

## **Board Strategic Planning Session**

Municipal Water District of Orange County

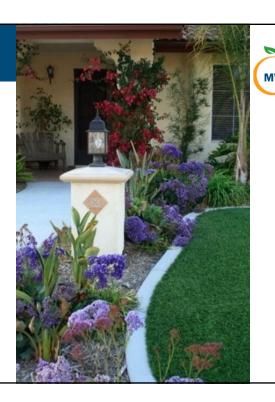
March 3, 2023

MWDOC

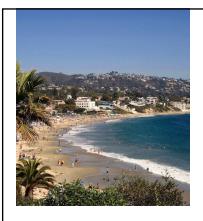
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# Agenda

- O1 Board Introductions & Strategic Plan Overview
- 02 MWDOC's History, Key Milestones, & Mission
- MWDOC's Current Role & Services
- O4 Discussion with Board Members
- O5 Expectations for Next Board Workshop



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**Board Introductions & Strategic Plan Overview** 



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## MWDOC History, Key Milestones, & Mission

Provide a Brief History & Chronology of the District Including Major Milestones and Progression through the Years Current Role and Mission Today



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## History of MWDOC



- From the 1800s to early 1900s, Orange County (OC) depended on groundwater to supply much of its needs.
- With increased demands exceeding the natural recharge, the water table gradually lowered. Thus, a supplemental source of water was required if OC was to continue its economic growth
- OC Cities of Anaheim and Santa Ana joined the Metropolitan Water District in 1928. (Fullerton joined later in 1931)
  - Primary mission was to built an aqueduct to the Colorado River. Where construction started on Christmas Eve 1932
- To maintain and protect the groundwater basin, Orange County Water District (OCWD) was formed in 1933
- In 1941, Construction of the Colorado River Aqueduct was completed



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#### Formation of MWDOC

- MWDOC
- Growth and the need for imported water, resulted in the creation of Coastal Municipal Water District formation in 1941; and annexed into MET in 1942. (Included the communities of Costa Mesa to San Clemente)
  - Interesting Fact: City of Brea joined Coastal MWD in 1946 to receive MWD water
- Mowever, Post-WWII growth in County accelerated water demand and the groundwater table declined to critically low levels. Forced OCWD to construct large-scale groundwater replenishment activities & to seek purchases from MET.
- In 1951, <u>Orange County Municipal Water District (OCMWD)</u> was formed, and the remainder of central and north Orange County was annexed into MET. South County annexed in the 1960s & 1970s
  - Not until 1969, was the named changed from OCMWD to the Municipal Water District of Orange County (MWDOC)



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# MWDOC's Early Years (1950s to 1970s)



- MWDOC was created to represent its service area at MET and meet the growing needs of the County with imported water
  - MWDOC deliveries ranged from of low of 45,349 AF in 1953-54 to as much as 280,397 AF in 1962-63 (double amount the of local production)
  - MWDOC levied property taxes in the 1950's and 60's as a source of revenue.
- To meet this growing demand of imported water, key Pipelines/Feeders, service connections were needed and constructed in OC
  - 1956-57 Santiago Lateral, Lower OC Feeder, and West OC Feeder, & West OC Feeder Board Pipelines 1 &2
  - 1962 East Orange County Feeder #1 & Santiago Aqueduct (JPA Commission)
  - 1964 East Orange County Feeder #2 (Joint Venture with OC agencies & MET)
  - 1964 Tri-Cities Transmission Main and Aufdenkamp Transmission main for SOC
  - 1971 Second Lower Orange County feeder
- In 1964, MWDOC developed studies of total water supply needs for the County, focusing on pipeline capacity to meet future demands
  - This study urged MET to provide early construction of portions of 2<sup>nd</sup> Lower Feeder

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### MWDOC in 1970s



- In 1972, MWDOC conducted a water consumption study on County's per capita usage. The District started a conservation campaign to lower per capita usage through a handbook "Mommy I'm Thirsty" where 300,000 copies were mailed out in August 1973
- In 1974, A Public Information Officer was added to District staff to inform the public of the District activities & services. In addition, a part time Education Coordinator was hired to implement its elementary school program (introduction of Ricki the Rambunctious Raindrop)
  - 0 In 1974-75, nearly 10,000 student participated in 1st year's program & by 1980 it grew to 62,000 students
  - In 1974-75 MWDOC offered a class on So California Water Resource at Cal State Fullerton
- In 1974, Engineering study of present & future regional water supply facilities. It was a reconnaissance level study to identified projects of possible interest to the District.
- In 1975, First SWP deliveries to Orange County, which provided a 30% blend at Diemer
- Due to the 1976-77 Drought, MWDOC intensified its Water Conservation & Public Outreach efforts through brochures, bumper stickers, bill stuffers and handbooks
  - MWDOC drafted the first (in So. Cal) model conservation ordinance for its retail agencies to Reduce Water Wasting 8

