632(a)(9), water provider wholesalers are not subject to this requirement.

3.10 WSCP Refinement Procedures

Per CWC Section 10632 (a)(10), MWDOC 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.

MWDOC's WSCP is prepared and implemented as an adaptive management plan. MWDOC 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 MWDOC staff, or suggested by customers or other interested parties, MWDOC 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, MWDOC staff will routinely consider the

functionality the overall WSCP and will prepare recommendations for MWDOC Board of Directors if changes are found to be needed.

3.11 Special Water Feature Distinction

As a wholesaler, CWC Section 10632 (b) is not applicable to MWDOC.

3.12 Plan Adoption, Submittal, and Availability

Per CWC Section 10632 (a)(c), MWDOC 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 MWDOC's website, in advance of the public hearing on May 19, 2021. Copies of the draft WSCP were also made available for public inspection at MWDOC 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 F.

MWDOC held the public hearing for the draft 2020 UWMP and draft WSCP on May 19, 2021 at the Board meeting. MWDOC Board reviewed and approved the 2020 UWMP and the WSCP at its May 19, 2021 meeting. See Appendix G for the resolution approving the WSCP.

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

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

If MWDOC 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

Metropolitan Water District of Southern California (MET). (2021a, February). *Water Shortage Contingency Plan.* http://www.mwdh2o.com/PDF_About_Your_Water/Draft_Metropolitan_WSCP_February_2021.pdf

Metropolitan Water District of Southern California (MET). (2021b, June). *2020 Urban Water Management Plan.*

Metropolitan Water District of Southern California (MET). (1999, August). *Water Surplus and Drought Management Plan*. http://www.mwdh2o.com/PDF_About_Your_Water/2.4_Water_Supply_Drought_Management_Plan.pdf

Appendix A

DWR Submittal Tables

DWR 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 –Condition exists when MWDOC notifies its water users that no supply reductions are anticipated in this year. MWDOC proceeds with planned water efficiency best practices to support consumer demand reduction in line with state mandated requirements and local MWDOC goals for water supply reliability.
1	Up to 10%	A Level 1 Water Supply Shortage – Condition exists when no supply reductions are anticipated, a consumer imported demand reduction of up to 10% is recommended to make more efficient use of water and respond to existing water conditions. Upon the declaration of a Water Aware condition, MWDOC shall implement the mandatory Level 1 conservation measures identified in this WSCP. The type of event that may prompt MWDOC to declare a Level 1 Water Supply Shortage may include, among other factors, a finding that its wholesale water provider (MET) calls for extraordinary water conservation efforts.
2	Up to 20%	A Level 2 Water Supply Shortage – Condition exists when MWDOC notifies its member agencies that due to drought or other supply reductions, a consumer imported 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, MWDOC shall implement the mandatory Level 2 conservation measures identified in this WSCP.
3	Up to 30%	A Level 3 Water Supply Shortage – Condition exists when MWDOC declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its member agencies that up to 30% consumer imported demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. MWDOC must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
4	Up to 40%	A Level 4 Water Supply Shortage - Condition exists when MWDOC declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its member agencies that up to 40% consumer imported demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. MWDOC must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
5	Up to 50%	A Level 5 Water Supply Shortage - Condition exists when MWDOC declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its member agencies that up to 50% or more consumer imported demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. MWDOC must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.

DWR Submittal Table 8-1 Water Shortage Contingency Plan Levels		
6	>50%	A Level 6 Water Supply Shortage – Condition exists when MWDOC declares a water shortage emergency condition pursuant to California Water Code section 350 and notifies its member agencies that greater than 50% or more consumer imported demand reduction is required to ensure sufficient supplies for human consumption, sanitation and fire protection. MWDOC must declare a Water Supply Shortage Emergency in the manner and on the grounds provided in California Water Code section 350.
NOTES:		

DWR 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	Provide Rebates for Landscape Irrigation Efficiency	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Base level of support to retail agencies and their customers through Landscape Irrigation Efficency rebates.	No
0	Provide Rebates on Plumbing Fixtures and Devices	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Base level of support to retail agencies and their customers through water saving device rebates.	No
0	Provide Rebates for Turf Replacement	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Base level of support to retail agecies and their customers through MWDOC's Turf Removal Program.	No
0	Reduce System Water Loss	On-going Long Term-Conservation Savings Measure. Not applicable to Water Shortage Contingency Plan quantifiable savings.	Base level of programatic support to retail agencies through MWDOC's Water Loss Program.	No
1	Expand Public Information Campaign	0 to 5% of total imported water use met by voluntary Demand Reduction	Expand Public Awareness to encourage residents and industries to reduce their usage of water.	No
1	Other	0 to 10% of total imported water use met by voluntary Demand Reduction	Implement Voluntary Demand Reduction	No
1	Other	0 to 10% of total imported base demand met by WSAP supply allocation	Implement Water Supply Allocation Plan	Yes
2	Expand Public Information Campaign	0 to 20% of total imported water use met by voluntary Demand Reduction	Increase Public Awareness efforts to encourage residents and industries to reduce their usage of water.	No
2	Other	0 to 20% of total imported water use met by voluntary Demand Reduction	Implement Voluntary Recommended Demand Reduction	No
2	Other	0 to 20% of total imported base demand met by WSAP supply allocation	Implement Water Supply Allocation Plan	Yes
3	Expand Public Information Campaign	0 to 30% of total imported water use met by voluntary Demand Reduction	Pursue an aggressive Public Awareness Campaign to encourage residents and industries to reduce their usage of	No
3	Other	0 to 30% of total imported water use met by voluntary Demand Reduction	Work with retail agencies to review and update as needed water waste prohibitions and ordinances to discourage unnecessary water usage.	No
3	Other	0 to 30% of total imported water use met by voluntary Demand Reduction	Implement Voluntary Demand Reduction	No
3	Other	0 to 30% of total base demand met by WSAP supply allocation	Implement Water Supply Allocation Plan	Yes
4	Expand Public Information Campaign	0 to 40% of total imported water use met by voluntary Demand Reduction	Pursue an aggressive Public Awareness Campaign to encourage residents and industries to reduce their usage of water.	No
4	Other	0 to 40% of total imported water use met by voluntary Demand Reduction	Implement Voluntary Demand Reduction	No
4	Other	0 to 40% of total base demand met by WSAP supply allocation	Implement Water Supply Allocation Plan	Yes

DWR 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	Expand Public Information Campaign	0 to 50% of total imported water use met by voluntary Demand Reduction	Pursue an aggressive Public Awareness Campaign to encourage residents and industries to reduce their usage of water.	No
5	Other	0 to 50% of total imported water use met by voluntary Demand Reduction	Implement Voluntary Demand Reduction	No
5	Other	0 to 50% of total base demand met by WSAP supply allocation	Implement Water Supply Allocation Plan	Yes
6	Other	0 to 50% of total imported water use met by voluntary Demand Reduction	Implement Voluntary Demand Reduction	No
6	Other	>50% of total base demand met by WSAP supply allocation	Implement Water Supply Allocation Plan	Yes
NOTES: Coordination with WEROC is anticipated to begin at Level 4 or greater. In the event of a short or long-term emergency MWDOC will utilize the WEROC Emergency Operations Plan and follow the detailed steps and process as specified.				

DWR 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)*
0 through 6	Other Actions (describe)	TBD	MWDOC will work in close coordination with MET on their supply augmentation projects during this time to ensure reliability for the service area.
NOTES:			

Appendix B

MWDOC Water Supply Allocation Plan

Municipal Water District of Orange County

Water Supply Allocation Plan

DRAFT
Revised 2016

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Section 1: Introduction

The Municipal Water District of Orange County (MWDOC) is dedicated to ensuring water reliability for the communities we serve. Hundreds of thousands of Orange County residents have taken advantage of our water conservation rebates to install water saving toilets, clothes washers, and other water saving devices. We continue to partner with our client agencies to develop new local supplies such as recycled water, brackish water desalting, ocean water desalination, and the Groundwater Replenishment System.

However, a combination of water supply challenges have brought about the possibility that MWDOC may not have access to the imported supplies necessary to meet the demands of its client agencies in the coming years. The following factors have dramatically impacted water supply conditions not only in Orange County, but all of Southern California:

- In CY 2013 many areas of California experienced the driest year on record. California received record low snowpack in FY 2014-15. On January 17, 2014, Governor Brown proclaimed a statewide drought emergency. On May 5, 2015, the State Water Resources Control Board adopted an emergency conservation regulations in accordance with the Governor's directive. The provisions of the emergency regulations went into effect on May 18, 2015. On February 2, 2016, the SWRCB will consider a resolution to extend the existing May 2015 Emergency Regulation as directed in the November 2015 executive order.

- The Colorado River is recovering from a long-term drought. Reservoirs along the river are less than half full. In the summer of 2015, Lake Mead water levels reached record lows. Supplies from this source have been reduced since 2003 and will continue to be limited.

To meet the imported water demands of its member agencies, the Metropolitan Water District of Southern California (MET) is quickly withdrawing supplies from surface and groundwater storage. Over the past three years, MET has drawn down 67% of its available reserves.

The recent dry conditions and the uncertainty about future supplies from the State Water Project have raised the possibility that MET will not have access to the supplies necessary to meet the imported water demands of its member agencies. As a result, MET has developed a Water Supply Allocation Plan that allocates wholesale imported water supplies among its 26 member agencies throughout Southern California.

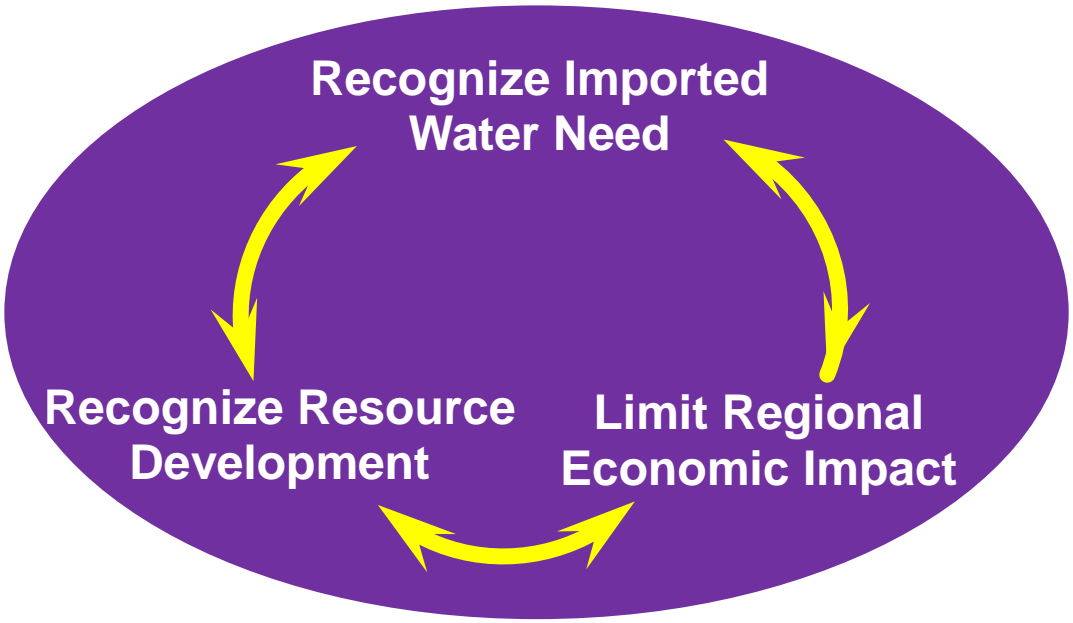
To prepare for the possibility of an allocation of imported water supplies from MET, MWDOC has worked in collaboration with its 28 client agencies to develop this Water Supply Allocation Plan to allocate imported water supplies at the retail level. This document lays out the essential components of how MWDOC plans to determine and implement each agency's allocation during a time of shortage.

