MEETING OF THE
BOARD OF DIRECTORS OF THE
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
Jointly with the
PLANNING & OPERATIONS COMMITTEE
May 5, 2014, 8:30 a.m.
MWDOC Conference Room 101

P&O Committee:
Director Osborne, Chair
Director Barbre
Director Hinman

Staff: R. Hunter, K. Seckel, R. Bell, J. Berg, H. De La Torre, K. Davanaugh

Ex Officio Member: L. Dick

MWDOC Committee meetings are noticed and held as joint meetings of the Committee and the entire Board of Directors and all members of the Board of Directors may attend and participate in the discussion. Each Committee has designated Committee members, and other members of the Board are designated alternate committee members. If less than a quorum of the full Board is in attendance, the Board meeting will be adjourned for lack of a quorum and the meeting will proceed as a meeting of the Committee with those Committee members and alternate members in attendance acting as the Committee.

PUBLIC COMMENTS - Public comments on agenda items and items under the jurisdiction of the Committee should be made at this time.

ITEMS RECEIVED TOO LATE TO BE AGENDIZED - Determine there is a need to take immediate action on item(s) and that the need for action came to the attention of the District subsequent to the posting of the Agenda. (Requires a unanimous vote of the Committee)

ITEMS DISTRIBUTED TO THE BOARD LESS THAN 72 HOURS PRIOR TO MEETING -- Pursuant to Government Code section 54957.5, non-exempt public records that relate to open session agenda items and are distributed to a majority of the Board less than seventy-two (72) hours prior to the meeting will be available for public inspection in the lobby of the District's business office located at 18700 Ward Street, Fountain Valley, California 92708, during regular business hours. When practical, these public records will also be made available on the District's Internet Web site, accessible at http://www.mwdoc.com.

ACTION ITEMS

1. MWDOC COMMENT LETTER ON PUBLIC REVIEW BAY-DELTA CONSERVATION PLAN (BDCP) AND DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT

DISCUSSION ITEM

2. PRESENTATION ON WEROC ACTIVITIES (Approximate Presentation Time: 15 minutes)

INFORMATION ITEMS (The following items are for informational purposes only – background information is included in the packet. Discussion is not necessary unless a Director requests.)

3. OVERVIEW OF OCWD PURCHASES OF MET WATER AND IMPACT ON TIER 1 LIMIT IN 2014

4. ORANGE COUNTY WATER DISTRICT LONG TERM FACILITIES PLANNING

5. STATUS REPORTS
   a. Ongoing MWDOC Reliability and Engineering/Planning Projects
   b. WEROC
   a. Water Use Efficiency Projects
   b. Water Use Efficiency Programs Savings and Implementation Report

6. REVIEW OF ISSUES RELATED TO CONSTRUCTION PROGRAMS, FACILITY AND EQUIPMENT MAINTENANCE, WATER STORAGE, WATER QUALITY, CONJUNCTIVE USE PROGRAMS, EDUCATION, DISTRICT FACILITIES, and MEMBER-AGENCY RELATIONS

ADJOURNMENT

NOTE: At the discretion of the Committee, all items appearing on this agenda, whether or not expressly listed for action, may be deliberated, and may be subject to action by the Committee. On those items designated for Board action, the Committee reviews the items and makes a recommendation for final action to the full Board of Directors; final action will be taken by the Board of Directors. Agendas for Committee and Board meetings may be obtained from the District Secretary. Members of the public are advised that the Board consideration process includes consideration of each agenda item by one or more Committees indicated on the Board Action Sheet. Attendance at Committee meetings and the Board meeting considering an item consequently is advised.

Accommodations for the Disabled. Any person may make a request for a disability-related modification or accommodation needed for that person to be able to participate in the public meeting by telephoning Maribeth Goldsby, District Secretary, at (714) 963-3058, or writing to Municipal Water District of Orange County at P.O. Box 20895, Fountain Valley, CA 92728. Requests must specify the nature of the disability and the type of accommodation requested. A telephone number or other contact information should be included so that District staff may discuss appropriate arrangements. Persons requesting a disability-related accommodation should make the request with adequate time before the meeting for the District to provide the requested accommodation.

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Item No. 1

ACTION ITEM
May 21, 2014

TO: **Board of Directors**

FROM: **Planning & Operations Committee**
(Directors Osborne, Barbre, Hinman)

Robert Hunter, General Manager

Staff Contact: Karl Seckel/Richard Bell

SUBJECT: **MWDOC Comment Letter on Public Review Bay-Delta Conservation Plan (BDCP) and Draft Environmental Impact Report/Environmental Impact Statement**

STAFF RECOMMENDATION

Staff recommends the Board of Directors authorize the President of the Board to send a letter on behalf of MWDOC, substantially in the form presented, to the National Marine Fisheries Service regarding Public Review of the Bay-Delta Conservation Plan (BDCP) and Draft Environmental Impact Report/Environmental Impact Statement.

[It should be noted that the current public comment period is open through June 13 and that the Implementing Agreement, whose purpose is to establish the obligations of the parties toward implementation of the plan, has not been advanced for public review. It is possible that the public review period may be extended.]

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

Budgeted (Y/N):	Budgeted amount:	Core __	Choice __
Action item amount:	Line item:		
Fiscal Impact (explain if unbudgeted):			

SUMMARY

Staff has worked with a group of volunteers on preparation of the attached comment letter on the BDCP. The letter has a short synopsis at the beginning and then includes a variety of comments on the process. The letter was drafted in a manner to require a response to the comments noted, hence the length. The due date for comments is June 13, however, the Implementing Agreement, which is an important document, has not yet been released. Our understanding is that the Implementing Agreement is supposed to receive a 60-day review as part of the BDCP process.

Key aspects of the comment letter have to do with:

- This may be the best opportunity for a comprehensive solution for the statewide water issues and therefore, the letter supports the BDCP Preferred Alternative No. 4.
- The documents and issues are incredibly complex and lengthy and truly beyond any one human being to comprehend. We have done our best to boil down our comments to what we believe are the key ones. In such a complex process with much having to do with NEW science and understanding of the implications changes in one area will have in other areas, there will ALWAYS be a significant amount of on-going debate. Even though these documents have been in preparation for years, there is still much debate over the science of habitat and species dynamics.
- Equal standing of the coequal goals – the coequal goals of enhancing the Delta Eco-system and achieving water supply reliability must be achieved on independent paths, meaning that one cannot be sacrificed for the other and the policy and decision-making must be consistent.
- Assurances regarding supply reliability, changed conditions & decision-making – this is central to all of the comments, assurances that what is planned to happen will happen. A lot of the details of the future operations are speculative at this time. The letter advocates for having the water Permittees at the decision-making table; it should be noted that the future governance and decision-making process involves many entities, processes, meetings, solicitations, scientific input, etc. and hence having a solid foothold by our representatives, MET and the State Water Contractors, is imperative. An important aspect of assurances means:
    - It is virtually impossible to predict the outcome of the BDCP habitat restoration efforts and endangered species population dynamics, and such a standard should not be required in the DEIR/DEIS.
    - Furthermore, this means that changed circumstances under the operation of the BDCP, including the potential for new species listing, be incorporated in such a manner to result in a minimum impact on future water supply exports.
- The comments discuss “self-reliance”. The letter has staked out the position that the 2009 Delta Legislation called for water agencies to reduce future reliance on the Delta, not to become 100 percent “self-reliant”. While efforts in these areas will continue, it is important to note that “reduced reliance” does not equate to and was never intended to require a move to 100 percent “self-reliance” and the notion of co-equal goals was never intended to result in a future with significant reduction in exports from levels achieved before the 2008 bio-opinions.

- Orange County and Southern California do not want to be "penalized" for having mandates to make additional investments in local resources without receiving credit for all that has already been done.
- From an operational scenario impacts to endangered species are controlled today by reducing exports. The BDCP Tunnel System will provide a physical means to minimize south Delta diversions and will result in greatly reduced reverse flows thereby, improving south Delta water quality and export water quality. The implementing agreement needs to recognize these benefits to allow export diversions to be restored.
- The BDCP Plan does NOT include storage. Our comment letter discusses the role storage would play with enhanced conveyance. There are concerns that if storage becomes a part of the plan, it would be a huge timing impact to re-do all of the documents and analyses to include it. Storage is being held over for a future decision.
- Decision-making regarding BDCP is a complex process. Staff has attached an excerpt from the documents on who gets to make what decisions. The Implementing Agreement will also cover the decision-making process.

Attached is the suggested comment letter on BDCP. The Board could take several actions:

1. Approve and send as presented.
2. Approve and do not send until such time as the Implementing Agreement has been issued and reviewed and/or the comment period is set to close.
3. Approve and circulate for additional comments. Steve Arakawa will be discussing BDCP at the June WACO meeting.

DRAFT ORANGE COUNTY BDCP COMMENT LETTER

Comments of (to be inserted by entity or organization) on the Draft Public Review Bay-Delta Conservation Plan (BDCP) and Draft Environmental Impact Report/Environmental Impact Statement

Comments can be provided via mail or email as follows:
MAIL TO:
BDCP Comments
Ryan Wulff, National Marine Fisheries Services
650 Capitol Mall, Suite 5-100
Sacramento, CA 95814

EMAIL TO:
BDCP.comments@noaa.gov

This version does not include a review of the "Implementing Agreement" as it has not yet been yet released.

SUMMARY OVERVIEW

The main points covered in this comment letter are:

1. MWDOC strongly supports the BDCP Preferred Alternative (No. 4) and opposes the No Action Alternative: It is critical to the state's economy and environment that both the State and federal government expeditiously follow through with the decision for adopting and implementing the BDCP.

2. Co-Equal Goals: The BDCP must be implemented in a manner consistent with the co-equal goals adopted by the State. Preferred Alternative (No. 4) is consistent with the Delta Reform Act of 2009's co-equal goals.

3. New Facilities and In-Delta Operational Flexibility: The modernization of the Delta conveyance system is essential in order for habitat restoration and conservation to have its intended effect; Preferred Alternative (No. 4), which incorporates the 9,000 cubic feet per second (cfs) three intake, twin tunnel conveyance system, provides the best balance between operational flexibility and modernizing the conveyance system for environmental benefit and water supply reliability.

4. Reduced Future Reliance: The 2009 Delta legislation called for water agencies to reduce future reliance on the Delta, not to become 100 percent "self-reliant". While efforts in these areas will continue, it is important to note that "reduced reliance" does not equate to and was never intended to require a move to 100 percent "self-reliance" and the notion of co-equal goals was never intended to result in a future with significant reduction in exports from levels achieved before the 2008 bio-opinions.

5. Plan Implementation and Regulatory Assurance: The BDCP must provide the needed implementation and regulatory structure and assurances to help achieve the co-equal goals.

    a. To us, this means that it is virtually impossible to predict the outcome of the BDCP habitat restoration efforts and endangered species population dynamics, and such a standard should not be required in the DEIR/DEIS.

    b. Furthermore, this means that changed circumstances under the operation of the BDCP, including the potential for new species listing, be incorporated in such a manner to result in a minimum impact on future water supply exports.

    c. At this time, the Implementing Agreement, whose purpose is to establish the obligations of the parties toward implementation of the plan, has not been advanced for public review. We would request that the agreement be circulated for public comment.

6. Cost Allocation: MWDOC supports the "beneficiary pays principle" in cost allocation for all responsible parties and beneficiaries.