### MWDOC in 1980s



- In 1980, "Topical Dinners" for Legislators & elected officials started to discuss Water policy & Legislative issues
- By 1980-81, District's School program included all level (Elementary to High School)
  - Water Conservation kits were distributed to every household
- In 1981, MWDOC conducted a feasibility study of identifying hydroelectric generating facilities in the service area to recover energy and sell to local utilities
  - The study resulted in City of La Habra to design and construction a power generation facility at one of its turnouts
- In 1981, Allen-McColloch Pipeline (AMP) was completed (MWDOC acted as Manager/Operator)
  - This 26-mile pipeline was constructed to bring a blend of treated SWP & Colorado River to eastern & southern portions of OC

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## MWDOC in 1980s (Cont.)



- In 1983, formation of the Water Advisory Committee for Orange County (WACO) and the Southern California Water Committee for public outreach and education
- In 1985, The Volunteer Emergency Preparedness Organization (VEPO) was formed
  - In 1999, VEPO was renamed the Water Emergency Response of Orange County (WEROC)
- In 1987, MWDOC organized "South County Regional Water Facilities Study" for future needs
- In 1988, MWDOC advocated for the Central Pool Augmentation Project and this triggered the desire for MET to own the AMP and to oversize the South County Pipeline (which was under design at the time by SMWD)
- In the late 1980's MWDOC was looking at ways to expand the AMP as a drastic need for new water was projected

### MWDOC in 1990s



- With the significant drought in early 1990s, MWDOC again ramped up Conservation and water awareness efforts to the public and retail agencies (Radio, print, speaking engagements). Major efforts through the 90's were the toilet rebate and distribution programs
- MWDOC was the first signatory to the California Urban Water Conservation Council (1991)
  - Set statewide BMPs in water conservation for over 20 years
- In 1992 deliveries began from the AMP to the South County Pipeline by way of the South County Pump Station
- Growing concern about reliability, MWDOC partnered with a number of agencies in MET's LRP applications for local supply development
- In 1995, MET Purchased the AMP
  - Moved MWDOC got out of the O&M business

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## MWDOC in 1990s



- In 1990, MWDOC and other advocated at MET for a planning document (MET IRP) to coordinate future investments between MET and its MAs so we collectively would not over-invest.
  - Set the standard in regional water resource planning
  - Ollective effort between MET and Agencies to ensure long term reliability
- In mid 1990s, a study was conducted by the District and the MAs
  - Concurrence that MWDOC's responsibility is providing necessary services which the member agencies cannot do themselves – sparked the role of MWDOC in the County & the need for "water conservation"
- MWDOC and Coastal consolidation began in 1997

### MWDOC in 2000s to Present



- In 2001, Coastal Municipal Water District consolidated with MWDOC
  - Board expanded from a 5 to a 7 Board of Directors
  - Set MWDOC as the regional wholesaler of imported water in the County
- Early 2000, MWDOC created the OC Regional Alliance for the 20% by 2020 Plan
  - This was the largest collective compliance effort to met WUE standards by the State
- Helped OCWD pursue both a Conjunctive Use Agreement with MET and support for the GWRS project
- Expanded our pursuit of Grants to help offset local costs or expand services
  - Range from \$3 to \$7 million per year
- Settlement Agreement with MWDOC's Member Agencies
  - Mainly to resolve role and mission of MWDOC
  - MET Representation Selection Process, Rates, Core-Choice Programs & Communications
- Conducted a number of studies for Ocean Desalination in the County
  - Responded to MET's RFP for ocean desalination
  - Poseidon Huntington Beach Project Workgroup
  - Doheny Desalination
  - San Onofre

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# MWDOC in 2000s to Present (Cont.)