Section 2: Metropolitan Water District's Water Supply Allocation Plan

In February 2008, MET approved a Water Supply Allocation Plan (WSAP) designed to allocate imported water to all of its member agencies during a shortage. In June 2014 MET convened a member agency working group to revisit the WSAP. The purpose of the working group was to collaborate with member agencies to identify potential revisions to the WSAP in preparation for mandatory supply allocations in 2015. There were eight working group meetings and three discussions at the monthly Member Agency Managers' Meetings. The WSAP follows the principles and considerations identified in MET's Water Surplus and Drought Management Plan, which calls upon the allocation of water in a fair and equitable manner to all of MET's member agencies. To the extent possible, this means developing a plan that minimizes regional hardship during times of shortage.

The MET WSAP seeks to balance the impacts of a shortage at the retail level while maintaining equity on the wholesale level. To achieve this, it takes into account:

- The impact to retail customers and the economy
- Allowance for population and growth
- Change and/or loss of local supply
- Reclamation/Recycling
- Conservation
- Investments in local resources
- Investments in MET's facilities



The WSAP states that MET staff will go before the Board with a recommendation in April, from which the Board of Directors will make a determination on the level of the Regional Shortage. If the Board determines allocations are necessary, they will go into effect in July and remain for a twelve-month period. *Note: This schedule is at the discretion of the MET Board, and is subject to change.*

The recommendation to declare a regional shortage will be based upon water supply availability from the State Water Project, the Colorado River Aqueduct, and the amount of surface and groundwater storage remaining in METs reserves. It will also take into account the implementation of METs water management actions i.e. Five Year Water Supply Plan, extraordinary conservation efforts, the acceleration of local resource projects, and the purchases of water transfers.

A full copy of METs Water Supply Allocation Plan as revised in December 2014 is available in Appendix B.

Section 3: Development Process

In preparation for possible allocation of imported water supplies from MET, MWDOC's Board first adopted the following policy principles to help guide staff and the client agency technical workgroup to develop a plan that is fair and equitable for everyone within its service area:

- **Seek best allocation available from MET**
- **Develop MWDOC Plan in collaboration with client agencies**
- **When reasonable, use similar method/approach as MET**
- **When MET's method would produce significant unintended result , use an alternative approach**
- **Develop accurate data on local supply, conservation, recycling, rate structures, growth and other relevant adjustment factors**
- **Seek opportunities within MWDOC service area to provide mutually beneficial shortage mitigation**

Client Agency Input

Between the months of September and January of 2014-15, MWDOC staff worked cooperatively with the client agencies through a series of technical workgroups to develop a formula and implementation plan to allocate imported supplies in the event that MET declares a regional shortage. These workgroups provided an arena for in-depth discussion of the objectives, mechanics, and policy aspects of the different parts of the Plan. MWDOC staff also met individually with a number of client agencies for detailed discussions on elements of the Plan. The discussions, suggestions, and comments expressed by the client agencies during this process played a key part in the development of this Plan.

The following MWDOC client agencies participated in the Technical Workgroup:

- **City of Buena Park**
- **City of Fountain Valley**
- **City of Garden Grove**
- **City of Huntington Beach**
- **City of Newport Beach**
- **City of Orange**
- **City of San Clemente**
- **City of San Juan Capistrano**
- **City of Tustin**
- **City of Westminster**
- **East Orange County Water District**
- **El Toro Water District**
- **Golden State Water Co.**
- **Irvine Ranch Water District**
- **Laguna Beach County Water District**

- **Mesa Water District**
- **Moulton Niguel Water District**
- **Orange County Water District**
- **Serrano Water District**
- **Santa Margarita Water District**
- **South Coast Water District**
- **Trabuco Canyon Water District**
- **Yorba Linda Water District**

In addition to the workshops, individual meetings were held between MWDOC staff and the following MWDOC client agencies to address more specific and agency-related questions.

These individual meetings provided MWDOC staff with a great deal of insight on exactly how a retail agency would implement allocations at the customer level. Such information was extremely valuable in our regional discussion at MET and in the development of this Plan.

Board of Directors Input

Throughout the Plan's development process, the MWDOC Board of Directors was provided with regular progress reports on the status of the Plan and the technical workgroup discussions. During the months the Plan was being developed, the Board Planning and Operations Committee was kept apprised of key issues regarding MET's and MWDOC's allocation plan. Moreover, the Committee played an integral part in th e development of key implementation issues such as the appeal process and the surcharge rate structure.

Section 4: Water Supply Allocation Formula

The MWDOC Water Supply Allocation Model follows five (5) basic steps to determine an agency's imported supply allocation:

- Step 1: Determine Baseline Information
- Step 2: Establish Allocation Year Information
- Step 3: Assess the Shortage Reduction Stage (Based on MET's Declared Shortage Level)
- Step 4: Apply Allocation Adjustments and Credits in the areas of retail impacts, conservation, groundwater recharge.
- Step 5: Sum total allocations and determine retail reliability

A description of how the calculation is used in each step is described below:

Step 1 – Determine Baseline Information

In order to determine a client agency's retail demands and imported supply needs in the allocation year, the model needs to establish a historical base period for water supply and delivery data. The base period for each of the different categories of demands and supplies is calculated using data from fiscal years (July through June) ending 2013 and 2014.

The following is a description of the base period calculations:

Base Period Local Supplies: Local supplies for the base period are calculated using a two-year average (from fiscal years ending 2013 and 2014) of groundwater production, groundwater recovery, surface water production, and other non-imported supplies.

Base Period Wholesale ("Imported") Firm Demands : Firm demands on MWDOC for the base period are calculated using a two-year average (from fiscal years ending 2013 and 2014) of full-service, and surface storage operating agreement demands.

Base Period In-lieu Deliveries: Base period in-lieu deliveries to client agencies are calculated using a two year average (from fiscal years ending 2013 and 2014) of In-lieu deliveries to long-term groundwater replenishment, conjunctive use, cyclic, and supplemental storage programs. In-lieu deliveries are not calculated as imported supplies from MET. They are calculated as local supplies to account for the corresponding reduction in base year local production that was required to take In-lieu deliveries.

Base Period Retail Demands: Total retail municipal and industrial demands for the base period are calculated by adding the Base Period Local Supplies, Base Period Wholesale Imported Firm Demands, and Base Period In-Lieu Deliveries.

Step 2 – Establish Allocation Year Information

In this step, the model adjusts for each member agency's water need in the allocation year. To do so, it adjusts the base period estimates for population growth and changes in local supplies.

The following is a description of how the allocation year information is established:

Allocation Year Retail Demands: Total retail M&I demands for the allocation year are calculated by adjusting the Base Period Retail Demands for growth. The method in which MWDOC determines each client agency's growth is through population increases for the fiscal years ending 2013 to 2014[1]. Based on the data received from California State University of Fullerton, Center for Demographic Research, MWDOC prorates each agency's population increase share to MWDOC's growth adjustment received from MET[2], as shown in Appendix C.

Growth Adjustment: The growth adjustment is calculated by taking the average percent of growth from fiscal years ending 2013 and 2014, as generated by the Center for Demographic Research at California State University, Fullerton.

Allocation Year Local Supplies: Allocation year local supplies include groundwater production, groundwater recovery, surface water production, and other imported supplies not from MET. In-lieu deliveries are considered as local supplies to account for the corresponding reduction in base year local production that was required to take in-lieu deliveries. Allocation year local supplies reflect a more accurate estimate of actual supplies in the allocation year, and in turn more accurately estimates an agency's demand for imported supplies.

Extraordinary Increased Production Adjustment: This adjustment accounts for extraordinary increases in local supplies above the base period. Extraordinary increases in production include such efforts as purchasing water transfers. In order not to discourage such extraordinary efforts, a percentage of the yield from these supplies is added back to Allocation Year Local Supplies in shortage levels as shown below. This has the effect of "setting aside" the majority of the yield for the agency who procured the supply. The percentage of the extraordinary increases in local supply corresponds according to the regional shortage level, as shown in Table 4.1.

[1] Although many options were discussed in the technical workgroup sessions, this option was chosen to best reflect the increase in water demand due to population growth as intended by MET's allocation formula for each client agency in the MWDOC service area.

[2] MET's growth adjustment is calculated by using the average of the last two year County-wide population growth rates, which include not only MWDOC's service area but also the cities of Fullerton, Anaheim, and Santa Ana.

Table 4.1
Extraordinary Increased
Production Adjustment

Regional Shortage Level	Regional Shortage Percentage	Extraordinary Increase Percentage
1	5%	5%
2	10%	10%
3	15%	15%
4	20%	20%
5	25%	25%
6	30%	30%
7	35%	35%
8	40%	40%
9	45%	45%
10	50%	50%

Step 3 – Calculate Initial Minimum Allocation Based on Declared Shortage Level

This step sets the initial allocation. After a regional shortage level is established, MWDOC will calculate the initial allocation as a percentage of adjusted Demand for Firm MET Supplies within the model for each client agency.

Regional Shortage Levels: The model allocates shortages of supplies over ten levels: from 5 to 50 percent, in 5 percent increments.

Initial (Wholesale Minimum) Allocation: The Wholesale Minimum Allocation is established to ensure a minimum level of imported supplies. The Wholesale Minimum Allocation ensures that client agencies will not experience shortages on the wholesale level that are greater than one-and-a-half times the percentage shortage of MET's regional water supplies. As illustrated in Table 4.2, the Wholesale Minimum Allocation percentage is equal to 100 minus one-and-a-half times the shortage level. The allocation is based on each agency's demand of firm MET water.

Table 4.2
Wholesale (Imported)
Supply Minimum Allocation

Regional Shortage Level		Wholesale Minimum Allocation
1		92.5%
2		85.0%
3		77.5%
4		70.0%
5		62.5%
6		55.0%
7		47.5%
8		40.0%
9		32.5%
10		25.0%

Step 4 – Assign Allocation Adjustments and Conservation Credit

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.