7. Economy, Environment and Water Management: The State Water Project (SWP) is critically important to the Orange County economy, environment and water management. Implementation of the BDCP is critical to Orange County's future.

    a. Orange County has invested heavily to diversify our water portfolio but the SWP remains a critical source of low salinity water supply that is currently unacceptably jeopardized by the unsustainability of the current Bay-Delta system.

    b. Orange County relies on the SWP to support groundwater conjunctive use programs and water recycling programs - it is an essential part of our water reliability strategy that sustains our citizens and businesses.

    c. We support the 9,000 cfs twin tunnel Preferred Alternative (No. 4) provided reasonable assurances are included regarding governance and future decision-making in the process. We strongly advocate for a seat at the table for the water Permittees in the various oversight groups. The investment and decision-making must be structured to achieve a positive outcome for both the SWP and Permittees and the ecosystem restoration in a collaborative, partnership manner.

Detailed comments follow:

INTRODUCTION OF FULL COMMENTS

(DRAFTED FOR MWDOC – AGENCIES CAN INSERT THEIR OWN BACKGROUND IN THIS SECTION)

The Municipal Water District of Orange County (MWDOC) is pleased to submit comments on the Draft Bay Delta Conservation Plan (BDCP) and Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

Please note that our comments on the BDCP and Draft EIR/EIS interchangeably use the terminology "BDCP", "BDCP process", "the Bay-Delta Fix" and the "decision-making process" to reflect the entire suite of efforts and decisions in a comprehensive manner.

The Municipal Water District of Orange County (MWDOC) is a wholesale water supplier and resource-planning agency governed by a publicly elected seven-member Board of Directors. MWDOC is the third largest member agency of Metropolitan Water District of Southern California (MET). Its service area covers all of Orange County with the exception of the three original MET member cities of Anaheim, Fullerton, and Santa Ana. MWDOC and the "Three Cities" coordinate water management planning. MWDOC serves Orange County through 27 cities and water agencies and one investor owned utility, including the Orange County Water District who manages the Lower Santa Ana River Groundwater Basin.

MWDOC's mission is "to provide reliable, high-quality supplies [of water] from Metropolitan and other sources to meet the present and future needs [of Orange County] at an equitable and economical cost, and to promote water use efficiency for all of Orange County." This mission is implemented through coordinated water management and planning with appropriate investments in water use efficiency, water supply development, system reliability improvements and emergency preparedness. Our mission is supported by collaboration with our member agencies and through public outreach, water education, and legislative advocacy.

MWDOC strongly supports the BDCP Preferred Alternative (No. 4) and opposes the No Action Alternative: *It is critical to the state's economy and environment that both the State and federal Government expeditiously follow through with the decision for adopting and implementing the BDCP.*

MWDOC strongly supports the BDCP Preferred Alternative (No. 4) with the expectation that the State and federal government will move steadily forward with its adoption by issuing the Record of Decision and Notice of Determination by the end of this year, and by implementing the Preferred Alternative in accordance with the BDCP schedule.

We compliment the State and federal agencies and stakeholders in developing a thorough, comprehensive and balanced BDCP Preferred Alternative that will help achieve the co-equal goals of ecosystem restoration and water supply reliability. It is vital that the State of California and Federal Government follow through with this tremendous effort in collaborative planning as it is a once in a lifetime opportunity to resolve the long-standing Delta problems, and the cost of no action is too high. Our expectations are that the approximate $25 billion investment to implement and carry out the BDCP will result in greater certainty in California's water supply reliability, will make measurable improvements in water quality, and will restore significant environmental values in the Delta. The Preferred Alternative appropriately achieves the proper balance between the environmental needs of the Delta watershed with the water supply reliability needs of the entire State of California.

In spite of the world-class efforts of Orange County to provide greater water supply certainty for eight percent of California's population and the $200 billion economy they represent, Orange County remains dependent on imported water to meet approximately 45 percent of our average annual demand, with the SWP deliveries from the Delta meeting approximately half of those needs. The Delta ecosystem and water supply conveyance problems have long been recognized, and have remained in a continuing state of degradation, conflict, and stalemate. Many years and hundreds of millions of dollars have been spent on study efforts while the delta system continues to be used for water

conveyance in a manner for which it was not intended. The longer it takes to begin the resolution, the more expensive it will become. This stalemate has been punctuated by droughts, floods, economic losses, environmental degradation and litigation every decade since the construction of the SWP in the 1960's. We can no longer delay action in the Delta, and urge the State and federal government to quickly move forward with the Preferred Alternative. Failing to act and move forward is not an acceptable alternative.

MWDOC also supports the proposed governance and implementation structure for the BDCP, as the large-scale Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP) to be formed under federal and state Endangered Species Act (ESA). Using the HCP/NCCP governance structure proposal will ensure that all of the project's environmental and water supply reliability goals and objectives are realized.

The bottom line is that the BDCP Preferred Alternative (No. 4) offers the best solution to achieve greater supply certainty and the governance structure to provide necessary regulatory assurances. Moreover, it provides for a sustainable and balanced solution to achieve the State's policy of co-equal goals.

COMMENTS ON THE DRAFT BDCP AND DEIR/DEIS

Co-Equal Goals: *The BDCP must be implemented in a manner consistent with the State policy of co-equal goals. Preferred Alternative (No. 4) is consistent with the Delta Reform Act of 2009's co-equal goals.*

The BDCP and Preferred Alternative (No. 4) should be adopted and implemented because they comply with State law and the Sacramento-San Joaquin Delta Reform Act of 2009. The Delta Reform Act establishes one of the basic state goals for the Delta as seeking to:

> "Achieve the two coequal goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the

> Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place." Ref: California Public Resources Code Section 29702(a).

The BDCP and the Preferred Alternative balance the co-equal goals established by the Legislature in the Delta Reform Act by proposing to improve 145,000 acres of Delta habitat and permitting new conveyance facilities which will provide operational flexibility and will improve water supply reliability from the Delta.

While some critics of the BDCP have claimed that the plan unduly favors water supply interests and will permit State Water Contractors to export more water than is currently allowed, the BDCP and the Preferred Alternative do not provide a greater amount of water for export. The BDCP estimates that the average water supplies available for export will be 4.7 million acre-feet (MAF) to 5.6 MAF per year. This is the same average currently permitted for export through the Delta today.

The Delta Reform Act of 2009 established the State policy of co-equal goals to provide a more reliable water supply and to protect, restore and enhance the Delta ecosystem. Orange County's primary interests in the successful implementation of the BDCP are:

1. Restoration of SWP supply to pre-2008 capabilities before imposition of the 2008 Delta smelt and salmon/steelhead biological opinions,
2. Assurances that the BDCP will provide greater supply certainty into the future without further significant mandated reductions in exports due to endangered species issues without a fair and balanced procedure, and
3. Protection of the export supply from both catastrophic outages to the Delta levee system from earthquakes and floods and from long-term sea level rise.

While the project will not expand average annual exports, it will provide certainty in the water supply, protect export supplies from catastrophic

outages, and allow for a "big gulp, little sip" approach to beneficiaries. Construction of a new north Delta intake for the SWP and Central Valley Project (CVP), a significant investment for beneficiaries, would protect this critical supply from earthquake, flood and seawater intrusion risks. It also would restore a greater level of export supply certainty and reliability by providing operational flexibility that will minimize environmentally damaging south Delta diversions and reverse flows. The "big gulp, little sip" approach will allow for greater exports when excess river flows would normally discharge to the ocean and smaller, but consistent and predetermined export levels when Delta flows at normal or lower than normal levels. This approach makes sense and helps mitigate the impact of the 2008 opinions, but not at the expense of the environment.

New Facilities and In-Delta Operational Flexibility: ***The modernization of the Delta conveyance system is essential in order for habitat restoration and conservation to have its intended effect; Preferred Alternative (No. 4), which incorporates the 9,000 cfs three intake, twin tunnel conveyance system, provides the best balance between operational flexibility and modernizing the conveyance system for environmental benefit and water supply reliability.***

The 9,000 cfs three intake, twin tunnel conveyance system will add a new point of diversion in the north Delta area which will provide operational flexibility in how water is conveyed across the Delta. This will mitigate entrainment of fish under the current south Delta operations and will significantly curtail reverse flows. In addition, an improved conveyance system will allow the Delta to operate more naturally by minimizing conflicts between fish and water operations. This will better enable conveyance of high flows while minimizing fishery impacts. The project would substantially reduce the take of endangered species and would protect exports from earthquake, flood and sea level rise into the future. We strongly support this foundational conservation element of the BDCP, and believe that the Proposed

Alternative (No. 4) proposes the best option for modernization of the conveyance system.

Proposed Alternative (No. 4) provides the best option for operational flexibility, and will allow for the "big gulp, little sip" approach. Southern California has made significant investment in water storage and conveyance facilities, such as the Diamond Valley Reservoir, Inland Feeder and groundwater storage facilities, to allow conjunctive use storage during periods of high flows in the system. Implementation of the Preferred Alternative (No. 4) will enable a more efficient and protective location for diversion of high flows for downstream storage and subsequent dry period use than the current system can provide.

The three proposed screened intakes in the northern Delta and proposed twin tunnels, combined with the enlarged and improved SWP Clifton Court forebay intake in the southern Delta, will provide the necessary flexibility to greatly reduce conflicts between fish and water operations. Reliance solely on the existing system is not sustainable and would cause significant long-term harm to the fishery as well as adverse impacts on SWP deliveries, as has occurred since 2008. The screened intakes proposed by BDCP in the northern Delta will significantly mitigate reverse flows and south Delta diversion impacts. The Preferred Alternative (No. 4) will enable a more natural flow pattern through the Delta estuary.

The existing system is vulnerable to future sea level rise. Salinity intrusion, especially during extended dry periods, will worsen with sea level rise. With sea level rise, the ability of the existing system to meet the co-equal goals will be increasingly difficult. The Preferred Alternative (No. 4) system will help mitigate future salinity risks to water supply. In addition, the projected change in precipitation patterns to increasing rain and decreasing snow will limit the time availability windows for diversion and capture of available river flows. This change will require increased diversion rates and storage during periods when higher flows occur. This should be a recognized benefit of the BDCP and placed within its climate adaption strategy.

The Preferred Alternative (No. 4) should also provide facility protection from major flood events, up to a 200-year storm event. This will require

establishing protective elevations at the Clifton Court Forebay as well as providing similar levels of protection at the recommended new north Delta diversion facilities. 200-year storm protection should be included in the BDCP.

The 9,000 cfs three intake, twin tunnel conveyance system would also protect the critical SWP and CVP supplies if massive Delta island levee failures should occur in the future from a major earthquake. The body of independent scientific evidence of the seismic risks in the Delta is growing. The best available science and engineering analysis of the Delta levee system has found that a major earthquake in the region would likely cause massive soil liquefaction, and failure of numerous levees resulting in relatively rapid seawater intrusion into Delta waterways and saltwater flooding of many islands. Under this scenario, SWP and CVP deliveries would be interrupted and significantly curtailed for up to three years resulting in severe economic damage to the state. The best available temporary solution would be a patchwork levee "pathway" that could only deliver a fraction of traditional supplies in the best-case scenario.

Seismic preparedness is crucial for this vulnerable segment of the statewide water delivery system, especially in the intervening years prior to completion of the tunnel system. The new northern Delta intakes and twin tunnels will protect future SWP deliveries and the economy of the state– providing a valuable insurance policy to improve the reliability of the system from natural disasters. Delays in implementation of the BDCP should be avoided and the project implementation should be expedited. Approvals should not be unreasonably withheld.

Reduced Future Reliance: *The 2009 Delta Legislation called for water agencies to reduce future reliance on the Delta, not to become 100 percent "self-reliant". The 2009 water package called for both reduced reliance and construction of improvements in the Delta.*

As part of the 2009 Delta legislation, water agencies are required to reduce their future dependence on the Delta. Over the past several

years, agencies have worked to improve water use efficiency, develop alternative local supplies, and reduce their dependence on the Delta by changing the timing of water exports. These efforts are in compliance with California's policy "to reduce reliance on the Delta in meeting California's future water supply needs through a statewide strategy of investing in improved regional supplies, conservation, and water use efficiency." Ref: California Water Code Section 85021.