- Early 2000's WUE examines market transformation to reduce outdoor water use for watershed benefits and water savings
- In 2006, the Emergency Services Plan concept was approved to help exchange water with the OCWD groundwater basin by way of IRWD; began operations in 2009.
- MWDOC & MET evaluate the time to recover from seismic events study leads to investments in the Diemer Plant and to creation of criteria for all OC retail agencies to be able to meet demands for 60 days without the MET system being operational.
- Started discussions with MET on Pump-in to various pipelines in OC
- Implemented Water Supply Allocation Plans (in 2009, 2010, & 2014)
- MWDOC Bills/Meters multiple MET service connections, Treatment Plants (Baker) & joint capacity pipelines

# MWDOC in 2000s to Present (Cont.)



- The Baker Treatment Plant, identified in one of MWDOC's studies, was built by five agencies under the leadership of IRWD to provide system reliability improvements
- Due to the challenges on SWP and Colorado River, MWDOC conducted its OC Reliability Studies & Updates (2018 & 2023 update)
- Create Water Loss workgroup and Leak Detection Service (Under a Choice Activity) available to retail agencies in OC
- Member Agency Facilitated interviews & discussions
  - To improve the relations and communication among the member agencies

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## **MWDOC Current Role**



In Southern California, Reliability & Sustainability cannot be achieved alone but rather through a joint effort of local and regional entities collaborating on studies, programs and projects. Historically, MWDOC can be viewed as a regional coordinator, facilitator, collaborate and leader bring together the local and regional agencies together to achieve this goal.

- MET Representation
- Regional Leadership & Advocacy
- Regional Engineering, Planning, & Studies
- Development Management, & Implementation of WUE Programs
- Emergency Preparedness, Coordination, Mutual Aid (WEROC)
- Facilitate development of local Resources
- Regional Public Messaging coordination, & Outreach
- Legislative Coordination, Advocacy, & Water Policy clearinghouse
- Informational Hub & Inter-Agency Dialogue
- Facilitation of Collective Resources
  - CCRs, UWMPs, Water Loss, Leak Detection, AWIA, Research, Other Studies

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# MWDOC's Mission



To provide reliable, high-quality water supplies from MWD and other sources to meet present and future needs, at an equitable and economical cost for all of Orange County, and to promote water-use efficiency

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### MWDOC's Current Role & Services

**Review of Core District Services** 

Specific Programs Value & Benefit to the member agencies and public



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## Reliability Planning & Engineering



Reliability Planning & Engineering works with Orange County water agencies on solutions & priorities for improving OC's future water supply reliability

#### **Key services include:**

- Provide a local and countywide perspective to planning & resource development efforts
- Advocate for local OC perspectives in MET regional planning & resource development efforts
- Coordinate and provide support services to MWDOC Agencies regarding MET issues
  - Regarding agreement terms and conditions, imported water, system operations, service connections, local pipelines, etc.
- Coordinate MET shutdowns with MWDOC agencies
- Provide support for MET Service Connection metering issues
- Collaborate with MET and MWDOC Agencies to integrate local water supply projects into the OC distribution system
  - Example OC Hydraulic Model



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# Reliability Planning & Engineering

#### Additional services include:

- Advocate and work towards seeking approval from MET for a Pump-in and conveyance of local water in EOCF#2
- Trustee Activities for AMP, Baker, and EOCF#2
  - Provide capacity monitoring services as required by the AMP Sale Agreement, regarding the tracking of AMP capacity usage
  - Participate on SAC Commission and other activities with respect to the Baker Pipeline and Baker Treatment Plant
  - Ocordinate activities relevant to EOCF#2 JPA (pump-in pilot project)
- WEROC Support
  - Assist with staffing the Emergency Operations Center during activations
- Assistance to other MWDOC Departments







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# Reliability Planning & Engineering Value & Benefit

# MWDoc

#### OC Water Reliability Study (OC Study)

- Scenarios of Southern California and Orange County water reliability 'futures', looking out into the future.
- Provides support to MWDOC MET Directors for future reliability planning decisions at MET.
- These analyses are also leveraged by multiple OC agencies in their own local reliability planning efforts.

#### Economic Benefits Study

- Provided estimates of the costs and impacts of not being reliable for Orange County businesses and residents;
- Measured in terms of economic and employment impacts of relatively sudden water curtailments.
- Useful to OC Agencies in providing quantification of the benefits that local water supply projects may provide.