Retail Impact Adjustment: The Retail Impact Adjustment is the factor used to address major differences in retail level shortages associated with across-the-board cuts. The purpose of this adjustment is to ensure that agencies with a high level of dependence on MET do not experience highly disparate shortages compared to other agencies when faced with a reduction in imported supplies. The Retail Impact Adjustment is calculated as the difference between the Regional Shortage Percentage and the Wholesale Imported Minimum Allocation. The amount of the adjustment each client agency receives is prorated on a linear scale, based on its dependence on imported water at the retail level. The prorated amount of allocation is referred to as the Retail Impact Adjustment Allocation. Table 4.3 below illustrates the maximum adjustment an agency may receive according to the regional shortage level.

Table 4.3
Retail Impact Adjustment

Regional Shortage Level	Regional Shortage Percentage	Retail Impact Adjustment Maximum
1	5%	2.5%
2	10%	5.0%
3	15%	7.5%
4	20%	10.0%
5	25%	12.5%
6	30%	15.0%
7	35%	17.5%
8	40%	20.0%
9	45%	22.5%
10	50%	25.0%

Unfortunately, the Retail Impact Adjustment MWDOC receives from MET may be less than the aggregate retail impact adjustment for its client agencies. To mitigate this difference, MWDOC decreases each client agency's retail impact adjustment according to their prorated share.

Conservation Demand Hardening Credit: The Conservation Demand Hardening Credit addresses the increased difficulty in achieving additional water savings at the retail level that comes as a result of successful implementation of water conserving devices and conservation savings programs. To estimate conservation savings, each member agency has a historical baseline Gallons Per Person Per Day (GPCD) calculated by the maximum usage from fiscal year ending 2004 to fiscal year ending 2014. Reductions from the baseline GPCD to the Allocation Year are used to calculate the equivalent conservation savings in acre-feet. The Conservation Demand Hardening Credit is based on an initial 10 percent of the GPCD-based Conservation savings plus an additional 5 percent for each level of Regional Shortage set by the Board during implementation of the WSAP. The credit will also be adjusted for:

- The overall percentage reduction in retail water demand
- The member agency's dependence on Metropolitan

The credit is calculated using the following formula:

Conservation Demand Harding Credit = Conservation Savings x (10% + Regional Shortage Level Percentage) x (1 +((Baseline GPCD – Allocation Year GPCD)/Baseline GCPD))x Dependence on MWD Percentage.

Minimum Per-Capita Water Use Credit: This adjustment creates a minimum daily gallons per capita (GPCD) water use threshold. Member agencies' retail -level water use is

compared to a total water use of 100 GPCD. Agencies that fall below this threshold receive additional allocation to bring them up to the minimum GPCD water use level[3].

Step 5 – Sum Total Allocations and Calculate Retail Reliability

This is the final step in calculating an 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.

Final Metropolitan Allocation: The final allocation of imported supplies to an agency for its retail demand is the sum of the Wholesale Imported Minimum Allocation, their Retail Impact Adjustment, their Conservation Demand Hardening Credit, and Per-Capita Adjustment Allocation (if applicable).

Total Metropolitan Supply Allocations: In addition to the WSAP Allocation described above, agencies may also receive separate allocations of supplies for seawater barrier and groundwater replenishment demands. Allocations of supplies to meet seawater barrier demands are to be determined by the MET Board of Directors independently, but in conjunction with the WSAP. Separating the seawater barrier allocation from the WSAP allocation allows the MET Board to consider actual barrier requirements in the Allocation Year and address the demand hardening issues associated with cutting seawater barrier deliveries. According to the principles outlined for allocating seawater barrier demands, allocations should be no deeper than the WSAP Wholesale Minimum Percentage implemented at that time. The WSAP also provides a limited allocation for drought-impacted groundwater basins based on the following framework:

1. Metropolitan staff will hold a consultation with the requesting member agency and the appropriate groundwater basin manager to document whether the basin is in one of the following conditions:

    a. Groundwater basin overdraft conditions that will result in water levels being outside normal operating ranges during the WSAP allocation period; or
    b. Violations of groundwater basin water quality and/or regulatory parameters that would occur without imported deliveries.

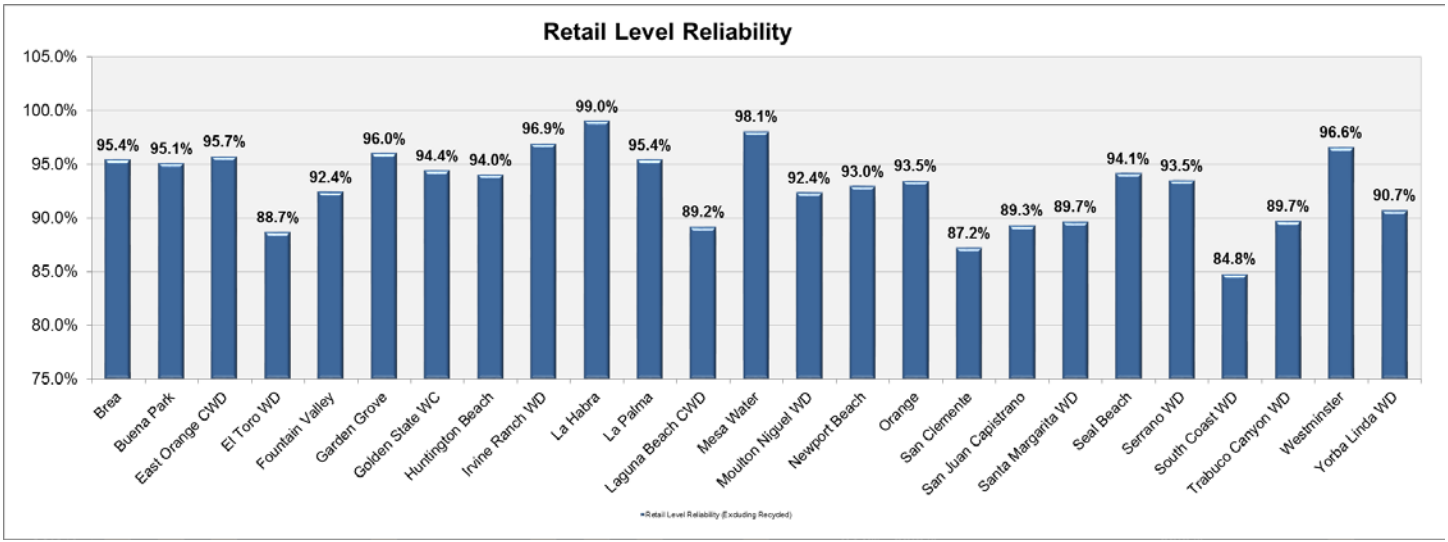
2. An allocation is provided based on the verified need for groundwater replenishment. The allocation would start with a member agency's ten -year average purchases of imported groundwater replenishment supplies (excluding years in which deliveries were curtailed). The amount would then be reduced by the declared WSAP Regional Shortage Level.

Agency's Retail Reliability: This calculates an agency's total MET allocation versus their allocation year retail demands to determine their overall reliability percentage (supplies

3 Per capita water used based on Total Retail-Level Use and population data received from California State University of Fullerton, Center for Demographic Research

as a percentage of retail demand) under a regional shortage level. This percentage excludes recycled water supplies from an agency's total water supply. Figure 4.1 illustrates the MWDOC client agencies' reliability percentages under a sta ge 3 regional shortage level (15%).

Figure 4.1
MWDOC's Water Supply Allocation Plan
Stage 3 with a Regional Shortage of 15%*



Source: MWDOC Allocation Model Version 3.1 and assumes a BPP of 75%.
[*] These are estimated reliability percentages for MWDOC client agencies under a regional shortage stage 3 (15%) based on initial local supply data received from the client agencies and OCWD's projected BPP for 2015/16.

Section 5: Plan Implementation

This section covers implementation issues which include: the appeal process, penalties rate structure and billing, tracking and reporting water usage, timeline and option to revisit the plan.

Allocation Appeals Process

The purpose of the appeals process is to provide client agencies the opportunity to request a change to their allocation based on new or corrected information. The grounds for appeal can include but are not limited to:

- Adjusting errors in historical data used in the Base period calculations
- Adjusting for unforeseen losses or gains in local supplies
- Adjusting for extraordinary increases in local supplies
- Adjusting for population growth rates
- Adjusting for credits with the Conservation base data, including Conservation Rate Structure

MWDOC anticipates that under most circumstances, a client agency's appeal will be the basis for an appeal to MET by MWDOC. MWDOC staff will work with client agencies to ensure that such an appeal is a complete and accurate reflection of the client agency's allocation and is properly reviewed by MET. To accomplish this, MWDOC will require the following information from the client agency submitting an appeal:

- Written letter (in the form of a letter or e-mail) from the client agency requesting an appeal
- Brief description of the type of appeal e.g. incorrect base data, loss/gain in local supply, extraordinary increase in local supply, adjustment in agency's conservation base data, or other
- Rationale for the appeal
- Quantity in acre-feet in question
- Verifiable documentation that supports the rationale i.e. billing statements, invoices for conservation device installations, Groundwater reports

To provide clarity of the process and ensure your appeal is properly handled, the following steps will occur:

Step 1 – Submit Appeal – Client agency will submit the necessary information, described above, to MWDOC.

Step 2 – Notification of Response and Appeal Meeting – Once MWDOC staff receives the appeal information, MWDOC will send a response and schedule a meeting with MWDOC staff and the client agency, within two weeks of receiving the information, to discuss the appeal in further detail.

Step 3 – Submittal to MET & MWDOC Board Notification – Using the information received from the client agency, MWDOC will prepare and submit the appeal to MET no later than one month of receiving the information. In addition, MWDOC staff will notify its Board of the submittal to MET.

Step 4 – MET Appeal Process - MWDOC will follow the terms of MET's appeal process, as described in Appendix B. Client agencies will also be invited, as deemed appropriate, by MWDOC to attend any meetings with MET on their appeal.

Step 5 –Client Agency Notification of MET's Decision – Once MET has made a determination of the appeal, MWDOC staff will notify the client agency of the decision and determine if additional actions are needed i.e. Appeal to MET Board.

In the event that MET denies the appeal, MWDOC staff will continue to work with the appealing agency to resolve their issue(s). Any action that will result in adjustments to client agency's allocation will be submitted to the Board for review and approval.