While efforts in these areas will continue, it is important to note that "reduced reliance" does not equate to and was never intended to require a move to 100 percent "self reliance." The 2009 Delta legislation did not intend or envision reduction or elimination in water exports from the Delta, but balanced the need for all of California to use its water resources wisely, and to reduce future pressures on the Delta ecosystem from future population and economic growth in the State.

We have grown concerned over references to "self-reliance" as this is markedly different than "reduced future reliance," which was the intent of the law. The concept of "self-reliance" is troubling as the notion of co-equal goals was never intended to result in a future with significant reduction in exports from levels achieved before the 2008 bio-opinions. We would question whether this line of reasoning seeks to establish the pretext for ever-declining yields out of the SWP and ever increasing unit costs, further stranding imported supply investments onto our ratepayers and fundamentally damaging our ability to continue to optimize our local resources (i.e. salt management in recycled water and groundwater basins).

It is our considered opinion that both improvement in supply that should be expected from the BDCP implementation and new local resource developments are necessary, as well as other longer-term federal/multi-state supply and conservation projects if we are to secure and improve our water and economic future for the benefit of a growing population.

The recently released California Water Action Plan promotes increasing self-reliance through several measures, including providing a more reliable water supply that protects export supplies from catastrophic outages from earthquakes, major floods and rising sea levels. The

California Water Action Plan focus highlights the importance of the BDCP to improve operational flexibility, protect water supplies and water quality, and restore the Delta ecosystem within a stable regulatory framework. It also goes on to state that as the Delta ecosystem improves in response to the implementation of the BDCP conservation measures, water operations would become more reliable, offering more secure water supplies. These are laudable goals of the BDCP, including restoration of export water supplies to levels that were realized before the 2008 biological opinions.

It is now time for the State and federal government to achieve the 2009 legislation's co-equal goals of improving water supply reliability and ecosystem function by implementing the BDCP.

Plan Implementation and Regulatory Assurance: *The BDCP must provide the needed implementation and regulatory structure and assurances to achieve the co-equal goals as established by the State. MWDOC submits the following comments related to plan implementation, governance and assurances.*

Regulatory Assurances

It is important to establish a more stable regulatory environment, which is one of the key goals of the BDCP. The BDCP offers a clear choice between a stable future and today's ineffective and adversarial species-by-species approach to regulation and ESA enforcement under Section 7 of the ESA. Under the BDCP, ESA regulations and provisions of the HCP/NCCP would provide for regulatory and economic assurances, and greater certainty for public water supply and fish and wildlife agencies. The core Adaptive Management and Monitoring program is encouraged and should help to realize achievement of the co-equal goals. It is virtually impossible to ascertain and predict with any precision the outcome of the BDCP habitat restoration efforts and endangered species population dynamics, and such a standard should not be required in the DEIR/DEIS.

The BDCP must provide regulatory assurances commensurate with the significant investment to be made in both improved habitat and

facilities. We generally concur with BDCP Chapter 6 Plan Implementation structure and process. It is important that under the operation of the BDCP the identified changed circumstances, including the potential for new species listing, be incorporated within the BDCP with minimum impact on future water supply exports.

Further, it is likely that unforeseen circumstances will be caused by factors other than water diversions. The plan recognizes this under Section 6.4.1 which states "… if unforeseen circumstances occur that adversely affect species covered by an HCP or NCCP, the fish and wildlife agencies will not require additional land, water or financial compensation or impose additional restrictions on the use of land, water or other natural resources." These provisions must be retained to assure fairness in the process.

Balancing and Proportionality

In the discussion of Alternatives 4, 7 and 8 in DEIR/EIS Chapter 31 (starting at line 42, pg 31-7 and ending at line 32 on pg 31-8), the rationale for the Preferred Alternative (No. 4) is provided in terms of its balancing and proportionality between upstream salmonids, in-Delta species, and export area economy and environmental needs. In addition, the incidental take limits (ITL) should be set in some proportion to the population size of the listed species and should be adjusted accordingly based on population dynamics.

This section further indicates that Preferred Alternative (No. 4) would be subject to the "scientific decision tree" mechanism to "…ensure minimization of adverse environmental effects to water exports in response to changing conditions and evolving scientific information." It is our understanding that the scientific decision tree analysis process would apply only to the Delta smelt (fall outflow issue from 2008 USFWS Biological Opinion "Reasonable and Prudent Alternative") and Longfin smelt (spring outflow operations effects) (CM1). We would hope that improved data collection of the presence and abundance of these fish be monitored over a reasonable habitat range rather than be limited to historical sampling points and procedures. We also recommend that flow changes must also be based on balancing and proportionality to the maximum extent practicable between upstream salmonids, in-Delta, and export area economy and environmental needs.

Sound Science

Sound science is critical to the success of the BDCP. We strongly support the inclusion of independent scientific investigation and research to be included in the BDCP process. The current process of reliance on agency staffs and consultants, the Delta Science Program, and independent science review panels, is very good, but it can further benefit from the inclusion of scientific investigations by researchers not part of these groups. We are also concerned that the models being used for the effects analyses may not fully consider all elements of the BDCP, as the models have recognized limitations and would likely underestimate the benefits of the BDCP. Outside expert opinions and independent research can only help the process and the process should be open to the inclusion of new scientific data and findings.

We note on page pg 31-8 the statement "Although Alternatives 7 and 8 do not include operations based on the (scientific) decision tree concept, these two alternatives would include greater levels of guaranteed spring and fall Delta outflows, which have demonstrated strong correlations with increased abundances of Delta and Longfin smelt." We disagree with this assertion and do not believe this has been supported at an accepted scientific level. This statement should be clarified for each species where it occurs in the BDCP and DEIR/EIS. Only necessary outflows for migrating fish should be required.

Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) Structure and Governance

Establishing an HCP/NCCP in the Delta is the best vehicle for achieving the Delta's co-equal goals, and providing assurances that both environmental protection and water supply reliability will be achieved.

It is important that the BDCP is being developed as a 50-year habitat conservation plan with the co-equal goals of restoring the Delta ecosystem and securing California water supplies. A habitat conservation plan is a proper vehicle for reaching these co-equal goals because it will bring the interested parties to the same table, and establish clear operating rules and conservation measures for the 50-year term proposed in the BDCP and its associated EIR/EIS. It is also important to note that the 50-year term proposed meets the objective

declared by the Legislature in Water Code Section 85020, which requires that the water and environmental resources of the Delta be managed over the long term.

There must be a strong voice for participating public water agencies in the BDCP process. There are good examples of multiple Permittee interests working collaboratively with resource agencies in southern California on Federal HCPs and State NCCP implementation. For example, the Metropolitan Water District of Southern California (MET) has Permittee status as part of a multi-state, multi-species HCP on the Colorado River because southern California's water supply reliability is tied to the success of the plan.

In Orange County, agencies have successfully implemented HCP/NCCPs incorporating assurances and representation for all participants. For example, in Orange County both the Santa Margarita Water District and Irvine Ranch Water District are participants in HCP/NCCP processes.

As one of the first communities in California to implement a HCP/NCCP, Orange County and the Central/Coastal HCP/NCCP demonstrated how the private and public sectors, including water agencies, can successfully partner with the resource agencies to allow for a holistic and broad-based ecosystem approach to habitat conservation and ecological protection while allowing for appropriate development and urban planning. The Central/Coastal HCP/NCCP in Orange County has demonstrated how substantial amounts of habitat can be conserved and restored based on an ecosystem approach, which better protects biological diversity and improves habitat for species of concern. Ultimately, the use of a similar HCP/NCCP, as proposed in the BDCP, will provide better ecosystem protection and restoration outcomes in the Delta.

Orange County's Central/Coastal HCP/NCCP is also a prime example of how HCP/NCCPs ensure that the habitat protection and other operating parameters agreed to in an HCP/NCCP are binding on all of the parties involved. Like the process proposed in the BDCP and the long-term 50-year permit discussed in its associated documents, the Central/Coastal HCP/NCCP is a long-term agreement with a permit in effect until 2071.

As the coordinating entity for the management of the 37,000-acre reserve system under the Central/Coastal HCP/NCCP, the Nature Reserve of Orange County serves the important role of working to implement the HCP/NCCP on behalf of its signatories. Its role is to ensure that the agreed upon natural communities and species are protected, and that the permit requirements for the reserve are met. After more than a decade, the Nature Reserve of Orange County has continued to bring all of the interested parties to the same table to ensure that the agreement reached in the HCP/NCCP is respected. We believe that the BDCP HCP/NCCP can do the same for the interests in the Delta.

Authorized Entity Group

Permittees, such as water providers, must have a strong voice in the governance of the BDCP because water providers have a huge vested interest in the success of the effort as they are directly affected by the risk to water supply by its failure. Permittees are currently envisioned as key members of the "Authorized Entity Group" which, according to the BDCP documents, "will provide input and guidance on general policy and program-related matters, monitor and assess the effectiveness of the Implementation Office in implementing the Plan and foster and maintain collaborative and constructive relationships with fish and wildlife agencies, other public agencies, stakeholders, local governments and interested parties." This is good and effective governance and these provisions must be retained in the final plan.

Permit Oversight Group

Our understanding is that the Permit Oversight Group, consisting of representatives of state and federal fish and wildlife agencies, will ensure "that the BDCP is being properly implemented." This group has "final decision-making about real-time operations." The Permit Oversight Group is apparently empowered to shut down the water exports and change the permits without Permittee recourse. We believe this is flawed and inconsistent with meeting the co-equal goals.

In early administrative draft versions of the plan that were available to the public, there was an appeals process that would enable decisions to be reviewed by the Secretary of the Interior and Secretary of Commerce. We believe this appeals step is critical, as Orange County and others

across the state substantially depend on the SWP for their water supply. This change from earlier drafts would impose an unacceptable veto power without adequate recourse. The appeals process must be provided as before. Our concern is best alleviated via a balanced process including the ability for appeals. The process must avoid the more rigid and case-by-case Section 7 consultation approach that we have experienced and the uncertainty it can create.

The investment is too great to be vulnerable to unilateral actions driven solely by regulators without allowing the functioning of the BDCP plan to achieve the co-equal goals. As currently written, this provision appears to undermine the BDCP, and it needs to be revised along the lines as described.

Implementing Agreement

The "Implementing Agreement" is necessary to provide a contractual, legally-binding agreement that spells out the commitments and assurances as well as the terms and conditions for on-going implementation of the BDCP. Given the high level of BDCP investment, the water community needs reasonable certainty regarding the expected amount of water supply to be restored that was lost as a result of the 2008 biological opinions.

It should be clearly recognized in the implementation structure and agreement decision-making process that the new, screened North Delta intake system will not only greatly improve salinity control and water supply reliability from catastrophic levee failure and future sea level rise, but will avoid entrainment losses of fish as well as minimizing impingement losses from current south Delta diversions. In addition, the new intake system will provide much needed operational flexibility that will enable significant protections to endangered species as well as maintaining environmental and water quality benefits to the south Delta that are provided by the SWP and CVP. These benefits will be made possible through the ability to curtail south Delta endangered species take by changing the timing and diversion rate by use of the new North Delta intake system.

Currently, endangered species take by the existing south Delta unscreened forebay diversion operations are controlled by reducing

exports. The BDCP will provide a physical means to minimize south Delta diversions. In addition, the added operational flexibility will result in greatly reduced reverse flows and related, improved south Delta water quality, and improved export water quality. The implementing agreement needs to recognize these benefits to allow export diversions to be restored.

At this time, the Implementing Agreement, whose purpose is to establish the obligations of the parties toward implementation of the plan, has not been advanced for public review. We would request that the Implementing Agreement be circulated for public comment.