		Max Shortage (TAF) in 2030					Max Shortage (TAF) in 2050				
0	Region	Sc 1	Sc 2	Sc 3	Sc 4	Sc 5	Sc 1	Sc 2	Sc 3	Sc 4	Sc 5
00	Basin	22	65	65	64	64	0	153	120	130	87
	uth Orange County	11	30	30	30	30	0	57	47	53	35
Bre	ea/La Habra	1	3	3	3	3	0	6	5	6	- 1
-											
		N	lax Short	tage (TAF	) in 2030		N	Tax Short	tage (TAF	) in 2050	
	Region	N Sc 1	lax Short Sc 2	tage (TAF	) in 2030 Sc 4	Sc 5	N Sc 1	Tax Short	tage (TAF Sc 3	) in 2050 Sc 4	Sc 5
	MARCH CO.										
OC	Region	Sc 1	Sc 2	Sc 3	Sc 4	Sc 5	Sc 1	Sc 2	Sc 3	Sc 4	Sc 5

TABLE 3. DIDECT IMPACTS TO OUTDUT BY INDUSTRY FOR 15% AND 30% WATER DEDUCTIONS

		15% Re	duction	30% Reduction		
Industry	Total Output (\$ millions)	Direct Impact (%)	(\$ millions)	Direct Impact (%)	(\$ millions)	
	[1]	[2]	[3]	[4]	[5]	
Construction	\$13,896	1.0%	\$136	1.2%	\$166	
Manufacturing	\$31,687	2.1%	\$652	7.0%	\$2,207	
Logistics, Transportation, and Warehousing	\$24,623	1.7%	\$412	2.6%	\$647	
Retail and Other Services	\$18,680	0.8%	\$152	4.6%	\$851	
FIRE	\$39,132	1.7%	\$669	2.4%	\$921	
Professional Services, Information, and Administration	\$48,508	1.2%	\$583	1.6%	\$790	
Education and Health Care	\$19,455	0.7%	\$135	1.3%	\$243	
Entertainment and Tourism	\$10,356	2.6%	\$270	6.6%	\$679	
Total	\$206,338		\$3,009		\$6,504	

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# Reliability Planning & Engineering Value & Benefit (Cont.)

#### OC Hydraulic Model

- Hydraulic model of the OC water distribution system.
- Multiple OC agencies work with MWDOC and its On-Call Technical Consultants to use the model to assist in planning efforts for the integration of local water projects into the OC distribution system.



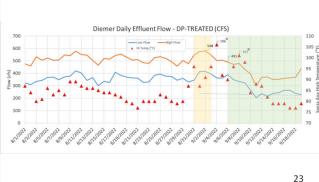
# Reliability Planning & Engineering Value & Benefit (Cont.)



#### Upper Feeder Emergency Shutdown Coordination

Ocordinated and quantified reductions in OC Agencies' imported water demands for the Sept 6-20, 2022, Upper Feeder emergency shutdown. MWDOC then worked with MET to provide a basis for Orange County's removal from MET's mandatory water reduction areas.





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# MET Representation & Advocacy



MET Representation & Advocacy is to represent the service area and advocate for the needs and wants of the water agencies & public in Orange County at Metropolitan.

#### Key services include:

- Support the MWDOC-MET Delegation in promoting Orange County objectives;
- District's liaison for Metropolitan information, programs and water policy issues, such as Bay-Delta & Colorado River Activities;
- Support and advocate on behalf of our member agencies for issues such as Local Resources Program (LRP) applications and certifications, and Metropolitan water use program such as replenishment deliveries (e.g., Cyclic and In-lieu programs) and MWDOC's Water Supply Allocation Plan for times of droughts;
- Development of countywide water supply and demand projections;
- Development of Water Reliability Studies and Reports (e.g., Urban Water Management Plan & Water Shortage Contingency Plans);



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# MET Representation & Advocacy Value & Benefit



- Provide County-level Demand Planning and Forecasting
  - Coordinate w/MET, OCWD & retail agencies on near & long term Countywide Demand projections
- Local Resources Program (LRP) Applications, Certification, and Reconciliation
  - Ensure MWDOC Agencies receive MET LRP funds for the development of local Projects
  - MWDOC has received the most LRP funds in the MET Service area
- Water Reliability Program Development and Coordination
  - For Cost Saving purpose and coordination MWDOC facilitates a Share Service Contract to assist in the development of Urban Water Management Plan (UWMP) and Water Shortage Contingency "Stress Tests"
- Advocacy for programs and policies that addresses County's needs
  - To enhance reliability, MWDOC urged MET to increase its emergency storage level to additional 100,000 AF to 750,000 AF
  - Encouraged MET to revised its Administrative Code to allow the delivery of Local Water into the MET system during emergency conditions to improve System Resiliency
  - Continue to promote the benefits of DCP and additional storage to enhance Reliability

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# MET Representation & Advocacy Value & Benefit (Cont.)