Allocation Surcharge Rates & Billing

MET's Surcharge Rates

MET will enforce its allocations through a tiered surcharge rate structure. MET will assess surcharge rates to a member agency that exceeds its total annual allocation at the end of the twelve-month allocation period, according to the rate structure below:

Table 5.1: Metropolitan Water District
Allocation Surcharge Rate Structure
(FY2015/16 Rates)*

Water Use up to:	(1) **Base Rate**	(2) **Surcharge Rate****	(1)+(2) = **Total Rate**
100% Allocation	Tier 1 ($942/AF)	-	**$942/AF**
100% < = 115%	Tier 1 ($942/AF)	Tier 1 + (1,480/AF)***	**$2,422/AF**
Use > 115%	Tier 1 ($942/AF)	Tier 1 + (2,960/AF)***	**$3,902/AF**

[*] The base rate shall be the applicable water rate for the water being purchased (Model shows CY 2016 rate).
[**] If MWDOC exceeds its allocation limit but is within its equivalent preferential right amount, MET will decrease the surcharge rate by one level.
[***] Surcharge rate is applied to water use in excess of an agency's WSAP allocation.

These surcharge rates will be assessed according to MET water rates in effect at the time of billing. Any surcharge funds collected by MET will be invested back to the MET member agency through conservation and local resource development.

MWDOC Surcharge Rates

As a water wholesaler, MWDOC has the opportunity to assess penalties in many different ways. A number of options were discussed and analyzed with the client

agencies and Board Committee members. The key components that helped guide development of a surcharge structure included:

- A financial incentive to discourage water usage above a client agency's allocation
- A surcharge rate structure that is administratively easy to understand and implement
- Surcharge rates that are fair and appropriate during a shortage

From these components and input received from both the MWDOC Board and the client agencies, a melded surcharge rate structure was recommended. This was mainly due to its "region -wide" style approach and similar structure to other MWDOC rates and charges.

MWDOC Surcharge Rate Structure – At the end of the allocation year, MWDOC would charge a surcharge to each client agency that exceeded their allocation. This surcharge would be assessed according to the client agency's prorated share (acre -feet over usage) of MWDOC surcharge amount with MET. Below is an example of how this surcharge rate structure would apply:

Under the melded surcharge rate structure, client agencies will only be assessed penalties if MWDOC exceeds its total allocation and is required to pay a surcharge to MET.

MWDOC Billing

During the allocation period, MWDOC billing will remain the same. Only at the end of the twelve-month allocation period will MWDOC calculate each member agency's total potable water use based on the local supply certification and MWDOC allocation model and determine which agencies exceeded their annual allocation. From those agencies that exceeded their allocation, MWDOC will assess surcharge rates according to the melded surcharge rate structure on their next water invoice.

Understanding that the penalties can be significant to a retail agency, MET and MWDOC will allow payment of these penalties to be spread over three monthly billing periods. Therefore, a third of the penalties will be applied each month to the agency's water invoice over a three-month period

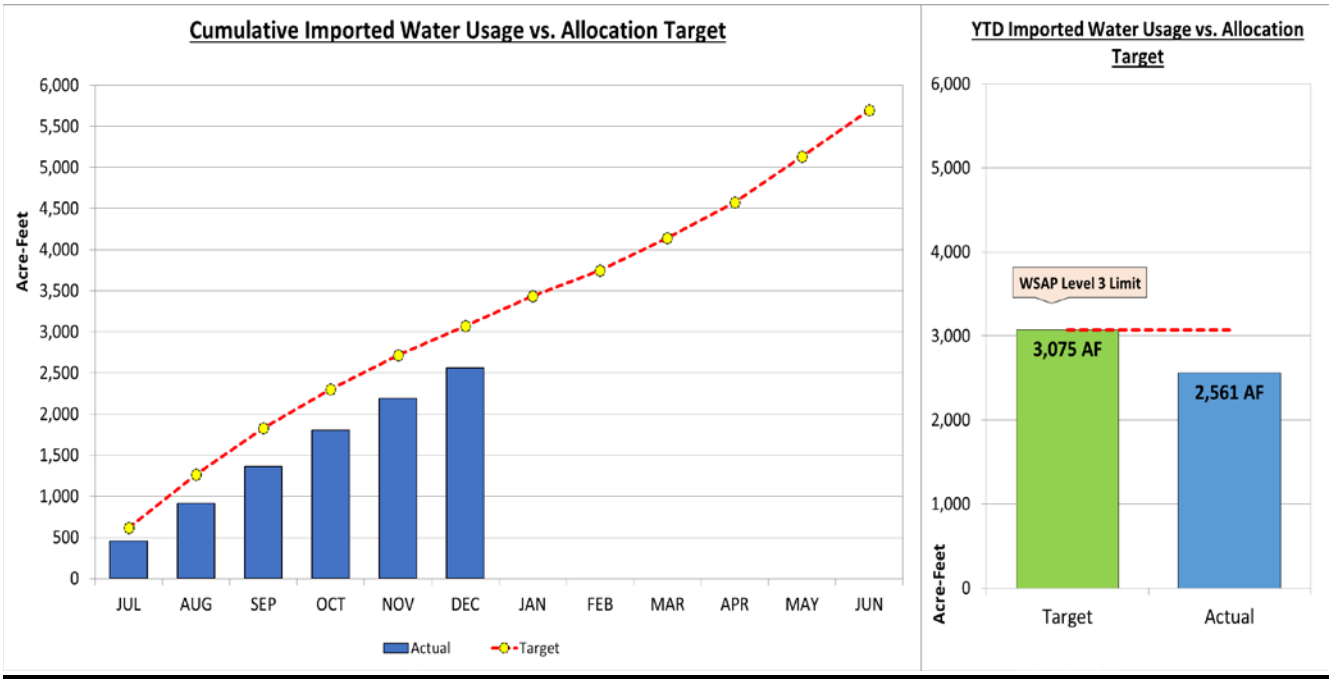
Tracking and Reporting

In preparing for allocations, it is important to track the amount of water the region and each client agency is using monthly. This data is important to help MWDOC and client agencies project their annual usage, evaluate their current demands, and avoid any over usage that will result in allocation penalties. MWDOC will provide water use monthly reports upon request or when necessary that will compare each client agency's current cumulative imported usage to their allocation target (Based off historical monthly percentages of imported usage). In addition, MWDOC will provide quarterly reports on its cumulative retail usage compared to its allocation baseline.

To develop these reports, MWDOC will need to work closely with each client agency to get their local supply data on a monthly basis. This data will not only be used by MWDOC to track monthly usage, but also by MET to assess MWDOC's total projected water demands.

Below in Figure 5.2 is an example of the type of monthly report MWDOC will provide to each client agency during the allocation period.

Figure 5.2
Example of a Client Agency's Monthly Usage R eport



Key Dates for Implementation

If a regional shortage is declared, the allocation period will cover twelve consecutive months, e.g. July 1st of a given year through June 30. Barring unforeseen large-scale circumstances, the Regional Shortage Level will be set for the entire allocation period, which will provide the client agencies an established water supply shortage allocation amount. Figure 5.3 Illustrates the Metropolitan timeline for allocations during a two year period.

Figure 5.3: Metropolitan Water District
Adopted Allocation Timeline

Year	Month	Year 1 Board Allocation Decision	Year 1 Allocation Year	Year 2 Board Allocation Decision	Year 2 Allocation Year
YEAR 1	January				
	February				
	March				
	April	**Declaration**			
	May				
	June				
	July		**Effective Period** Continuous Tracking of Member Agency Local Supply and Imported Water Use		
	August				
	September				
	October				
	November				
	December				
YEAR 2	January				
	February				
	March				
	April			**Declaration**	
	May				
	June				
	July				
	August		**Assess Penalties**		
	September				**Effective Period** Continuous Tracking of Member Agency Local Supply and Imported Water Use
	October				
	November				
	December				
YEAR 3	January				
	February				
	March				
	April				
	May				
	June				

It is important to note that MWDOC does not anticipate calling for allocation unless the MET Board declares a shortage through it WSAP; and no later than 30 days from MET's declaration will MWDOC announce allocation to its client agencies.

Revisiting the Plan

Calculating the amount of imported water each client agency receives during a water shortage is not an easy task. The key objective in developing this allocation plan is to ensure that a proper and fair distribution of water is given to each client agency. However, due to the complexity of this issue and the potential for unforeseen circumstances that may occur during an allocation year, MWDOC offers the opportunity to review and refine components of this plan where deemed necessary.

The MWDOC staff and client agencies have the opportunity to revisit the plan and offer any recommendations to the MWDOC Board that will improve the method, calculation, and approach of this plan.

MET has a similar process which will allow opportunity to review their plan when deemed necessary.

Appendix A

List of Acronyms:

AF- Acre-feet
M&I- Municipal and Industrial
MET-Metropolitan Water District of Southern California
SWRCB-State Water Resources Control Board
WSAP-Water Supply Allocation Plan

Definitions:

Extraordinary Increases in Production: water production efforts that increase local supplies during an allocation year such as purchasing water transfers.

Groundwater Recovery: The extraction and treatment of groundwater making it usable for a variety of applications by removing high levels of chemicals and/or salts.

In-lieu deliveries: MET-supplied water bought to replace water that would otherwise be pumped from the groundwater basin.

Overproducing groundwater yield: Withdrawal (removal) of groundwater over a period of time that exceeds the recharge rate of the supply aquifer. Also referred to as overdraft or mining the aquifer.

Seawater Barrier: The injection of water into wells along the coast to protect the groundwater basin from seawater intrusion. The injected water acts like a wall, blocking seawater that would otherwise migrate into groundwater basins as a result of pumping inland.

Appendix B

Metropolitan's Draft Water Supply Allocation Plan

MET Final Water Supply Allocation Pl

Appendix C
MWDOC Growth Adjustment Table per Client Agency

Population of MWDOC Retail Water Agencies

Water Agency	Jan-13	Jan-14	Avg of 2013 & 2014
Brea	41,129	42,181	**41,655**
Buena Park	82,053	82,364	**82,209**
East Orange CWD Retail Zone	3,233	3,247	**3,240**
El Toro WD	48,453	48,628	**48,541**
Fountain Valley	57,129	57,590	**57,360**
Garden Grove	175,096	175,873	**175,485**
Golden State Water Company	167,779	168,561	**168,170**
Huntington Beach	193,873	196,041	**194,957**
Irvine Ranch WD	357,781	369,724	**363,753**
La Habra	60,989	61,455	**61,222**
La Palma	15,890	15,946	**15,918**
Laguna Beach CWD includ. Emerald Bay Service District	20,130	20,204	**20,167**
Mesa Water	105,779	106,152	**105,966**
Moulton Niguel WD	168,301	169,405	**168,853**
Newport Beach	65,404	65,551	**65,478**
Orange	137,814	138,182	**137,998**
San Clemente	50,757	50,960	**50,859**
San Juan Capistrano	37,943	38,491	**38,217**
Santa Margarita WD	152,245	153,358	**152,802**
Seal Beach	23,543	23,618	**23,581**
Serrano WD	6,408	6,437	**6,423**
South Coast WD	34,672	34,816	**34,744**
Trabuco Canyon WD	12,588	12,640	**12,614**
Tustin	67,445	67,700	**67,573**
Westminster	92,939	93,322	**93,131**
Yorba Linda WD	73,378	73,990	**73,684**
Total of MWDOC Agencies	**2,252,751**	**2,276,436**	**2,264,594**

Source: Center for Demographic Research, CSU Fullerton, December 2014. CDR's estimates were based on the 2010 Census. Water agency counts were made for the actual area served, which may be different than the political boundary. Numbers are tied to the State Dept. of Finance numbers for total population of Orange County.