Salinity Control

Before the construction of the CVP and SWP reservoirs, salinity intrusion far into the Delta was a common occurrence during very dry years. Since the construction of Shasta and Oroville Reservoirs and with the 1978 SWRCB D-1485 water quality control decision, the CVP and SWP have provided broad salinity control benefits to the Delta that have helped to protect in-Delta agriculture and domestic uses as well as export water quality, even as San Joaquin River flows were depleted by upstream diversion. We concur that salinity control is an important component of the BDCP. We also note that natural variability must be recognized within the BDCP and some relaxation of salinity control objectives must be allowed during severe droughts.

In addition, with future sea level rise, the BDCP needs to provide for a gradual relaxation of the X2 salinity control point, as releasing more and more stored water, which is made possible by both the CVP and SWP, will cause increasingly greater shortages in water supply at increasingly greater economic impact to the state. The estuary would be expected to shift upstream with sea level rise and this should be accounted for in the 50-year permit period. The BDCP must recognize that the existing Delta agricultural areas may require some form of land use conversion into the future.

Recognize Need for Additional Upstream Storage

While not part of the BDCP plan, additional storage north and south of the Delta will be critical concurrent with improvements in conveyance to enable the capture of high flows during wet periods for subsequent use. Additional storage will be especially important during periods of prolonged drought. Such facilities would be of statewide and national benefit, and both the State and federal government should financially contribute to their development. The BDCP should recognize the need for additional upstream and downstream surface storage to realize the full benefits of Preferred Alternative (No. 4). We support the development of future storage projects as stand-alone projects outside of the BDCP Plan to help with meeting the co-equal goals.

Scientific Decision Tree and Project Yield

The BDCP holds the potential to stabilize SWP and CVP annual deliveries to between a range of 4.7 to 5.6 MAF (Prior 20-year average deliveries were 5.2 MAF) and to stabilize them within this range over the 50-year permit period, but this depends upon the future outcome of "Scientific Decision Tree" studies that will refine future spring and fall outflows. The BDCP indicates that without the BDCP the Delta will continue in ecosystem decline, future deliveries would be reduced between 3.4 to 3.9 MAF as the result of new listings, higher requirements for outflows during wet and above-normal precipitation years would be required, and using fixed limits on take rather than proportionate take based on actual population size and dynamics would be likely.

The Decision Tree process is critical; water agencies require a seat at the table to represent the water supply and economic interests of the public that we, as public agencies, serve. Further, the water agencies have a high level of interest in ensuring that adaptability will result in regulatory agencies working collaboratively with the Permittees as provided for under the state and federal ESA laws for habitat and natural community conservation plans. It is important to ensure that the process is not skewed and has not established pre-determined outflows and compliance locations.

Plan Implementation and Regulatory Assurance: *The BDCP must provide the needed implementation and regulatory structure and assurances to help achieve the co-equal goals. MWDOC submits the following comments related to plan implementation, governance and assurances.*

The BDCP and the 9,000 cfs three intake, twin tunnel conveyance system would significantly improve export water quality by reducing total dissolved solids (TDS), bromide, dissolved organic carbon (DOC) and other contaminants that currently impact the south Delta. This is especially important for Orange County for a broad range of water management purposes. It is our understanding, that future SWP deliveries under the Preferred Alternative (No. 4) would realize a reduction in concentrations, on average, of approximately 20 percent from existing conditions. Reductions in TDS, bromide and DOC will help to sustain Orange County's groundwater basins, enhance recycling usage, and reduce treatment and consumer costs. Improving source water quality is an important value of the BDCP.

Reductions in DOC and bromide in SWP water will lower disinfection by-product formation in public water systems. Compliance with these U.S. Environmental Protection Agency and California Department of Public Health regulated compounds requires expensive water treatment to meet public health requirements. Reducing DOC levels will also reduce chemical and energy usage in ozone or chlorine based disinfection processes saving the ratepayer money and reducing environmental impact.

Further, given the high TDS and hardness levels in Colorado River water, lower TDS and softer SWP water is essential to help manage the long-term salt balance in southern California and Orange County groundwater basins, thereby, minimizing treatment costs, reducing penalty costs to consumers, and lowering the cost of recycled water projects. Lower TDS source water helps many of the elements of our Southern California reliability strategy, as well as achieving compliance with Regional Water Quality Control Board Basin Plan objectives and discharge limitations.

Water Quality Improvements and Regional Compliance with Section 85021

The Water Code directs that "Each region that depends on water from the Delta watershed shall improve its regional self-reliance for water through investment in water use efficiency, water recycling, advanced water technologies, local and regional water supply projects, and improved regional coordination of local and regional water supply efforts", reference California Water Code Section 85021. Orange County and Southern California have complied with the California Water Code by taking great strides to improve its regional self-reliance, but the BDCP and a reliable supply of imported water is still needed.

Many of the opponents of the proposed BDCP process state that development of local supplies, water reuse, conservation and water use efficiency can take the place of the supply and reliability projects proposed in the BDCP. The reality is that the solution to California's water problems requires action on all of these fronts in addition to the BDCP. While California should continue to develop local supplies, improve water reuse, and move towards greater water use efficiency and conservation, those efforts would be hampered without the BDCP Preferred Alternative (No. 4) and the water quality improvements which will be obtained as a result of those projects and changes in operations.

Expected water quality improvements in SWP supplies from the BDCP in reduced salinity, total organic carbon and bromide would result in water quality benefits and would promote water recycling and reuse. A reduction at the source means that these water quality challenges are less of a problem once the water is recycled, and would allow for better quality in the recycled water produced in Orange County and Southern California. A better quality recycled water will allow water to be used for a greater number of cycles.

Orange County's future depends on high quality, reliable and affordable imported water supplies. If we do not have the expected high quality and reliable supply from the SWP that would be made possible by the BDCP, it would seriously jeopardize groundwater basin management and expanded local recycling projects, many of which may not be

economically feasible without the high quality water received from the SWP. Moreover, a high quality SWP supply also supports long-term economic management and protection of groundwater basins from salinization and reduces overall consumer penalty costs from corrosion and scaling.

Cost Allocation: *MWDOC supports the "beneficiary pays principle" in cost allocation for all responsible parties and beneficiaries*

All beneficiaries and responsible parties of the BDCP must contribute to the solution, including any diverter of water from the system (north or south of the Delta). Moreover, in Delta interests have been significant contributors to the modification of habitat, continue to discharge pollutants into the waterways, have caused the subsidence of the Delta islands and need for ever higher and unstable levees that risk both habitat and exports, and have benefited from operations of the projects. Accordingly, these interests have a moral and financial responsibility to directly participate in any solutions as do other responsible parties. Where habitat is to be created by modifying or restoring Delta islands to a more natural state, the in-Delta interests should work collaboratively to facilitate such actions.

Further, any recipient of water should pay the cost of water conveyance improvements in line with the proportion of overall water supplies they receive. Economic values associated with end uses of the water should have no bearing on the cost allocation of the BDCP; it is solely a matter of paying one's share of the cost of development of the water supply.

Furthermore, all Californians will benefit from a solution in the Delta through the improved habitat and reliable water supply that will be created; a stronger overall economy benefits everyone. Consequently, the State and federal government should step up to fund the costs of environmental and habitat improvements as well as providing funding support for flood control, levee improvements, fisheries, invasive species control and other programs within their jurisdictions.

Economy, Environment and Water Management: *The State Water Project is critically important to the Orange County economy, environment and water management.*

Economic Impacts

The BDCP and DEIR/DEIS "No Project Alternative" analysis should include an evaluation of the economic impact of not strengthening California's water supply and the impact that "no action" has on the state's economic hubs as part of its overall evaluation. The BDCP evaluates the economic impact of the project's potential for growth inducement; however, it does not adequately take into account the economic impact of failing to secure water reliability for the state's economic centers. MWDOC urges inclusion of these impacts.

The economy of California is largely driven by economic activity in the San Francisco Bay Area and Southern California. To put the economic contributions of these areas in perspective it is important to note that Los Angeles and Orange counties contribute roughly $766 billion to California's gross state product (GSP). The Bay Area contributes $534 billion, and San Diego County contributes $177 billion. These three areas alone comprise nearly 75% of the state's $2 trillion GSP.

Orange County has a population of 3.1 million people, approximately eight percent of California's entire population, and an economy with a gross domestic product of about $200 billion or 10 percent of the state's overall economy of $2 trillion. Orange County's share of California's non-farm businesses was about 10 percent in 2011, and in 2007 Orange County accounted for $49 billion (10 percent) of California's manufacturer's shipments and $98 billion (16 percent) of California's merchant wholesaler sales. In addition, Orange County is a major regional employment, higher education and tourism center.

Orange County is an economic powerhouse for the state; the lifeblood of any economy is a reliable and secure water supply. MWDOC's 2010 Urban Water Management Plan indicates water demand for municipal and industrial use is expected to increase from approximately 485,000 acre-feet per year (AFY) to nearly 568,000 AFY by 2035. For all of Orange County, the total demand of 627,000 AFY is expected to increase to 726,000 AFY by 2035. Regional and local innovative programs and

investments in water use efficiency have saved an estimated 75,000 AFY to date in the county.

The San Francisco Bay Area and Southern California depend heavily on the Bay-Delta with nearly one third of their water supplies coming from Delta exports, and the economic vitality of these areas is dependent upon a secure and reliable water supply. The bottom line is that a dependable water supply is essential to business operations and expansion that will continue to strengthen our state's economy and increase employment. The BDCP should take into account the economic cost of not providing a secure and dependable water supply in its economic impacts analysis. Given the importance of Southern California and the Bay Area to California's economy, the cost of no BDCP, without the Preferred Alternative (No. 4), would be extremely large and would greatly exceed any economic benefits of other alternatives that were considered.

It is also noteworthy that the Delta is a key water supply for 25 million California residents, largely located in the economic centers discussed above. The risk of a large earthquake in Northern California causing severe damage to the Delta grows greater with each day a comprehensive Delta solution is not implemented. If the State and federal government do not move forward on the BDCP, we are risking great environmental damage, a loss of substantial water supply to more than two-thirds of California's residents and businesses, and associated economic losses into the future.

We also risk severe and possibly permanent damage to our State's agricultural economy. The water from the Delta supports more than 5 million acres of California agriculture. These 5 million acres represents more than 80 percent of the United States' food production and more than 500,000 jobs. Loss of water as a result of failure in the Delta will mean California's agriculture will lose an essential water supply.

That loss of water will result in millions of acres of unproductive land and a loss of jobs in communities which have already suffered great losses as a result of our most recent economic downturn and during the current severe drought. Without implementing the comprehensive

environmental and conveyance solution proposed by the BDCP, we risk permanent damage to California's $44.7 billion agriculture industry.

The development of a secure and reliable water supply for the citizens of California is important to the economic vitality of our state. The BDCP will provide stability in California's water infrastructure by providing a process that can result in a more dependable, high quality SWP water supply.

Orange County Environment and Water Management

The recent droughts of 1977-78, 1987-92, 1999-00, 2007-08 and the current drought demonstrate the precarious nature of the federal, state, regional and local water supply systems serving California. Throughout the state, the current acute drought, natural climate variability and climate change, agricultural cutbacks due to lack of water and continuing groundwater overdraft, increasing population and need for an ever growing economy, have brought to the light that water supply solutions and challenges are looming larger and more complex. This has led many to an increasing recognition that we have entered an era of uncertainty and potential era of water scarcity if we do not plan for the future.

Recent droughts and a greater understanding of climate change impacts have demonstrated that supply uncertainty and variability pose great risks to our economy and the natural environment. We remain confident that we have the combined ability to help solve these long-term problems. One key part of this solution is to fix the "broken Delta" through the program developed and recommended in the BDCP.