- Provide Water Supply Conditions Updates
  - Inform the Water Community on our current supply condition & forecast conditions
- Inform the Member Agencies and public of Regional programs, actions, and activities
  - Educate & inform the OC water community is well informed of all key MET, SWP and Colorado River activities that impact OC
- Advocacy & Facilitated on Imported water programs
  - In coordination with OCWD, MWDOC advocate for Cyclic Storage Program which expands the Pre-delivery of imported water in the OC Basin during high wet years
  - In-Lieu (Cost Offset Program) program to increase replenishment deliveries
- Monthly Meter Reads and Billing Assistance
  - Baker Treatment Plant billing to create a more efficiency method of billing

# Water Use Efficiency Implementation & Advocacy

To advocate for sound and achievable WUE policies and provide member agencies and local consumers access to WUE programs to improve efficiency.

**Key services include:** 

- Assist member agencies to comply with WUE Mandates
- **Technology Transfer and Research**
- Legislation & Regulatory Process Leadership
- Shape Metropolitan WUE Policies and Programs
- Access Local, State and Federal Grant Funding



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### Water Use Efficiency & Advocacy Value & Benefit



- Maximize MWDOC expertise and act as an extension of retail agency staff
- Access local, state and federal grant funding to offset local funding needs
- Research and Evaluate New Water Saving Opportunities



- Keep Agencies Informed as Standards Evolve
- O Dedicated Irrigation Meter Area Measurements; initiated FY 20-21
- CII Customer Classifications & BMP Implementation Plans; proposed FY 23-24











Standards

nercial, Industrial and Institutional (CII)

**Variances** 

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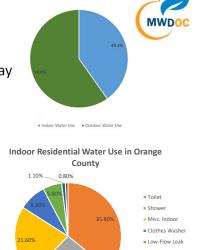
# Water Use Efficiency & Advocacy Value & Benefit (Cont.)

#### With Local Knowledge and Data:

- Shape the development of Conservation as a California Way of Life Standards (SB 606 & AB 1668)
- Advocate for new WUE Policy that benefits Member Agencies
- Ocomplete the Potential & Opportunities Study to Guide Future Program Implementation

#### Push the Evolution of Metropolitan WUE Programs

- New Program Offerings such as Spray-to-Drip Conversions
- Advocate for Stable WUE Funding Mechanisms from Metropolitan as they Move away from the Stewardship Charge and to a new Business Model



Residential Water Use In Orange County

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# Water Emergency Response & Preparedness (WEROC)





#### **Key Services of WEROC:**

- MWDOC provides the administrative umbrella for the Water Emergency Response Organization of Orange County (WEROC).
- WEROC staff works with its 36 Signatories on emergency plans and standard operating procedure development and review; state and federal required trainings for grant eligibility and disaster readiness; disaster exercise development; grant identification and application; and response and recovery coordination
- Operates through its own funding Structure
- WEROC continues to be a strong leader for regional water and wastewater emergency coordination and response

#### **WEROC**

## Value & Benefits





- COVID-19 Response
  - Inform OC agencies of the multiple emergency laws & regulations, along with protocol & testing
- Provide a number of ICS & G Series Courses, AREP Training & Tabletop Exercises
  - Result in a tremendous level of cost-savings. In fact, the Regional Logistics Exercise (\$225,000 savings)
- Update of the Orange County Regional Water and Wastewater Hazard Mitigation Plan
  - Through a Choice Contract, MWDOC provided joint Coordination, Support, & Costs Savings
- Planning Efforts on the Emergency Drinking Water Distribution Plan
- Cyber Communications & Working Group (OCIAC Partnership)
  - Development and implementation of a Regional Cyber Security Coordination Annex as part the WEROC FOP
- Development of a GIS dashboard
  - Allows for visibility of information in a none-linear form using open source information and current inhouse mapping information and Damage Assessment
- Development of the Regional Water and Wastewater Fuel Plan Project