Water Agency	Growth % from 2012 to 2013	Growth % from 2013 to 2014	Avg Growth % 2013 to 2014
Brea	1.13%	2.56%	1.84%
Buena Park	0.62%	0.38%	0.50%
East Orange CWD Retail Zone	0.56%	0.43%	0.50%
El Toro WD	0.56%	0.36%	0.46%
Fountain Valley	0.71%	0.81%	0.76%
Garden Grove	0.19%	0.44%	0.32%
Golden State Water Company	0.87%	0.47%	0.67%
Huntington Beach	0.61%	1.12%	0.87%
Irvine Ranch WD	2.68%	3.34%	3.01%
La Habra	0.53%	0.76%	0.65%
La Palma	0.75%	0.35%	0.55%
Laguna Beach CWD includ. Emerald Bay Service District	0.60%	0.37%	0.48%
Mesa Water	0.58%	0.35%	0.47%
Moulton Niguel WD	0.78%	0.66%	0.72%
Newport Beach	0.51%	0.22%	0.37%
Orange	0.59%	0.27%	0.43%
San Clemente	0.55%	0.40%	0.48%
San Juan Capistrano	0.89%	1.44%	1.17%
Santa Margarita WD	0.55%	0.73%	0.64%
Seal Beach	0.59%	0.32%	0.45%
Serrano WD	0.60%	0.45%	0.52%
South Coast WD	0.61%	0.42%	0.51%
Trabuco Canyon WD	0.55%	0.41%	0.48%
Tustin	0.63%	0.38%	0.50%
Westminster	0.64%	0.41%	0.53%
Yorba Linda WD	1.11%	0.83%	0.97%
Total of MWDOC Agencies	**0.95%**	**1.05%**	1.00%

Appendix D

MWDOC Conservation Hardening Credit Table per Client Agency

Member Agency	GPCD Baseline	GPCD for 2014	Change in GPCD	AF Savings
Brea	288.58	246.61	**41.97**	**1,983**
Buena Park	199.59	165.57	**34.02**	**3,138**
East Orange CWD includ. Tustin	196.19	170.20	**25.99**	**2,065**
El Toro WD	214.96	185.54	**29.42**	**1,748**
Fountain Valley	192.48	184.64	**7.84**	**506**
Garden Grove	166.11	133.16	**32.95**	**6,491**
Golden State Water Company	175.11	146.27	**28.84**	**5,445**
Huntington Beach	163.73	141.79	**21.94**	**4,818**
Irvine Ranch WD	304.13	244.30	**59.83**	**24,778**
La Habra	160.60	150.19	**10.41**	**717**
La Palma	154.88	123.75	**31.13**	**556**
Laguna Beach CWD includ. EBSD	203.74	173.46	**30.28**	**685**
Mesa WD	191.25	166.35	**24.90**	**2,961**
Moulton Niguel WD	236.66	194.91	**41.75**	**7,922**
Newport Beach	258.85	239.36	**19.49**	**1,431**
Orange	231.08	210.84	**20.24**	**3,134**
San Clemente	198.09	178.51	**19.58**	**1,118**
San Juan Capistrano	236.93	206.65	**30.28**	**1,306**
Santa Margarita WD	235.06	201.77	**33.29**	**5,719**
Seal Beach	157.34	147.07	**10.27**	**272**
Serrano WD	485.61	468.88	**16.73**	**121**
South Coast WD	205.86	196.91	**8.95**	**349**
Trabuco Canyon WD	314.13	270.88	**43.25**	**612**
Tustin	191.31	164.21	**27.10**	**2,055**
Westminster	145.76	120.75	**25.01**	**2,614**
Yorba Linda WD	299.73	272.75	**26.98**	**2,236**

[*] The •GPCD Baseline• is the highest Ten-year average from 2004 to present, and includes Recycled water in order to normalize the conservation savings

Source: MWDOC 20% by 2020 OC Regional Alliance Model updated in 2014

WSAP GPCD.pdf

Appendix C

WEROC 2018 Emergency Operations Plan

Appendix D

MWDOC Hazard Mitigation Plan

Appendix E

MWDOC Strategic Communications Program and Plan

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
STRATEGIC COMMUNICATIONS PROGRAM AND PLAN

TABLE OF CONTENTS

INTRODUCTION

"The art of communication is the language of leadership."
~ James Humes, Author & President Reagan's Speechwriter

Strategic communication is the process of relaying specific, purposeful ideas and information to targeted audience groups in order to reach identified goals and objectives. The Municipal Water District of Orange County's (MWDOC or District) goals and objectives are identified in the District's Mission Statement:

*Our mission is to **provide reliable**, high-quality **supplies** from Metropolitan Water District of Southern California and other sources **to meet present and future needs** at an **equitable and economical cost**, and **to promote water use efficiency** for **all of Orange County.***

MWDOC presently develops, coordinates, and delivers a substantial number of programs and services aimed at elevating stakeholders' awareness about water policy, efficient water use, and the District's role in advocating for sound policy and water reliability investments that are in the best interest of Orange County. As water is a necessary resource to all life, these efforts encourage and benefit all Orange County residents and businesses, across all demographics.

Over the past decade, there has been a significant shift in the way people receive information. The media market is overcrowded and constantly evolving. The public is bombarded minute by minute with news from their phones, televisions, computers and tablets. Traditional media has been on the decline and at the same time, digital media continues to explode. Water providers must prove themselves to be relatable, trustworthy, and essential. This is accomplished by communicating more frequently and more effectively using a wider array of tools and channels to meet the needs and interests of an extremely diverse demographic. It is important to recognize that no single communications tool or channel can fulfill all of the District's identified goals and objectives. Instead, a holistic approach should be taken, utilizing all the tools in the toolbox to create a compounding and inclusive impact.

Historically, and typical for the industry, MWDOC has maintained a modest public profile, however, the District's influence continues to grow, and MWDOC has quickly become a leading regional voice for water in the State. MWDOC's very vocal support for the Delta Conveyance Project (DCP), investments in quality water education, water use efficiency, and emergency management, as well as increased participation in state water regulations and policy has elevated the District's profile in the water industry. It has become necessary to expand communications efforts to reach people where they spend the most time - on social media and through other firmly established electronic channels.

Strategic communication is an ongoing activity where the purpose, audience, message, tools, and channels may change at any given moment, however, for the most part, the overarching goals remain the same. As a result of this, MWDOC's Strategic Communications Program and Plan must remain a living document in order to implement effective, relevant communication with timeliness and accuracy. This document serves as a blueprint, establishing a baseline understanding for how MWDOC's programs will provide information and value to its various stakeholders, partners, and employees; enhance the District's image; and, support MWDOC's mission, goals and objectives to secure long term water reliability for the region.

COMMUNICATIONS GOALS & OBJECTIVES

"The two words 'Information' and 'Communication' are often used interchangeably but they signify quite different things. 'Information' is getting out; 'Communication' is getting through."

~ Sydney J. Harris, American Journalist

The charge of the MWDOC Public Affairs Department (Department) is to elevate public awareness, garner support, and establish confidence in the District's initiatives. Additionally, the Department is tasked with providing transparent, reliable, and accurate information to the public, our partners, and our member agencies. These commitments support not only the MWDOC mission, but also an ongoing districtwide stance to be the leading regional voice for water issues throughout the State. With 28 member agencies in the District's service area - many with competing interests - and a complex, ever-changing landscape of water policy and regulation, MWDOC must utilize various communications tools and channels to reach and unify such a vast and diverse group of stakeholders and audiences.

The MWDOC Strategic Communications Program and Plan aligns the District's identified goals and objectives with the respective audiences, and outlines the appropriate communications tools and channels used to connect them all together. This living document will continue to be updated and amended as the District's goals and objectives evolve, shift, or change.

GOALS & OBJECTIVES

As defined by the Board of Directors, executive management, and the District's Mission Statement, MWDOC'S primary goals and present objectives are as follows:

GOAL #1: SECURE LONG TERM WATER RELIABILITY FOR ORANGE COUNTY AND THE REGION.

- **OBJECTIVE 1.1:** Provide recognized, effective leadership and sound representation across all MWDOC organizational roles, including at the District level, at Metropolitan Water District of Southern California (Metropolitan), as well as at the County, State, and Federal levels.

- **OBJECTIVE 1.2:** Provide leadership, water education, and outreach support towards the successful advancement and completion of the **Delta Conveyance Project (DCP)**.

- **OBJECTIVE 1.3:** Provide unwavering advocacy on behalf of the region to invest in, improve, and expand Orange County's water supply portfolio by continuing to study, evaluate, and recommend opportunities identified in the **Orange County Water Reliability Study.**

GOAL #2: EXAMINE, DEVELOP, AND IMPLEMENT SOUND POLICIES AND PROGRAMS THAT SUPPORT ORANGE COUNTY WATER INVESTMENTS, AND PROVIDE RECOGNIZED VALUE TO THE REGION.

- **OBJECTIVE 2.1:** Provide unbiased analysis of water reliability programs, projects, and accompanying policies that affect Orange County, and to identify and ensure implementation of cost efficient solutions for the region.

- **OBJECTIVE 2.2:** Be the trusted, leading voice for the region on water reliability, water policy, efficient water use, water education, and emergency preparedness and response.

- **OBJECTIVE 2.3:** Educate, inform, and involve Orange County stakeholders and California civic, business, education, and community leaders of today and tomorrow.

GOAL #3: PROVIDE EFFECTIVE COMMUNICATION AND ADVOCACY PROMOTING MWDOC PROGRAMS, POSITIONS, AND SERVICES.

- **OBJECTIVE 3.1** Expand and refine communications efforts to ensure stakeholders, partners, employees, and other decision makers have the information and education they need to make judicious decisions regarding water-saving opportunities and best practices, as well as pending policy matters that affect Orange County.

- **OBJECTIVE 3.2:** Grow and improve MWDOC's traditional and electronic media presence to establish trust and credibility in the District's programs, positions, and activities.

- **OBJECTIVE 3.3:** Define and enhance the District's brand identity.

This award winning Strategic Communications Program and Plan articulates the process of communicating the value of the aforementioned goals and objectives to the District's identified audience members who may *or may not* be engaged in MWDOC's programs or activities.

TARGET AUDIENCES

"To effectively communicate, we must realize that we are all different in the way we perceive the world and use this understanding as a guide in our communication with others."