MWDOC and its member agencies have made significant investments in local resources and water management. Orange County water agencies are recognized leaders in water use efficiency, storm water conservation, groundwater basin management, wastewater management, water recycling and reuse, and advanced water treatment technologies. In north Orange County, the Orange County Water District is recognized as a world leader in indirect water recycling through their award winning Groundwater Replenishment System, a project that now recycles 72,000 AFY, is under construction to be expanded to recycle 100,000 AFY with plans to recycle up to 130,000 AFY in the near future.

These programs with imported water enable OCWD groundwater producers to meet about 70% of their water supply needs from the groundwater production. Conjunctive use of the basin with imported water and its utilization remains dependent on the availability of high quality imported water that can be replenished during wet periods.

Through innovative, multi-agency approaches, MWDOC and its agencies develop, implement, and evaluate water use efficiency programs that provide multiple benefits, including improved irrigation efficiency, increased utilization of California Friendly landscapes, and pollution prevention through programs that help to reduce dry weather urban runoff. Our programs include educational classes on water-wise landscaping, irrigation performance reporting, water use surveys for hotels and industrial customers, and consumer incentives for water-efficient devices. To evaluate the effectiveness of such devices, MWDOC conducts studies to monitor water savings and urban runoff reduction.

Through these efforts, Orange County's water use today is less than it was in 1990 even with population growth of 683,000 and jobs growth of 204,000 respectively. Overall, MWDOC has documented conservation of about 75,000 AF per year (active and passive). Despite these efforts, Orange County is still reliant on purchases of imported water from MET to meet about 45 percent of our current needs. About one-half this need is met from the SWP.

South Orange County is much more reliant on imported water, having few local resources other than water recycling and a few small groundwater basins that are nearly fully developed. Regional recycling planning is underway to evaluate how best to maximize the use of recycled water in South Orange County. In addition, studies are underway for evaluating the feasibility of augmenting the groundwater supply from the San Juan Creek alluvial basin through replenishment with recycled water. The southern portion of Orange County despite its best efforts remains heavily dependent upon the Delta.

A number of retail agencies in south Orange County are recognized leaders in water use efficiency and conservation based rate structures, water recycling, and water reliability projects. For example, Irvine Ranch Water District, Moulton Niguel Water District, El Toro Water

District, Santa Margarita Water District, Trabuco Canyon Water District and the cities of San Juan Capistrano and San Clemente are recognized leaders in water recycling and management through the use of dual distribution systems and community planning.

Orange County ratepayers have invested heavily in local resources in past years both directly and through MET. These investments through MET water supply purchases helped fund the $2 billion Diamond Valley Reservoir and $1 billion Inland Feeder that allow SWP deliveries during wet periods to be delivered into storage Southern California reservoirs. In addition, at least $1 billion in local recycling and groundwater recovery projects have been made, including water use efficiency and conjunctive use since 1991. Combined, these investments provide the ability to efficiently use existing supplies, develop additional local supplies, and to store water in wet years for subsequent dry year use.

Orange County is also exploring ocean desalination, another potential local supply. It is also a key feature of planning in Orange County with the innovative subsurface intake system being examined for the planned 15 million gallon per day Doheny Ocean Desalination Project in Dana Point and permitting of the 50 million gallon per day Poseidon Resources desalination plant in Huntington Beach.

Despite all of these efforts and investments, Orange County will continue to be dependent upon imported water. Completion and successful implementation of the BDCP is paramount to achieving the reliability that supports water management in Southern California. These local investments have helped meet the water needs of a growing productive population and reduced the otherwise growing pressure on water imports - our agencies should not be "penalized" by additional mandated investments that do not recognize and account for investments that have already been made.

Summary: *Implementation of the BDCP is critical to Orange County's future*

- Orange County has invested heavily to diversify our water portfolio but the SWP is a critical source of low salinity water

supply that is currently unacceptably jeopardized by the unsustainability of the current Bay-Delta system.

- Orange County relies on the SWP to support groundwater conjunctive use programs and water recycling programs - it is an essential part of our water reliability strategy that sustains our citizens and businesses.

- It is time to adopt and move the BDCP to implementation in order that we can achieve the co-equal goals of a reliable water supply for California and ecosystem restoration for the Delta.

- The 9,000 cfs twin tunnel BDCP Preferred Alternative (No. 4) will improve export water supply operations, reliability and water quality from the Delta in a manner that is protective of endangered species in the Delta.

- We support the 9,000 cfs twin tunnel Preferred Alternative (No. 4) provided reasonable assurances are included regarding governance and future decision-making in the process. We strongly advocate for a seat at the table for the water Permittees in the various oversight groups. The investment and decision-making must be structured to achieve a positive outcome for both the SWP and Permittees and the ecosystem restoration in a collaborative, partnership manner.

Thank you for your time and consideration of these comments.

Sincerely,

(Letter Signatory)

Chapter 7
Implementation Structure

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Acronyms

BDCP, the Plan	Bay-Delta Conservation Plan
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CVP	Central Valley Project
Delta Conservancy	Sacramento-San Joaquin Delta Conservancy
DWR	California Department of Water Resources
EIR	environmental impact report
EIS	environmental impact statement
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
Fish & Game Code	California Fish and Game Code
HCP	habitat conservation plan
IEP	Interagency Ecological Program
NCCP	natural community conservation plan
NCCPA	California Natural Community Conservation Planning Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
Reclamation	Bureau of Reclamation
ROA	restoration opportunity area
SFCWA	State and Federal Contractors Water Agency
State Water Board	State Water Resources Control Board
SWP	State Water Project
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Service

Chapter 7
Implementation Structure

This chapter describes the institutional structure and organizational arrangements that will be established to govern and implement the Bay Delta Conservation Plan (BDCP or the Plan), and sets out the roles, functions, authorities, and responsibilities of the various entities that will participate in Plan implementation. The implementation structure is designed to ensure that sufficient institutional expertise, capacity, resources, and focus are brought to bear to accomplish the goals and objectives of the BDCP, that the entities receiving regulatory authorizations are accountable to those agencies granting the regulatory authorizations, and that the decision-making process regarding the implementation of the Plan is transparent and understandable to the public.

The BDCP implementation structure will help ensure effective and efficient Plan implementation and ongoing compliance with the provisions of the Plan and its associated regulatory authorizations. This approach will also facilitate the clear delineation of roles and responsibilities among the public and private entities participating in the process and help define the nature of their engagement. This approach reflects the commitment to maintain and encourage ongoing collaboration among the parties with an interest in the Delta, and to facilitate adaptive and responsive Plan implementation, guided by new information and scientific understanding.

The approaches to Plan governance set out in this chapter have been designed solely to facilitate the implementation of BDCP actions. If, over the course of Plan implementation, matters arise that are outside the scope of the BDCP, any proposed actions related to those new matters may be implemented through the BDCP only upon appropriate modifications and/or amendments to the Plan.

The California Department of Water Resources (DWR), Bureau of Reclamation (Reclamation), and those state and federal water contractors who receive take authorizations for activities covered under the BDCP, will have ultimate responsibility for compliance with the provisions of the BDCP and the associated regulatory authorizations. The implementation of the BDCP, however, will be organized around a newly created BDCP Implementation Office, which will be managed by a Program Manager and governed by the Authorized Entities through the Authorized Entity Group. The U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and California Department of Fish and Wildlife (CDFW) (collectively referred to as the state and federal fish and wildlife agencies) will maintain an ongoing role in Plan implementation, including participation in the Permit Oversight Group, to ensure that such implementation proceeds in a manner consistent with the BDCP and its associated regulatory authorizations. Through the Permit Oversight Group, the state and federal fish and wildlife agencies will be involved in certain specified implementation decisions and will lend technical and scientific expertise to the implementation process. The Authorized Entities will work in a collaborative manner with the fish and wildlife agencies to implement the BDCP. In addition, a Stakeholder Council will be created and regularly convened to enable public agencies, nongovernment organizations, interested parties, and the general public to provide ongoing input into the BDCP implementation process.

The Implementation Office will also coordinate with the Delta Stewardship Council, Delta Science Program, Sacramento-San Joaquin Delta Conservancy (Delta Conservancy), and Delta Protection Commission to ensure appropriate engagement and collaboration on matters of common interest.

This approach to Plan implementation is expected to ensure the timely, efficient, and proper implementation of the commitments contained in the BDCP.

7.1 Roles and Responsibilities of Entities Involved in BDCP Implementation

The parties that will be engaged in the implementation of the BDCP recognize that substantial coordination and cooperation between the Permit Oversight Group, the Authorized Entity Group, the Implementation Office, and various stakeholders will be necessary to ensure the overall success of the Plan. As such, these parties will, on an ongoing basis, collaborate on various elements of Plan implementation. The Program Manager, through the Implementation Office and under the direction of the Authorized Entity Group, will manage the implementation of the BDCP and ensure that such implementation proceeds in compliance with the Plan, the Implementing Agreement, and the associated regulatory authorizations. With respect to those state or federal agency functions not subject to assignment or delegation, DWR and Reclamation will each name a designated official to approve and assist in the execution of those functions, in coordination with the Implementation Office.[1] Various other parties, including the state and federal fish and wildlife agencies, other public agencies, nongovernment organizations, interested parties, and the public will be integral to the process of shaping decisions and effectuating actions set out in the BDCP. This section describes the roles and responsibilities of these parties in the implementation process. Table 7-1 summarizes the governance process for key decisions expected during Plan implementation. The organization of the implementation is illustrated in Figure 7-1, and the roles of implementation staff are illustrated in Figure 7-2.

7.1.1 Program Manager

The Program Manager will manage, coordinate, oversee, and report on all aspects of Plan implementation, subject to the oversight of the Authorized Entity Group and the limitations set out in this chapter related to the development, operation, and maintenance of the State Water Project (SWP) and the Central Valley Project (CVP) facilities and the administration of the Adaptive Management and Monitoring Program. The Program Manager will report to the Authorized Entity Group, and act in accordance with the group's direction.

[1] The designated state and federal officials will be charged with the responsibility for approving and executing, in coordination with the Implementation Office, those departmental functions that may not be delegated or assigned to other parties.

1 **Table 7-1. BDCP Governance Decision-Making**

Decision	Who initiates?	Who has input?	Who makes decision?	Who has final authority to decide the matter?	Final decision subject to review process?[1]
Program Management					
Selection of Program Manager (Section 7.1.1.1)	Authorized Entity Group (AEG)	Permit Oversight Group (POG); Stakeholder Council	Authorized Entity Group	AEG	No
Selection of Science Manager (Section 7.1.1.2)	Program Manager	POG; AEG; Stakeholder Council	Program Manager	Program Manager	No
Oversight and administration of program funding and resources and of contracting (except for water conveyance infrastructure)	Program Manager	Stakeholder Council	Program Manager in conjunction with designated State and Federal agents	AEG	No
Oversight and implementation of conservation measures (except water operations)	Program Manager	AMT, Stakeholder Council	Program Manager	AEG	No
Implementation of outreach, compliance monitoring and reporting requirements	Program Manager	Stakeholder Council	Program Manager	AEG	No
Annual Work Plan (Section 7.1.3.1)	Program Manager	AEG; POG; Stakeholder Council	AEG review and approval. POG concurrence that plans are consistent with past decisions that involve the POG	AEG	Yes
Annual Progress Report/Annual Water Operations Report	Program Manager	AEG; POG; Stakeholder Council; Real Time Operations Team	AEG review and approval	POG	No
Formal amendment (Section 7.2.11)	Program Manager	AEG	AEG review and approval	POG	No
Adaptive Management and Monitoring					
Adaptive management change to a conservation measure (water operations and non-water related	AMT (proposals may be submitted by any party or	AEG; POG; Stakeholder Council (Technical Facilitation Subgroup)	AEG and POG	Regional director of relevant federal agency(ies) (USFWS or	Yes

Decision	Who initiates?	Who has input?	Who makes decision?	Who has final authority to decide the matter?	Final decision subject to review process?[1]
measures)	stakeholder)			NMFS) and/or CDFW director[2]	
Adaptive management change to a biological objective	AMT (proposals may be submitted by any party or stakeholder)	AEG; POG; Stakeholder Council	AEG and POG	Regional director of relevant federal agency(ies) (USFWS and/or NMFS) and/or CDFW director	Yes
Adaptive management change to problem statement and model refinement	AMT	AEG; POG; Delta Science Program; Interagency Ecological Program; Stakeholder Council	AEG and POG, if no consensus among AMT	POG	Yes
Development and modification of monitoring and research plans	Program Manager	AMT, AEG, POG, Delta Science Program, Interagency Ecological Program, Stakeholder Council	AEG and POG	POG	Yes
Science Review initiation and panel selection (independent and internal)	AMT and/or AEG/POG	AMT; AEG; POG; Stakeholder Council	AEG and POG	POG	Yes
Water Operations					
Annual Delta Water Operations Plan (Sections 7.1.4 and 7.3.2.1)	DWR and Reclamation	Implementation Office; POG; AMT; Stakeholder Council; Real Time Operations Team	DWR and Reclamation (POG review and concurrence regarding consistency with BDCP and associated authorizations)	DWR and Reclamation	Yes
Real-time operations changes	Real Time Operations Team	Case-by-case, as needed	Real Time Operations Team	Regional director of relevant federal agency(ies) (USFWS or NMFS) and/or CDFW director	No

Notes:

[1] See Section 7.1.7 *Review of Disputes Regarding Implementation Decisions* for details.