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## Local, State & Federal Advocacy

#### Federal advocacy in the Key Areas:

- Salinity Control on the Colorado River
- O Current EIS & 2026 Guidelines updates
- Fundings and/or financing for infrastructure & Reliability projects
- Tax parity for Water Rebates

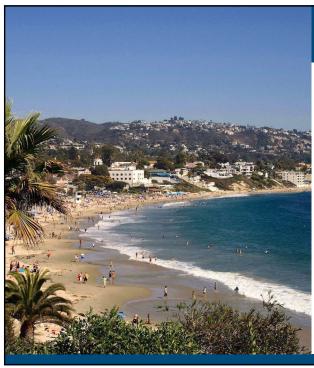
#### State Advocacy in the Key Areas

- Delta Conveyance Project (Legislative & Regulatory)
- Legislation impacting Water Policy, Regulations, & Rates
- Conservation Legislation & Regulations (i.e. WUE Standards & Nonfunctional Turf)

#### Outreach & Education Efforts

- Newly, Existing elected officials
- Members and staff of key policy committees
- Board of Supervisors
- MWDOC Member Agencies & 3 OC MET Cities Coordination





### **Grants Tracking and Acquisition**

- 24 Participating Member Agencies
  - 155 Projects Currently Tracking for Grants
- 2,500 Inquiries
- 180 Funding Programs Currently Matched with Orange County Projects
- 75 Go/No-Go Evaluations
- 37 Funding Meetings/Update Calls
- \$52M in Grant Awards (18 grants written by Soto Resources)
- ♦ \$10M in Grants Funding Currently Pending
- \$110M in Loan Funding Selected



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## Local, State & Federal Advocacy Special Projects

























## **Education Initiatives**

#### **MWDOC Water Education Programs**



- FREE In-Class K-12 School Programs since 1973
  - OC Climate, Water Supply, Conservation, and more!
  - Aligned With State Standards
  - Pre- and Post Activities To Support Educators
- FREE Grab-and-Go Water Activities
  - · Water Filtration, Go-Bag Challenge, and more!
- 2023 Water Awareness Poster Contest for 30+ years
  - Family-Centric Awards Ceremony with Learning Stations
- Scouts
  - More requests for clinics from MAs than ever before (20)!

#### Water Energy Education Alliance (WEEA)

- 70+ Organizations Statewide
  - Statewide Water/Wastewater Workforce Report
- FREE Career Brochures in nine (9) languages!

#### 2022/23 WEEA Sponsors:











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## **Engaging Industry and Business**

#### Symposiums and Hosted Meetings

- Water Policy Forum & Dinner + OC Water Summit
  - 200-400+ Attendees
  - Topical Presentations Featuring Well-Respected Speakers
- WEEA Leadership Roundtable Quarterly Meetings
  - Noteworthy Presentations and Regional Breakouts
  - Closing Gaps Between Education and Industry
- **Communications Workgroups** 
  - MWDOC Public Affairs Workgroup (PAW)
  - California Association of Public Information Officials
  - Department of Water Resources and Metropolitan

#### **Publications**

- MWDOC eCurrents Newsletter
  - Average Open Rate: 55.5% or 5,560 Opens
    - Industry Average: 28%
- News Releases Picked Up Nationwide
- **Industry Newsletters and Magazines** 
  - ACWA | CSDA | Landscape Architect Magazine
- OC Register





## Galvanizing the Public

**Community Events and Inspection Trips** 

Approximately 26 events/trips each year

**Campaigns & Partnerships** 

- Industrywide Campaigns

  - National Mayors Challenge For Water Conservation
    Smart Irrigation Month (WaterSense EPA Grant Funding)
  - Imagine A Day Without Water, and More!
- Regional Drought Campaign
- OC Master Gardeners OC is Water (and Garden) Smart

Campaign Spotlight: Streams of Hope

- Longstanding Partnership with Famed Artist Wyland
- 25 Statuettes Completed and Placed in Orange County
  - 26 Artists | 11 OC Water Providers | 25 Classrooms
  - JW Airport | 2 Public Parks | HB Pier | Library | OCDE HQ
- Extensive Media Coverage (Mentions)
  - 12 Television | 26 Radio | 63 Online and Print
  - Reaching 450M people
  - Estimated publicity value \$3.3M



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**Board Discussion**