~ Tony Robbins, Author & Entrepreneur

The ability to understand MWDOC's identified audience groups makes it possible to logically align messaging with the appropriate communications tools and channels to reach the District's identified goals and objectives. There are many ways to categorize MWDOC's audience groups and determine which tools and channels the District can use to best connect with those groups. These categories may include demographics, geography, employer, behavior, and attitudes, to name a few.

Accordingly, the Department has identified several key audience groups (See Appendix A). This by no means is a complete list since our business is water, and every person on the planet needs, and uses it. Water is an essential resource for all life, and for the success and sustainability for all societies regardless of how identified audience groups are categorized.

SAMPLE PERSONAS FOR TARGET AUDIENCES

TARGET AUDIENCES

Student K-6th Grade

Curious, Impressionable, Enthusiastic, Imaginative, Adaptive

Goals & Objectives
- Goal #2

Activities & Partnerships
- Boy/Girl Scouts Organization
- Educators
- OCDE
- OC STEM
- CAELI
- Wyland Foundation
- MWDOC Water Awareness Poster Contest

Messages
- Message #1-#5
- Message #8-#10
- Message #17-#19

Channels
- Ricky Raindrop
- Community events
- Boy/Girl Scouts Program
- Choice School Programs

OC Elected Official

Ambitious, Engaged, Traditional, Invested, Informed

Goals & Objectives
- Goal #1
- Goal #2
- Goal #3

Activities & Partnerships
- Elected Officials Forum
- ACC-OC
- Metropolitan & Member Agencies
- OCBC
- SoCal Water Committee
- SWRCB
- UWI
- AMWA
- ACWA
- AWWA

Messages
- Message #1-#5
- Message #8-#9
- Message #11-#14
- Message #17

Channels
- Introduction to Water Booklet
- Briefing papers
- Written correspondence
- Virtual platforms
- Inspection Trips
- D.C. Luncheon
- Water Policy Forum
- O.C. Water Summit
- Speaker presentations

MESSAGING AND TACTICS

"Many attempts to communicate are nullified by saying too much."

~ Robert K. Greenleaf, Author

Modern day society is exposed to thousands of bits of information each day. The barrage of messages received through billboards, television, radio ads, as well as print media, email, and text notifications, has given many people a sense of anxiety from information saturation to overload. To be effective, the District must start by stripping out the unnecessary complexities. Messaging needs to be purposeful, simple, clear, concise, and consistent.

Messaging guidelines:

- Before engaging any audience group, be clear about what the District is trying to accomplish.
- Determine what the intended audience needs, wants, and cares about, then get to the point.
- Use words and language that the audience easily understands and can relate to. Be careful not to include industry jargon, technical terms, or excessive detail.
- Use an active voice and clearly define the call to action.

Messages also must be consistent in order to effectively engage audience groups in the District's programs and activities. Important messages become more memorable through repetition. Consistency should be practiced across all District organizational roles as it is vital to the effectiveness of MWDOC's communications efforts and can prevent confusion or misunderstanding.

MESSAGES:

1. Nearly half of all Orange County water is imported from hundreds of miles away AND local water supply sources meet only about half of what Orange County needs.
    a. Protecting our water supply is everyone's responsibility.
    b. Using water more efficiently is everyone's responsibility.
    c. We can all do our part to protect and secure Orange County's water supply for generations to come.
2. Your tap water is clean, safe, and reliable.
3. Providing a healthy, dependable supply of water is our highest priority.
4. Water is our most precious natural resource.
5. Water is life.
6. Less water, more savings.
7. MWDOC can help you save WATER, TIME, and MONEY.
8. Orange County IS Water Smart / OC IS Water Smart (Hook / Lead: Did You Know? / Hashtag: #OCisWaterSmart).
9. We're in this together.
10. Save together.
11. Orange County's primary water source from Northern California is at risk.
12. California (Orange County) needs the **Delta Conveyance Project (DCP) -** the most sound, economical, and environmentally sustainable solution for the region.
13. Climate change, droughts, and other natural disasters will happen. Californians need to invest in a variety of reliable water sources.

14. MWDOC's **Orange County Water Reliability Study** identifies the best water infrastructure projects available to the region based on reliability and value. Through MWDOC's water use efficiency programs and incentives, Orange County saves more than 17.1 billion gallons of water each year.
15. MWDOC has been educating Orange County students about the importance and value of water for nearly five decades through the MWDOC Choice School Programs.
16. Through strong leadership and sound representation, MWDOC works diligently to secure a dependable water future for all of Orange County.
17. Water industry jobs provide steady, long-term careers that ultimately contribute to the welfare of workers, their families, and to the health of the state's economy.
18. MWDOC is committed to educating and encouraging water leaders of today and tomorrow.

While strategy provides the path towards reaching an end goal, tactics define the specific actions taken along the way. Tactics have a definite beginning and end, and are more about the planning and detailed components of a plan.

Some tactics can be utilized to accomplish several, if not all objectives in some cases, however **Tactics** identified for each of the primary MWDOC GOAL objectives are as follows:

OBJECTIVE 1.1 Tactics:

- Maintain a steady, clear, accurate voice throughout the organization by ensuring that all outreach materials both traditional and digital are reviewed and updated frequently.
- Participate in one-on-one and group conversations or meetings with decision makers and partners, and provide informational materials and guidance whenever appropriate.
- Engage stakeholders, partners, and member agency representatives across all MWDOC organizational roles in order to ensure the District is providing needed and necessary support and advocacy.
- Discover common ground and identify opportunities to partner with other organizations to advance the District's goals, objectives, and initiatives.

OBJECTIVE 1.2 Tactics:

- Identify opportunities to keep **DCP** at the forefront of messaging, such as earned media, social media, print media, and other effective forms of communication.
- Identify leading voices in **DCP** as MWDOC Water Policy Forum & Dinner and OC Water Summit speakers.
- Invite speakers from both sides of the **DCP** to participate as Inspection Trip presenters.
- Provide briefing papers, hands-on activities, and presentations to educator groups, teachers, and students to integrate water supply sources and **DCP** into classroom lessons where appropriate.

OBJECTIVE 1.3 Tactics:

- Work with member agencies and partners to educate and advocate for the completion of local projects deemed most valuable by the **Orange County Water Reliability Study.**
- Produce collateral and content such as briefing papers, media kits, and videos highlighting the **Orange County Water Reliability Study** for stakeholders including elected officials, member agencies, as well as traditional and social media audiences.

OBJECTIVE 2.1 Tactics:

- Host a learning workshop targeting leaders from member agencies; include a messaging component for attendees.

OBJECTIVE 2.2 Tactics:

- Present a MWDOC Water Policy Forum & Dinner ***Speakers Series*** each fiscal year and secure top-level expert speakers to discuss timely, relevant water related topics with Orange County stakeholders and leaders.
- Develop messaging that amplifies MWDOC's opposition to any potential legislation that imposes a "public goods charge" "water user fee", or "water tax" on public water agencies or their ratepayers.
- Assume leadership roles where possible at the local, County, and State levels in all areas of expertise and District focus.
- Provide comprehensive tool kits to stakeholders, partners, and member agencies that support and promote water-centric programs, activities, and campaigns, offering direction for implementation and ensuring a unified message.
- Provide hands-on water education activities to Orange County K-12 teachers that enhance and extend classroom lessons.
- Administer the Water Energy Education Alliance that strengthens career pathways and builds and bolsters technical training programs for Southern California students.
- Administer a water-centric K-12 MWDOC Choice School Program for Orange County students that enhance their ability to become responsible environmental stewards
- Support and advance environmental literacy, giving students the knowledge and understanding they need to create ecologically sound, economically prosperous, and equitable communities.

OBJECTIVE 3.1 Tactics:

- Provide stakeholders with valuable resources such as the OC Water 101 Booklet (volume 1) and other MWDOC collateral (briefing papers).
- Integrate District partners and their target audiences (i.e. ACCOC, OCBC, and others) into Inspection Trips and Policy Dinners.
- Provide briefing papers, hands-on activities, and focused presentations where appropriate.
- Utilize all communications tools and channels to engage and inform identified audience groups.

OBJECTIVE 3.2 Tactics:

- Cultivate relationships with traditional media (Newspaper Editorial Boards, Radio and Television News outlets) to maintain a steady voice on water issues, and utilize Social Media to maximize the reach of earned media opportunities and events.
- Evaluate and amend where necessary all current communications platforms and tools to ensure the District is utilizing the most effective and contemporary systems.

OBJECTIVE 3.3 Tactics:

- Apply approved Logo and Brand Identity Guidelines to all MWDOC outreach materials and platforms, activities, programs, and events.
- Promote districtwide buy-in by implementing the MWDOC Logo and Brand Identity Guide.

COMMUNICATIONS TOOLS AND CHANNELS

"If you have an important point to make, don't try to be subtle or clever. Use a pile driver. Hit the point once. Then come back and hit it again. Then hit it a third time- a tremendous whack."

~ Winston Churchill, British Politician, Army Officer & Author

Most of the District's audience groups will already have preconceived notions about who MWDOC is based on past or current collaborations, our website structure and social media content, as well as any interaction with our communications materials including articles, print materials, and news media. To successfully reach these individuals with our intended messages, MWDOC must utilize the tried-and-true tools and resources that are readily available, and strategically place the messages where they can easily be found.

As a guiding reference, the MWDOC Public Affairs Department has defined communications tools, activities, and channels, and identified how MWDOC currently utilizes each of these resources to effectively reach the goals and objectives of the District.

A communications tool is the partnership or activity used to interface with an identified audience to achieve goals and objectives. Some examples include:

- **Partnerships -** *Successful partnerships are developed through an understanding of each other's specific needs to reach identified goals and objectives. Partners typically see a reward involved with coming together and are able to offer each other a choice of tools, services, and solutions to meet those needs. Exceptional partnerships act as a catalyst for those involved to grow and prosper.*

  MWDOC's RECOGNIZED PARTNERS*:

  - MWDOC member agencies
  - Metropolitan and its member agencies
  - Department of Water Resources (DWR)
  - State Water Resources Control Board (SWRCB)
  - Media
  - Technical Consultants
  - School Program Contractors
  - Educators
  - Boy Scouts/Girl Scouts Organizations
  - Association of California Cities – Orange County (ACC-OC)
  - Orange County Business Council (OCBC)
  - Association of California Water Agencies (ACWA)
  - American Water Works Association (AWWA)
  - Association of Metropolitan Water Agencies (AMWA)
  - Council for Environmental and Economic Balance (CEEB)
  - Urban Water Institute (UWI)
  - So Cal Water Committee
  - Wyland Foundation

- Bolsa Chica Conservancy
- Orange County Coastkeepers
- UCCE Master Gardeners
- Orange County Department of Education (OCDE)
- OC STEM
- California Environmental Literacy Initiative (CAELI)
- California Environmental Education Foundation (CEEF)
- Orange County and Pacific West Association of Realtors (OCAR) and (PWR)
- Other Contractors

*This is by no means an exhaustive list, but gives an indication of the many partners of the District.