[2] DWR and Reclamation need to confirm that any changes to a conservation measure are within their legal authority to implement.

The Program Manager, with the assistance of the Implementation Office staff, will ensure that the BDCP is properly implemented throughout the duration of the Plan. Among other things, the Program Manager will manage and/or monitor the implementation of implementation actions associated with the protection and restoration of habitat; reduction of ecological stressors; management of conserved habitat; and operation of the water projects, including the development of infrastructure. The Program Manager will also oversee the preparation of annual and 5-year work plans, budgets, and reports; and will implement the public outreach program. As set forth in this chapter, the Program Manager will engage the Authorized Entity Group, the Permit Oversight Group, the Stakeholder Council, and other interested groups and entities in matters related to Plan implementation.

7.1.1.1 Program Manager: Selection and Designation of Staff

The Authorized Entity Group will select the Program Manager. Prior to making its selection, the Authorized Entity Group will take the following actions.

- Solicit qualified candidates for the Program Manager position.
- Consult with the Permit Oversight Group regarding the selection process and the qualifications of the candidates, and invite the Permit Oversight Group to participate in the interview process.
- Confer with the Stakeholder Council regarding the selection process.

The Program Manager will have the following minimum qualifications.

- At least 10 years of experience in the field of natural resources management.
- Experience with complex natural resources issues, including water resources issues.
- Experience with state and federal regulatory processes that affect water and other natural resources that fall within the scope of the BDCP.
- Experience with multi-stakeholder processes.
- Experience with the administration or management of large-scale programs or projects, including experience with budget management.
- Excellent communication skills.

The Program Manager may be retained under the Intergovernmental Personnel Act (5 United States Code [USC] 3371–3375), through personal services contracts, or other appropriate mechanisms.

The specific roles and responsibilities of the Program Manager are described in further detail throughout this chapter.

7.1.1.2 Science Manager: Selection and Function

A position will be established within the Implementation Office for a Science Manager. The Science Manager will be responsible for handling technical and scientific matters on behalf of the Program Manager and will focus on ensuring that decisions related to Plan implementation are guided by the best available scientific information.

The Program Manager will select the Science Manager. Prior to making this selection, the Program Manager will consult with the Authorized Entity Group and the Permit Oversight Group regarding

the selection process and the qualifications of the candidates, and invite the Authorized Entity Group and Permit Oversight Group to participate in the interview process. The Program Manager will also confer with the Stakeholder Council on the selection process.

The Science Manager will have the following minimum qualifications.

- Educational and professional background in relevant scientific disciplines.
- At least 10 years of experience in the management of large programs.
- Substantial experience and involvement in the management of large-scale research or monitoring programs.
- Familiarity with water management and ecological issues related to the Delta.
- Excellent communication skills.

The Science Manager will report to the Program Manager and will, among other things, assume the following responsibilities.

- Serve as Chair of the Adaptive Management Team and assist the team in the development and administration of the Adaptive Management and Monitoring Program, in coordination with the Interagency Ecological Program (IEP) and other science programs.
- Serve as a member of the IEP Coordinators.
- Engage in regular communication and coordination with the Delta Science Program and the Independent Science Board, in a manner consistent with California Water Code Section 85820, as well as with other outside scientists and, with the guidance of the Adaptive Management Team, coordinate or contract with the Independent Science Board, the Delta Science Program, or other scientists to obtain input and review, to support the Adaptive Management and Monitoring Program.
- Support the Program Manager in the preparation of plans, reports and other technical documents.
- Assist in building sufficient scientific capacity and resources within the Implementation Office and the IEP to advance the goals and objectives of the BDCP.
- With guidance from the Adaptive Management Team, assist in synthesizing and presenting the results of studies and research, compiling the findings of monitoring efforts, and summarizing the current scientific knowledge on relevant Delta resources to the Program Manager, the Authorized Entity Group, Permit Oversight Group, Stakeholder Council, and others.

Matters relating to the conduct of scientific reviews and the solicitation of independent scientific advice to assist in the implementation of the BDCP, including independent science review of adaptive management decisions affecting water operations, will be managed by the Adaptive Management Team, in a manner that ensures their independence and scientific integrity. The Adaptive Management Team, through the Science Manager, will coordinate such efforts with the Delta Science Program, the IEP, Stakeholder Council, the Authorized Entity Group, and the Permit Oversight Group.

7.1.1.3 Implementation Office: Function, Establishment, and Organization

The Program Manager will establish, organize, and direct the Implementation Office. To ensure that the commitments reflected in the BDCP are carried out in a timely and efficient manner, the Program Manager, through the Implementation Office, will institute processes and procedures to adequately address planning, budgeting, sequencing, and scheduling needs related to Plan implementation. Under the direction of the Program Manager, the Implementation Office will function with a significant level of independence. However, the Program Manager and the Implementation Office staff will work closely with the Authorized Entity Group on a range of matters, particularly with respect to actions that affect water operations, and will be responsive to the Authorized Entity Group, regardless of the entity through which the Program Manager and the Implementation Office staff have established employment relationships. In addition, for those activities involving functions that, under state and federal law, cannot be delegated (e.g., water operations, water contracting, procurement, expenditures of state and federal funds), the Program Manager will coordinate with the appropriate designated state or federal official to ensure that the necessary function is carried out. The Program Manager will also, to the extent appropriate, solicit input from the Stakeholder Council on a range of implementation matters.

Specifically, under the direction of the Program Manager, the Implementation Office will assume responsibility for the implementation of the following broad range of actions.

- Oversight and coordination of administration of program funding and resources.
- Preparation of annual budgets and work plans.
- Establishment of procedures and approaches to implement plan actions.
- Oversight of and/or engagement in the implementation of conservation measures.
- Technical and logistical support to the Adaptive Management Team with respect to the administration of the Adaptive Management and Monitoring Program,
- Coordination with Delta-wide governance entities, including the Delta Stewardship Council, the Delta Science Program, the Delta Protection Commission, and the Delta Conservancy.
- Implementation of public outreach programs.
- Fulfillment of compliance monitoring and reporting requirements, including the preparation of annual reports.

The Implementation Office will not be responsible for the construction or operation of SWP and/or CVP facilities; instead, it will monitor water operations to assemble the information necessary to evaluate and report on compliance with the provisions of the Plan, the Implementing Agreement, and the associated regulatory authorizations, as described in Chapter 6, *Plan Implementation,* Section 6.3, *Planning*, *Compliance and Progress Reporting*. The BDCP sets out the parameters within which DWR and Reclamation will conduct SWP and CVP operations and infrastructure development. DWR and Reclamation may choose to operate the SWP and CVP and develop new project infrastructure using their current organizational capacity or by contract with other entities.

The Program Manager will fulfill the staffing needs of the Implementation Office by drawing from existing personnel at DWR, Reclamation, State and Federal Contractors Water Agency (SFCWA), and from other sources, including from sources outside of agencies, if appropriate and if such personnel

possess the expertise and experience necessary to carry out the tasks associated with BDCP implementation. The specific staffing needs of the Implementation Office will be determined by the Program Manager, with input from the Authorized Entity Group and the Permit Oversight Group. Staff assigned to the Implementation Office will act under the direction of the Program Manager. The engagement of personnel from DWR, Reclamation, and other entities, however, will not affect or modify the existing authorities of federal, state, and local agencies or nongovernmental organizations that pertain to personnel matters. Personnel may be retained under the Intergovernmental Personnel Act (5 USC 3371–3375); through personal services contracts, or other appropriate mechanisms. The Authorized Entities and the fish and wildlife agencies will each designate a lead representative from their respective agencies to serve as liaisons to the Implementation Office.

The Program Manager will budget for, oversee, and coordinate management of the funds and other resources needed to carry out the Program Manager's responsibilities for Plan implementation. The Program Manager will seek to ensure that the funding commitments set out in the BDCP and its Implementing Agreement are being met. Consistent with its respective funding commitments, each of the signatories to the Implementing Agreement will dedicate, hold, and release funds and resources necessary for Plan implementation; will not commingle these funds with other funds or resources of the agency; and will be responsible for all appropriated funds and other funds entrusted to it. Each of these signatories will retain final authority over the expenditure of funds it is required to dedicate for BDCP implementation.

The Implementation Office may enlist other entities to carry out on its behalf actions associated with the BDCP, including implementation of the conservation measures (Section 7.1.8, *Supporting Entities*). Notwithstanding the assignment of such responsibilities, the Implementation Office will be responsible for ensuring that the work is carried out and completed in a manner that complies with the provisions of the BDCP and its associated regulatory authorizations. As part of that responsibility, the Implementation Office will oversee and coordinate the management of contracts with these other entities, in conjunction with the designated state and federal officials as applicable, and monitor and verify the sufficiency of the work.

7.1.1.4 Assignment of Responsibilities

The Authorized Entity Group will assign the Program Manager certain responsibilities concerning the implementation of the BDCP. The Authorized Entity Group will provide the Program Manager with sufficient capacity and capability to execute these responsibilities and effectively implement the BDCP and will explicitly define the scope of responsibilities assigned to the Program Manager.

7.1.1.5 No Delegation of Authority

The assignment of responsibility to the Program Manager and the Implementation Office will not alter or modify existing authorities, mandates, and obligations of the Authorized Entities or any other participating state and federal agency participating in Plan implementation. No general delegation of authority by the Authorized Entities to the Implementation Office, including the Program Manager or to any employee assigned to the Implementation Office will occur, although specific delegation may occur in the event that it is considered by the delegating Authorized Entity to be beneficial to the efficient operation of the Implementation Office. Any such delegation will be conferred, in writing, by the delegating Authorized Entity to the Program Manager, and will be

reviewed by that agency from time to time. No unauthorized delegation of state or federal authority to the Program Manager or the Implementation Office will occur.

7.1.2 Entities to Receive Regulatory Authorizations

The BDCP provides the basis for the issuance of regulatory authorizations, under the federal Endangered Species Act (ESA) and the California Natural Community Conservation Planning Act (NCCPA), for the take of certain fish and wildlife species that result from the implementation of covered activities and associated federal actions (Chapter 4, *Covered Activities and Associated Federal Actions*). Take authorizations will be sought by federal and nonfederal entities under the following authorities.