- **Activities-** An activity is a planned course of action taken in order to achieve a specific aim. Activities have a distinct beginning and end and usually contain several tasks within them that once completed, conclude the activity. Examples of District activities:

  - Annual Campaigns
    - MWDOC Water Awareness Poster Contest
    - Fix-a-Leak Week
    - Irrigation Week
    - Smart Irrigation Month
    - Wyland National Mayor's Challenge for Water Conservation
    - Imagine A Day Without Water
    - Emergency Preparedness Month
    - Garden Smart campaign, and more
  - Workgroup Meetings
  - D.C. Luncheon
  - Water Energy Education Alliance (WEEA) Leadership Roundtable meetings
  - Surveys
  - Water saving programs and incentives

- **A Communications Channel** is the medium through which a message is sent to its intended receiver. The basic channels are visual, written, spoken, or electronic. Examples of District communications channels:

  - **Word of mouth**
  - **Speaker presentations**
  - **Trainings**
  - **Conferences/Meetings**
    - Elected Officials Forum
    - Water Policy Forum
    - Orange County Water Summit
  - **Community Events**
  - **Print media**
    - News stories/News Releases

        - Newsletters
        - Briefing papers/Talking points
        - Media kits
        - Written correspondence
        - Introduction to Water booklet (Volumes)
        - Flyers/Signage/Brochures
        - Promotional giveaways
        - Door hangers/Bill inserts
        - Consumer Confidence Reports (CCRs)
    - **Electronic media**
        - Social Media
        - Email blasts
        - Radio
        - Television
    - **District Programs**
        - Choice School Programs
        - Scouts Programs
        - WEEA
        - Inspection Trip Program
        - WEROC
    - **Ricky Raindrop**

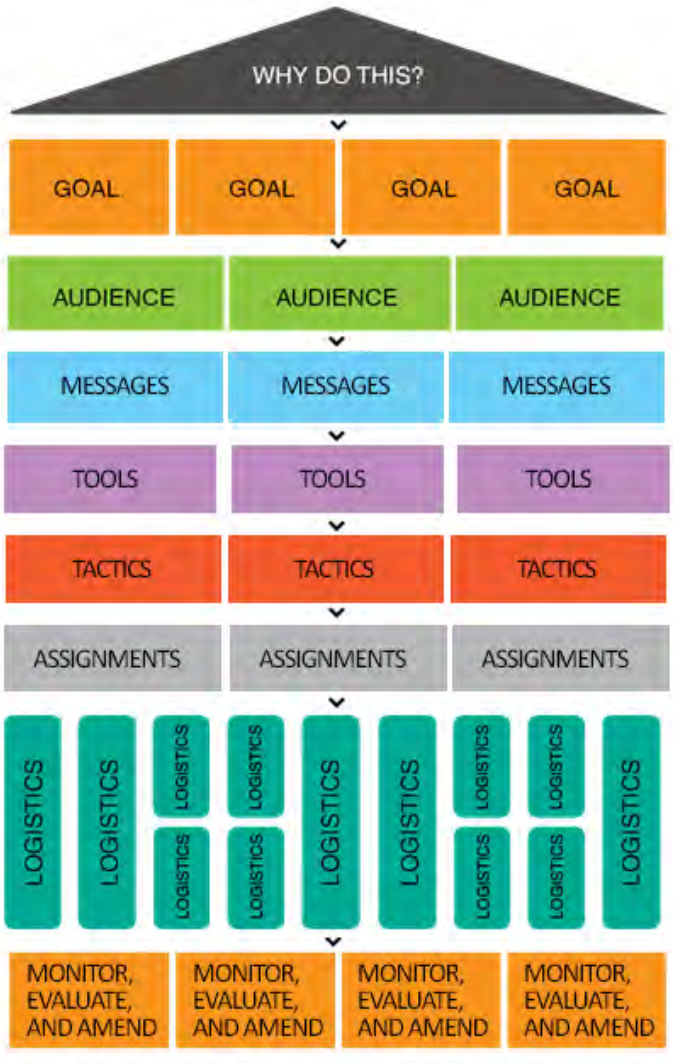
IMPLEMENTATION, ASSIGNMENTS, AND SCHEDULES

"Individual commitment to a group effort – that is what makes a team work, a company work, a society work, a civilization work."

~ Vince Lombardi, American Football Player & Coach

Public sector organizations shoulder a unique responsibility to be transparent, accountable, and have a positive impact on the community. A carefully developed and executed communications plan can establish trust and credibility in the District's programs and activities for our stakeholders, partners, audience members, and employees. This holds especially true in the water industry which is often vulnerable to changes in the political climate.

To effectively reach MWDOC's identified goals and objectives, each of the District's programs and activities must include *basic strategic targets* such as goals, intended audiences, messages, and tools. To ensure the benefit or value received is worth the time, money, talent, and effort expended by the District and its staff, every task, project, or program should start with the question "Why are we doing this?" In turn, all strategic targets should include an *implementation plan* which identifies tactics and logistics, and eventually, active monitoring, evaluation, and amending.



Assignments are essential to maintaining productivity and accountability as well as collectively accomplishing the goals of a project. The MWDOC Public Affairs Department has developed a Programs and Responsibility flowchart which breaks down the Department's primary roles and assignments by team member (See Appendix B).

Additionally, the MWDOC Public Affairs Department has developed a series of logistical checklists to efficiently plan, implement, and control the flow of information for each program and activity, and will continue to do so as new activities and programs are developed. Furthermore, the Department uses robust program management software tools such as Asana and CoSchedule to stay in touch with impending deadlines and to keep everything, including assignments and checklists, organized and in one place.

IMPLEMENTATION, ASSIGNMENTS, AND SCHEDULES

	Federal or State Elected Officials	Legislative Staffers	Orange County Elected Officials	Business Community Leaders	Environmental Organization Leaders	Community Organization Leaders	Water Industry Professionals	Landscape Contractor	Media	Educators	Students K - 6th	Students 7th-12th	College Students	Orange County Residents	Emergency Manager	Human Resources
GOALS																
Goal #1	X	X	X		X		X		X	X						
Goal #2	X	X	X	X	X	X	X		X	X	X	X	X	X	X	
Goal #3	X		X	X	X	X	X	X	X	X			X	X	X	X
MESSAGES																
Message #1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Message #2	X	X	X	X	X	X			X	X	X	X	X	X	X	
Message #3	X	X	X	X	X	X	X		X	X	X	X	X	X	X	
Message #4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Message #5	X		X	X	X	X	X			X	X	X	X	X		
Message #6				X				X					X	X		
Message #7				X		X		X					X	X		
Message #8	X		X	X	X	X	X	X		X	X	X	X	X	X	
Message #9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Message #10	X			X	X	X	X	X		X	X	X	X	X		
Message #11	X	X	X	X	X		X		X	X			X	X	X	
Message #12	X	X	X	X	X		X		X	X			X	X	X	
Message #13	X	X	X	X	X		X		X	X			X	X	X	
Message #14		X	X		X		X		X	X			X	X	X	
Message #15				X	X	X	X	X	X	X			X	X		
Message #16							X			X				X		
Message #17	X	X	X	X	X	X	X		X	X	X	X	X	X	X	
Message #18		X		X		X	X			X	X	X	X	X		X
Message #19	X	X		X	X	X	X			X	X	X	X	X		X
COMMUNICATIONS TOOLS AND CHANNELS																
Partnerships	X	X	X	X	X	X	X	X		X	X	X	X	X		X
Annual Campaigns	X	X	X	X	X	X	X		X	X	X	X	X	X		
Surveys	X	X	X	X	X		X	X		X				X	X	X
Word of Mouth	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Speaker Presentations	X	X	X	X	X	X	X		X	X	X	X			X	
Trainings							X	X		X				X	X	X
Conferences/Meetings	X	X	X	X	X	X	X		X	X					X	X
Community Events	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Print Media	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Electronic Media	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
District Programs	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Ricky Raindrop									X	X	X	X		X		
Virtual Platforms	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X

MONITOR, EVALUATE, AND AMEND

"Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted."

~ Albert Einstein, Theoretical Physicist

The effectiveness of the MWDOC Strategic Communications Program and Plan depends on a large variety of factors including technological advancements or changes, the rise and fall of audience engagement, current news or media concentration, political changes in leadership and focus, and even the weather.

There are a significant number of Key Performance Indicators (KPI), metrics and measurements that the MWDOC Public Affairs Department currently uses. Some of the most common include:

- Constant Contact activity reports- email marketing for surveys, events, newsletters, and news release distribution (results per activity)
    - Open rate
    - Click rate
    - Registration rate
        - Includes financial indicators
    - Responses
- Website (Google) Analytics
    - Return Visitor and First Visitor metrics
    - Web traffic and Search Engine Optimization (SEO) including landing pages and time spent on specific pages
    - Click through rate
    - Page views per session
    - Referral traffic
    - Content downloads
    - Use of forms such as newsletter, interest lists, and mailing list sign ups
- Social Media Dashboard Analytics (Facebook, Twitter, Instagram)
    - Followers
    - Likes/Fans
    - Post engagements
    - Content sharing
    - Sentiments
    - Link clicks
    - Inbound messages
    - Ad campaign performance
    - Ranking
- Verbal and Written Feedback
    - Phone calls
    - Email and written correspondence
    - Public comment at meetings

Program and activity evaluation is constant, and through this evaluation process the District's messaging and activities continue to be shaped and refined. Additionally, the tools mentioned here will remain relevant and useful no matter how the goals and objectives or messaging changes.

MWDOC BRAND

"Your brand is what people say about you when you're not in the room."

~ Jeff Bezos, American Technology Entrepreneur, Founder, Chairman, & CEO of Amazon

Many organizations downplay the value of branding because they view themselves as a business, not a brand. However, branding is a critical step to achieving success in communications, creating meaningful interactions, and establishing credibility. Branding is the sum of all the impressions an audience has of an organization. This is based on the interactions they have had with employees and Board members, as well as with the communications tools and channels that are used to reach them. Each of these interactions tells a story to the audience. For example, if materials are presented in a clean, organized, skillful, and contemporary fashion, the audience associates those materials with sophistication, expertise, and trustworthiness. The most important thing is to set expectations for the experience that the audience will have each time they interact with the brand, making it instantly recognizable. People need to identify with, and understand what information comes to them and from whom. How an audience perceives the brand will ultimately determine how successful an organization's efforts are. If an organization does not create and establish their own brand, their audience and competitors will do it for them.

Decades ago, branding was simply labeled a visual representation of an organization - a name, slogan, logo, or combination of all three. Today, it is understood that these elements, while extremely powerful and important, are just one piece of the puzzle. A brand is far more encompassing—it defines an organization's identity. Some of the benefits gained by strengthening the MWDOC brand include:

- **Builds trust and establishes credibility** – Credibility is at the heart of any successful outreach effort. Maintaining a consistent message demonstrates expertise, professionalism, and experience. Brand credibility is established by:
    - Non-verbal identifiers such as a logo or graphic materials
    - Verbal or written communications through marketing efforts
    - The organization's mission statement
    - Delivering expertise regularly through all identified channels
    - Consistently providing valuable information and resources

- **Fosters loyalty** – Once trust has been established, loyalty will soon follow. People who are loyal to a brand continue to support that organization in good times and bad, share positive messages, and introduce new audience groups to the organization.

- **Increased recognition or brand awareness** – One measurement of brand success is if an organization can be identified simply by its attributes such as the logo, tagline, or materials packaging. Brand familiarity can influence decisions when an audience must differentiate between messages that contain conflicting information. People are more likely to trust a brand they recognize.

- **Supports marketing and outreach efforts** – A brand links the name, logo, print materials, online presence, and professional services together bringing a united, clear, consistent message to all audience groups, and across all channels.

- **Extends range of influence** – Consistent branding is a powerful tool that has the potential to reach a large amount of people across a wide variety of channels including online, offline, mobile, and niche markets.

- **Motivates employees** – To build a strong brand, it is essential to have brand ambassadors – individuals, both internal and external, who are engaged, connected, and committed to the organization's activities and priorities. One of the most powerful, and more frequently overlooked brand assets is an organization's workforce. Employees spend a great deal of time at work, and as a result, form solid opinions about their employer. A contemporary, clean, consistent, and well-respected brand can institute a sense of pride, and can help inspire strong, internal brand ambassadors.

A strategic and thoughtfully developed brand should become the backbone of an organization's identity. It is a powerful communications tool which, when utilized correctly, will enable the District to build and establish credibility, as well as present an overall positive experience for identified audience groups. The MWDOC Public Affairs Department has developed the MWDOC Logo and Brand Identity Guidelines as a living document that will continue to grow and evolve along with the District (See Appendix C). The Department's consistent branding efforts align with the MWDOC Strategic Communications Program and Plan goals and objectives to successfully maintain and continue to enhance a brand presence throughout the Orange County region.

Federal or State Elected Official

Ambassador, Busy, Engaged, Educated, Driven

Goals & Objectives
- Goal #1
- Goal #2
- Goal #3

Activities & Partnerships
- ACWA
- OCBC
- SoCal Water Committee
- SWRCB
- Metropolitan & Member Agencies
- Media
- D.C. Luncheon

Messages
- Message #1-5
- Message #8-13
- Message #17
- Message #19

Channels
- Introduction to Water Booklet
- Briefing papers
- Written correspondence
- Virtual platforms
- Water Policy Forum
- O.C. Water Summit
- Elected Officials Forum
- Inspection Trips

Legislative Staffer

Political Emphasis, Educated, Involved, Ambitious, Adaptable

Goals & Objectives
- Goal #1
- Goal #2

Activities & Partnerships
- MWDOC Member Agencies
- ACC-OC
- Surveys
- D.C. Luncheon

Messages
- Message #1-4
- Message #9
- Message #11-14
- Message #17-19

Channels
- Introduction to Water Booklet
- Briefing papers
- Social media
- Virtual platforms
- Inspection Trips
- Water Policy Forum
- O.C. Water Summit
- Elected Officials Forum

OC Elected Official

Ambitious, Engaged, Traditional, Invested, Informed

Goals & Objectives

- Goal #1
- Goal #2
- Goal #3

Activities & Partnerships

- Elected Officials Forum
- ACC-OC
- Metropolitan & Member Agencies
- OCBC
- SoCal Water Committee
- SWRCB
- UWI
- AMWA
- ACWA
- AWWA

Messages

- Message #1-#5
- Message #8-#9
- Message #11-#14
- Message #17

Channels

- Introduction to Water Booklet
- Briefing papers
- Written correspondence
- Virtual platforms
- Inspection Trips
- D.C. Luncheon
- Water Policy Forum
- O.C. Water Summit
- Speaker presentations

Water Industry Professional

Authority, Steward, Knowledgeable, Focused, Forward-thinking

Goals & Objectives

- Goal #1
- Goal #2
- Goal #3

Activities & Partnerships

- Water-saving programs & incentives
- MWDOC Member Agencies
- Boy/Girl Scouts Organization
- Surveys
- Annual campaigns
- SWRCB
- AWWA
- UWI
- ACWA
- So Cal Water Committee

Messages

- Message #1
- Message #3-#5
- Message #8-#19

Channels

- Trainings and Workgroup Meetings
- Print media
- Electronic media
- CCRs
- Virtual platforms
- Community events
- District Programs
- Conferences and Meetings

Media

Persistent, Proactive, Inquisitive, Adventurous, Resilient

Goals & Objectives

- Goal #1
- Goal #2
- Goal #3

Activities & Partnerships

- Annual campaigns
- All identified partners if newsworthy

Messages

- Message #1-#4
- Message #9
- Message #11-#15
- Message #17

Channels

- Print media
- Electronic media
- Word of mouth
- Virtual platforms
- Water Policy Forum
- O.C. Water Summit
- Inspection Trips
- Ricky Raindrop

Business Community Leader

Influential, Resourceful, Accomplished, Motivated, Active

Goals & Objectives

- Goal #2
- Goal #3

Activities & Partnerships

- OCAR
- OCBC
- ACC-OC
- Imagine a Day Without Water
- Garden Smart campaign

Messages

- Messages #1-13
- Messages #15
- Messages #17-19

Channels

- Social media
- Flyers/Signage/Brochures
- Speaker presentations
- Door Hangers/Bill Inserts
- Surveys
- Word of mouth
- Virtual platforms
- WEEA
- Inspection Trips
- O.C. Water Summit
- Water Policy Forum

Community Organization Leader

Purposeful, Dynamic, Trustworthy, Dedicated, Economical

Goals & Objectives

- Goal #2
- Goal #3

Activities & Partnerships

- Boy/Girl Scouts Organizations
- Inspection Trips
- OCAR
- Water-saving programs & incentives
- Orange County Coastkeeper
- CAELI
- UCCE Master Gardeners
- Imagine a Day Without Water
- Garden Smart campaign
- Wyland National Mayor's Challenge for Water Conservation

Messages

- Message #1-5
- Message #7-10
- Message #15
- Message #17-19

Channels

- Social media
- Flyers/Signage/Brochures
- Speaker presentations
- Door Hangers/Bill Inserts
- Virtual platforms
- Word of mouth
- News stories
- Newsletters
- Briefing papers
- CCRs

Environmental Community Leader

Service-oriented, Passionate, Invested, Motivated, Aware

Goals & Objectives

- Goal #1
- Goal #2
- Goal #3

Activities & Partnerships

- Orange County Coastkeeper
- Bolsa Chica Conservancy
- CAELI
- Imagine a Day Without Water
- Wyland National Mayor's Challenge for Water Conservation

Messages

- Message #1-5
- Message #8-15
- Message #17
- Message #19

Channels

- Social media
- Surveys
- Speaker presentations
- Water Policy Forum
- Briefing papers
- CCRs
- Virtual platforms
- Community events
- Inspection Trips

Emergency Manager

Organized, Persuasive, Responsible, Driven, Decisive

Goals & Objectives

- Goal #2
- Goal #3

Messages

- Message #1-4
- Message #8-9
- Message #11-14
- Message #17

Activities & Partnerships

- Surveys
- DWR
- Technical consultants
- ACWA
- Other contractors
- Imagine a Day Without Water
- Emergency Preparedness Month
- MWDOC Member Agencies

Channels

- Speaker presentations
- Electronic media
- Trainings
- Conferences
- Virtual platforms
- Community events
- WEROC

Landscape Contractor

Expert, Thrifty, Creative, Hands-on, Detail-oriented

Goals & Objectives

- Goal #3

Messages

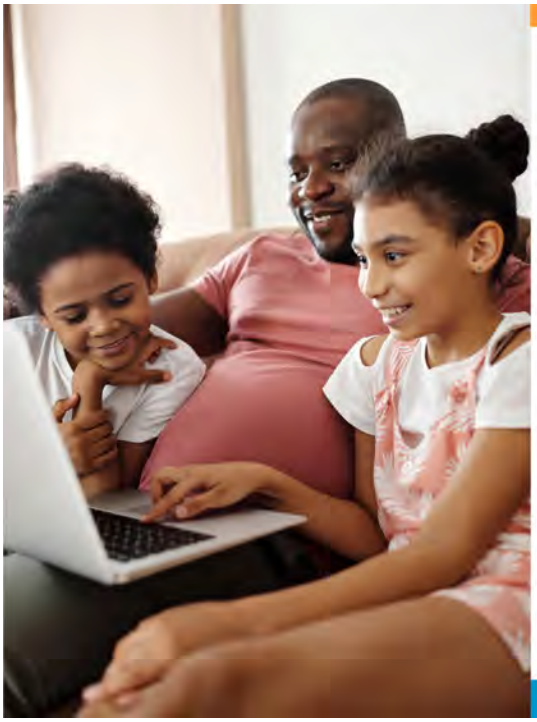
- Message #1
- Message #4
- Message #6-10
- Message #15

Activities & Partnerships

- MWDOC Member agencies
- OCAR
- Wyland Foundation
- UCCE Master Gardeners
- Smart Irrigation Month
- Irrigation Week
- Garden Smart campaign

Channels

- Flyers/Signage/Brochures
- Door Hangers/Bill Inserts
- Social media
- Trainings
- Virtual platforms



OC Residents

Diverse, Penny-wise, Family focused, Casual, Industrious

Goals & Objectives

- Goal #2
- Goal #3

Activities & Partnerships

- MWDOC Member Agencies
- Annual campaigns
- Water-saving programs & incentives
- Orange County Coastkeeper
- UCCE Master Gardeners
- OCDE
- CAELI
- OC STEM
- Boy/Girl Scouts Organizations

Messages

- Message #1-19

Channels

- Electronic media
- Surveys
- District Programs
- Word of mouth
- Door Hangers/Bill Inserts
- CCRs
- Promotional items
- Virtual platforms
- Community events

College Student

Independent, Perceptive, Receptive, Social, Frugal

Goals & Objectives

- Goal #2
- Goal #3

Activities & Partnerships

- Educators
- Surveys
- Bolsa Chica Conservancy
- Orange County Coastkeeper
- CAELI
- Imagine a Day Without Water
- Wyland National Mayor's Challenge for Water Conservation

Messages

- Messages #1-15
- Messages #17-19

Channels

- Social media
- Word of mouth
- Print media
- Electronic media
- Virtual platforms
- Community events