- Nonfederal entities will seek regulatory coverage pursuant to ESA Section 10(a)(1)(B) and NCCPA Section 2835.
- Federal agencies will seek regulatory coverage under ESA Section 7(a)(2) for federally listed species.

DWR, Reclamation, and those state and federal water contractors that receive take authorizations for activities covered under the BDCP are referred to collectively as the Authorized Entities.

The Authorized Entities will have responsibility for compliance with the provisions of the BDCP and regulatory authorizations, regardless of whether another entity is assigned the responsibility for carrying out a required action. Consistent with their roles and responsibilities under the Plan, the Authorized Entities and the Program Manager may enter into agreements individually, amongst themselves, or with other entities, for the purpose of facilitating the implementation of the BDCP by the Implementation Office. Such agreements will not affect or diminish an Authorized Entity's established authority or control over a covered activity, such as the operation of the SWP and CVP, or any other plan action, as provided by law or pursuant to the BDCP and its Implementing Agreement.

Certain other entities may also obtain take authorizations under the Plan for covered activities other than water operations associated with the SWP or the CVP, as specified in Chapter 4, *Covered Activities and Associated Federal Actions*. Such other entities will be known as Other Authorized Entities.

7.1.2.1 Authorized Entities

The entities identified in this section are anticipated to be Authorized Entities for the purpose of the BDCP and its associated regulatory authorizations. The activities that will be covered under the regulatory authorizations issued to the Authorized Entities are identified and described in Chapter 4, *Covered Activities and Associated Federal Actions.* These activities will be covered under take authorizations issued to the Authorized Entities pursuant to ESA Section 10(a)(1)(B) and Section 2835 of the California Fish and Game Code (Fish & Game Code). Activities that are addressed by the BDCP and carried out by Reclamation are referred to in Chapter 4 as Associated Federal Actions. Those actions are subject to the consultation requirements of ESA Section 7. Reclamation will seek take authorizations under ESA Section 7 for those actions, as well as actions outside the scope of the BDCP related to the coordinated operations of the SWP and CVP.

7.1.2.1.1 California Department of Water Resources

The State of California owns, and DWR manages and operates, the existing SWP Delta facilities, including the Clifton Court Forebay and the Banks Pumping Plant. Pursuant to the BDCP, DWR seeks state and federal regulatory authorizations to continue to operate such facilities. The State of California, through DWR, will construct, own, and operate any new diversion and conveyance facilities described in this plan.

7.1.2.1.2 Bureau of Reclamation

The United States owns, and Reclamation operates, the existing CVP Delta facilities, including the Jones Pumping Plant and the Delta Cross Channel. For Delta operations, the BDCP will provide the basis for the ESA Section 7 consultation on the coordinated long-term operation of the CVP. Reclamation will likely enter into an agreement with DWR to wheel CVP water through a new conveyance facility. Reclamation will not be an applicant for coverage under Section 10 of the ESA. Reclamation's expenditures in furtherance of the Plan will conform to the requirements of federal law.

7.1.2.1.3 SWP and CVP Contractors

The SWP and CVP water contractors receive water under contract from the projects. They will participate in various aspects of the implementation of the BDCP, including the implementation of certain conservation measures. Pursuant to the BDCP, the SWP and CVP contractors will seek permits under Section 10(a)(1)(B) of the ESA and Section 2835 under the NCCPA for covered activities, as set out in Chapter 4, *Covered Activities and Associated Federal Actions*. The water contractors are expected, on an individual basis or through SFCWA, to be Authorized Entities under the Plan. However, the decision whether to grant permits under Section 10 of the ESA resides with USFWS and NMFS and, under NCCPA, with CDFW. The status of the water contractors as Authorized Entities will not provide them with any new authority over water project operations decisions or result in the delegation of authority from any state or federal agency. The water contractors may choose to carry out their responsibilities under the BDCP through SFCWA or other appropriate entities.

7.1.2.2 Other Authorized Entities

The BDCP covers certain diversions of water not associated with the SWP or the CVP. These activities are described in Chapter 4, *Covered Activities and Associated Federal Actions*. Take of covered species associated with these activities will be authorized through the state and federal take permits issued to DWR under the BDCP. The entities or individuals that receive such regulatory coverage will be considered Other Authorized Entities. However, these Other Authorized Entities will not be members of the Authorized Entity Group nor will they have a specific role in the governance of the BDCP, other than as potential members of the Stakeholder Council.

7.1.3 Authorized Entity Group

The Authorized Entity Group will be established to provide program oversight and general guidance to the Program Manager regarding the implementation of the Plan. The Authorized Entity Group will consist of the Director of DWR, the Regional Director for Reclamation, and a representative of the participating state contractors and a representative of the participating federal contractors, if they

are issued permits pursuant to the Plan. The Authorized Entity Group will be responsible for ensuring that the management and implementation of the BDCP are carried out consistent with its provisions, the Implementing Agreement, and the associated regulatory authorizations.

7.1.3.1 Function

The Authorized Entity Group will provide oversight and direction to the Program Manager on matters concerning the implementation of the BDCP, provide input and guidance on general policy and program-related matters, monitor and assess the effectiveness of the Implementation Office in implementing the Plan, and foster and maintain collaborative and constructive relationships with the State and federal fish and wildlife agencies, other public agencies, stakeholders and other interested parties, and local government throughout the implementation of the BDCP.

The Authorized Entity Group will also engage in more specific matters, such as consideration of proposed adaptive management actions and review and approval of an Annual Work Plan and Budget and the Annual Delta Water Operations Plan. The group's review of the work plan and budget will focus primarily on the programmatic aspects of Plan implementation. The Authorized Entity Group will seek the advice and input, and in certain instances review and concurrence, from the Permit Oversight Group and as appropriate, the Stakeholder Council, with respect to these matters. The Program Manager will make the day-to-day decisions necessary to carry out the Annual Work Plan and to otherwise properly implement the BDCP.

The Program Manager will organize, convene, and provide support to the Authorized Entity Group and its proceedings,[2] including its meetings with the Permit Oversight Group. The Program Manager will further ensure that the Authorized Entity Group receives and reviews all proposed work plans, reports, budgets, and other relevant information generated by the Implementation Office, the state and federal fish and wildlife agencies, the Adaptive Management Team, and other sources. The Program Manager will further ensure that the Authorized Entity Group has sufficient opportunity to provide input regarding these documents.

The participation of the Authorized Entities on the Authorized Entity Group will not trigger or otherwise cause a delegation of authority or responsibility for any of the implementation actions described in the BDCP from one Authorized Entity to another or to the Implementation Office. Rather, the specific roles and level of involvement in implementation actions are defined either by existing statutory and regulatory mandates or by provisions set out in this Plan and its associated Implementing Agreement. For many of the implementation actions and commitments, a specific Authorized Entity will have the sole responsibility for implementation; for other actions and commitments established by the Plan, the Authorized Entities may be jointly and severally responsible for their implementation. For instance, the operation of the SWP will remain under the control and responsibility solely of DWR; likewise, the operation of the CVP will continue to be under the control and responsibility of Reclamation. As such, while it is expected that the Authorized Entity Group will express a single position of the group regarding a matter under its consideration, the entity(ies) with statutory or regulatory authority over the matter will make the final determination.

The Program Manager will solicit input on the draft Annual Work Plan and Budget from the Permit Oversight Group, the Adaptive Management Team, and the Stakeholder Council, and submit the plan

[2] In the event that the Program Manager position is vacant, then DWR and Reclamation will designate agency staff to serve this role until such time as the position has been filled.

and budget to the Authorized Entity Group for review and approval. As part of this process, the Permit Oversight Group will review the draft plan and provide written concurrence prior to the Authorized Entity Group's approval that the draft accurately sets forth and makes adequate provision for the implementation of the applicable joint decisions of the Authorized Entity Group and the Permit Oversight Group or decisions of an agency within the Permit Oversight Group with authority over the matter. The content of the Annual Work Plan and Budget and the timing of preparation and submission of the document to the Authorized Entity Group are described in Chapter 6, *Plan Implementation,* Section 6.3, *Planning*, *Compliance, and Progress Reporting*.

The Authorized Entity Group will meet on a schedule of its own choosing, but at a minimum, on a quarterly basis. The Authorized Entity Group may also be convened by the Program Manager, as needed, to review issues that arise during the implementation of the Annual Work Plan and Budget. The Program Manager may further request that the group reconvene to consider proposed amendments to the Annual Work Plan and Budget. The Authorized Entity Group will also meet with the Permit Oversight Group (Section 7.1.5, *Permit Oversight Group*), at least on a quarterly basis to review Plan implementation issues, including those related to the adaptive management and monitoring program and the restoration and preservation of habitat.

The Authorized Entity Group will institute procedures with respect to public notice of and access to its meetings and its meetings with the Permit Oversight Group. The date, time, and location of the meetings will be posted on the BDCP website at least 10 days prior to such meetings. The meetings will be held at locations within the City of Sacramento or the legal Delta. All meetings will be open to the public.

7.1.4 DWR and Reclamation: Operation of the SWP and CVP and Preparation of the Annual Delta Water Operations Plan

Implementation of the conservation measures related to water facilities and water operations, as described in *CM1 Water Facilities and Operation* and *CM2 Yolo Bypass Fisheries Enhancement* of Chapter 3, *Conservation Strategy*, will be the responsibility of DWR and Reclamation or entities with whom they may contract. DWR and Reclamation will retain their authority to operate the SWP and the CVP within the parameters of the BDCP and other applicable laws and regulations.

The federal and state operators of the SWP and the CVP will prepare coordinated operation plans for the federal and state projects, including the Annual Delta Water Operations Plan as described in Chapter 6, *Plan Implementation*, Section 6.3, *Planning, Compliance, and Progress Reporting*. DWR and Reclamation will seek input from the Implementation Office, Permit Oversight Group, Adaptive Management Team, and the Stakeholder Council regarding the draft Annual Delta Water Operations Plan. DWR and Reclamation will retain final approval authority over the plan; however, the Permit Oversight Group will, within 30 days of receipt of the draft plan, or as soon as practicable thereafter, review the draft plan and provide written concurrence that the plan is consistent with the provisions of the BDCP, the Implementing Agreement, and the associated regulatory authorizations. If the Permit Oversight Group concludes that the plan is not consistent, it will notify DWR and Reclamation in writing, within the 30-day timeframe, of the specific reasons for its conclusion. In such event, DWR and Reclamation may modify the plan to the satisfaction of the Permit Oversight Group. If they do not, DWR, Reclamation and the Permit Oversight Group will, in a timely manner, meet and confer in an effort to resolve the matter in dispute. If these parties are unable to reach

resolution, the review process (Section 7.1.7, *Review of Disputes Regarding Implementation Decisions*) may be invoked by any of these parties. The Implementation Office will incorporate, for informational purposes, the final Annual Delta Water Operations Plan into the BDCP Annual Work Plan and Budget (Chapter 6, *Plan Implementation*, Section 6.3, *Planning, Compliance, and Progress Reporting*).

Decisions related to real-time water operations will be the responsibility of the Real Time Response Team, as described in Chapter 3, *Conservation Strategy.*

7.1.5 Permit Oversight Group

The Permit Oversight Group will be composed of the state and federal fish and wildlife agencies, specifically, the Regional Director of USFWS, the Regional Administrator of NMFS, and the Director of CDFW or their designees. On the basis of the BDCP, USFWS, NMFS, and CDFW are expected to issue regulatory authorizations to the Authorized Entities and Other Authorized Entities pursuant to the federal ESA and the NCCPA, as applicable. Consistent with their authorities under these laws, the fish and wildlife agencies will retain responsibility for monitoring compliance with the BDCP, approving certain implementation actions, and enforcing the provisions of their respective regulatory authorizations. In addition to fulfilling those regulatory responsibilities, the state and federal fish and wildlife agencies will also provide technical input on a range of implementation actions that will be carried out by the Implementation Office. The Permit Oversight Group will not be a separate legal entity nor will it be delegated any authority by the member agencies.

7.1.5.1 Function

To ensure that the BDCP is being properly implemented, the Permit Oversight Group will coordinate agency review of the actions being implemented under the Plan and assessments of compliance with the provisions of the Plan, its Implementing Agreement, and associated regulatory authorizations. The Permit Oversight Group will be involved in certain decisions relating to the implementation of water operations and other conservation measures, actions proposed through the adaptive management program or in response to changed circumstances, approaches to monitoring and scientific research. The Implementation Office will work with the Permit Oversight Group and the Authorized Entity Group to institute mutually agreeable processes to enhance opportunities for such collaboration and engagement.

The Permit Oversight Group will have the following roles, among others, in implementation matters:

- Approve, jointly with the Authorized Entity Group, changes to conservation measures or biological objectives proposed by the Adaptive Management Team (Section 7.1.5, *Permit Oversight Group*).
- Decide, jointly with the Authorized Entity Group, all other adaptive management matters for which concurrence has not been reached by the Adaptive Management Team (Section 7.1.5, *Permit Oversight Group*).
- Role in decision-making regarding real-time operations, consistent with the criteria of *CM1 Water Facilities and Operation* and other limitations set out in the BDCP and annual Delta water operations plans. (The roles of the parties in decision-making regarding real-time operations are still under consideration and will be addressed in Chapter 3, *Conservation Strategy*.)
- Provide input into the selection of the Program Manager and the Science Manager.

- Provide input and concur with the consistency of specified sections of the Annual Work Plan and Budget with the BDCP and with certain agency decisions.
- Provide input and concur with the consistency of the Annual Delta Water Operations Plan with the BDCP.
- Provide input and accept Annual Reports.
- Provide input and approve plan amendments.

The participation of the state and federal fish and wildlife agencies on the Permit Oversight Group will not trigger or otherwise cause a delegation of authority or responsibility for any of their regulatory actions described in the BDCP from one such agency to the Permit Oversight Group or to another Permit Oversight Group agency. Rather, the specific roles and level of involvement in implementation actions are defined by existing statutory and regulatory mandates and by provisions set out in this Plan and its associated Implementing Agreement.

For those actions that are regulatory in nature or require the concurrence and/or approval of the Permit Oversight Group, there will be one written communication, to the maximum extent practicable, relaying the position of the Permit Oversight Group on the issue in question. In developing this communication, the three member agencies will coordinate with each other to evaluate interspecies conflicts and determine actions that meet the needs of all covered species, and they will ensure consistency among the federal agencies and, to the extent possible, among all three agencies in the application of their respective regulatory authority. Subject to the requirements for consistency above, nothing in this section will limit the ability of any Permit Oversight Group agency to exercise its discretion through individual correspondence in circumstances where project operating agency action is imminent and there is not sufficient time to coordinate correspondence. Nothing in the this section will limit application of authorities with respect to necessary Section 7 correspondence related to annual or seasonal operations of the CVP.

7.1.5.2 Participants

7.1.5.2.1 California Department of Fish and Wildlife

CDFW is the agency of the State of California authorized to act as trustee for the state's wildlife. CDFW administers and enforces the California Endangered Species Act (CESA), the NCCPA, and other provisions of the Fish & Game Code. CDFW is authorized to enter into agreements with federal and local governments and other entities for the conservation of species and habitats, to authorize take under CESA and the NCCPA, and to provide regulatory assurances under the NCCPA. As a member of the Permit Oversight Group, CDFW will confer, on an ongoing basis, with the Implementation Office and the Authorized Entity Group on various aspects of Plan implementation, including participation in operations decisions, the adaptive management process, and the monitoring and science programs. CDFW will also maintain responsibility for plan enforcement, consistent with the NCCPA and other authorities. CDFW owns and manages land in the Plan Area, and may, at the request of the Implementation Office, enter into agreements whereby it operates and maintains certain habitat areas that are developed through BDCP habitat preservation and restoration actions. CDFW is jointly responsible for implementation of the Ecosystem Restoration Program, which was established to advance ecosystem restoration projects in the San Francisco Bay Delta and its tributaries.

7.1.5.2.2 National Marine Fisheries Service

NMFS is an agency of the U.S. Department of Commerce authorized by Congress to administer and enforce the ESA with respect to marine mammals and certain fish species (including anadromous fish); to enter into agreements with states, local governments, and other entities to conserve federally threatened, endangered, and other species of concern; to authorize incidental take under ESA; and to provide regulatory assurances in accordance with 50 Code of Federal Regulations (CFR) Section 222.307(g). As a member of the Permit Oversight Group, NMFS will confer, on an ongoing basis, with the Implementation Office and the Authorized Entity Group on BDCP implementation, including participation in the operations decisions and adaptive management processes and the monitoring and science programs. NMFS will also maintain responsibility, jointly with USFWS, for Plan enforcement consistent with the ESA and other authorities. NMFS is jointly responsible for implementation of the Ecosystem Restoration Program, which was established to advance ecosystem restoration projects in the San Francisco Bay Delta and its tributaries.

7.1.5.2.3 U.S. Fish and Wildlife Service

USFWS is an agency of the U.S. Department of the Interior authorized by Congress to administer and enforce the ESA with respect to terrestrial wildlife, certain fish species, insects and plants, to enter into agreements with states, local governments, and other entities to conserve threatened, endangered, and other species of concern, to authorize incidental take under ESA, and to provide regulatory assurances in accordance with 50 CFR Section 17.22(b)(5) and Section 17.32(b)(5). As a member of the Permit Oversight Group, USFWS will confer, on an ongoing basis, with the Implementation Office and the Authorized Entity Group on various aspects of Plan implementation, including participation in operations decisions, the adaptive management process, and the monitoring and science programs. USFWS will also maintain responsibility, jointly with NMFS, for plan enforcement consistent with the ESA and other authorities. USFWS may also, at the request of the Implementation Office, enter into agreements whereby it operates and maintains certain habitat areas that are developed through BDCP habitat preservation and restoration actions. USFWS is jointly responsible for implementation of the Ecosystem Restoration Program, which was established to advance ecosystem restoration projects in the San Francisco Bay Delta and its tributaries.

7.1.6 Adaptive Management Team

The Adaptive Management Team will have primary responsibility for administration of the adaptive management and monitoring program described in Chapter 3, *Conservation Strategy*, Section 3.6, *Adaptive Management and Monitoring Program,* and will decide when and on what terms to seek independent science review to evaluate technical issues for the purpose of supporting adaptive management decision making. The Adaptive Management Team will have primary responsibility for the development of performance measures and effectiveness monitoring and research plans; analysis, synthesis, and communication of monitoring and research results; soliciting independent scientific review; and developing proposals to adapt (e.g., proposed modifications to the biological objectives and conservation measures). The Adaptive Management Team will ensure an appropriate level of integration between the BDCP adaptive management and monitoring program and the Delta Science Plan (Section 3.6.2.4, *Integration with the Delta Science Plan*).

The Adaptive Management Team will be responsible for integrating adaptive management and monitoring activities into one cohesive program. The roles and responsibilities of the Adaptive

Management Team to implement the adaptive management process are discussed further in Sections 3.6.3.5.1 and 3.6.3.4. Information obtained from monitoring and research activities will be used by the Adaptive Management Team to develop proposed changes to conservation measures or biological objectives to improve, on an ongoing basis, the outcomes associated with water resource management and ecological restoration commitments reflected in the Plan.

The Adaptive Management Team will be chaired by the Science Manager, and will consist of representatives of DWR, Reclamation, a CVP contractor-Permittee, a SWP contractor-Permittee, CDFW, USFWS, and NMFS, who will serve as voting members; and the IEP Lead Scientist, the Delta Science Program lead scientist or a designee, and the Director of the NOAA Southwest Fisheries Science Center, who will serve as nonvoting members. The directors of DWR and CDFW and the regional directors of Reclamation, USFWS, and NMFS will each designate a management-level representative to the Adaptive Management Team who can represent both policy and scientific perspectives on behalf of their agency, including on matters related to adaptive management proposals and research priorities.

The Adaptive Management Team will operate by consensus.[3] In the event that consensus is not achieved, the matter will be elevated to the Authorized Entity Group and the Permit Oversight Group for resolution. Any proposed changes to conservation measures or biological objectives will be elevated to the Authorized Entity Group and the Permit Oversight Group for their concurrence or for their own determination regarding the matter. If concurrence is not achieved, the entity or entities with decision-making authority will make a decision, subject to the review process set forth Section 7.1.7, *Review of Disputes Regarding Implementation Decisions*. The Adaptive Management Team may invite individuals or convene subteams consisting of individuals who are not members of the team to provide input into specific issues under consideration. These individuals or groups of individuals may be from the technical staffs of the entities represented on the Adaptive Management Team, the Technical Facilitation Subgroup of the Stakeholder Council, or other entities or institutions, as deemed appropriate by the team. As part of its deliberations, the Adaptive Management Team may seek input from independent scientists or from other appropriate sources, including the Technical Facilitation Subgroup of the Stakeholder Council. Operation of the Adaptive Management Team, with respect to making decisions and development recommendations, is described in Section 3.6.3.5.2, *Operation of the Adaptive Management Team*.

The Program Manager may request that the Adaptive Management Team provide internal scientific review (internal to the Implementation Office) on specific technical issues of importance to the success of the adaptive management program and the conservation strategy implementation. The Adaptive Management Team will also assess on a regular basis the overall efficacy of the adaptive management program, including the results of effectiveness monitoring, selection of research and adaptive management experiments, and relevance of new scientific information developed by others (e.g., universities, Delta Science Program) to determine whether changes in the implementation of the conservation measures and the monitoring program would improve the effectiveness of the BDCP in achieving its biological goals and objectives.

The Adaptive Management Team will hold public meetings at least quarterly, and will otherwise determine its meeting schedule and rules of operation. The Program Manager will institute procedures with respect to public notice of, and access to, these meetings. Other meetings of the

[3] For the purpose of this section, *consensus* will be considered to be reached if either all members of the Adaptive Management Team agree to the proposal at hand or no member of the team dissents from the proposal.

Adaptive Management Team in which changes to the BDCP conservation strategy (e.g., biological objectives or conservation measures) are being proposed will also be noticed and open to the public. Information considered in developing any proposed actions will be presented in those public meetings.

7.1.7 Review of Disputes Regarding Implementation Decisions

Various entities (e.g., the Authorized Entity Group, Permit Oversight Group, and their member agencies) will be responsible for making decisions to implement the BDCP. With respect to those proposed implementation decisions for which the Authorized Entity Group and the Permit Oversight Group are unable to reach agreement on a matter in which they have joint decision-making authority, or in which a member(s) of the Authorized Entity Group and/or Permit Oversight Group does not agree with the resolution of the matter by the entity with authority over the matter, the dispute will be resolved pursuant to the following process.

The Authorized Entity Group and/or the Permit Oversight Group, who may jointly agree to enlist the assistance of the Program Manager and the Science Manager or others as appropriate, will describe the basis for the dispute and options that may be available to assist the parties in seeking resolution. In the event that the Authorized Entity Group and the Permit Oversight Group are unable to resolve the issue at hand, the entity with decision-making authority over the matter will make a final decision.

Prior to that final decision by the entity with decision-making authority, any member of the Authorized Entity Group or the Permit Oversight Group may initiate a nonbinding review process concerning the matter in dispute. The decisions that are eligible for this nonbinding review process are listed in Table 7-1. A member of either group may trigger this process by providing the Authorized Entity Group and the Permit Oversight Group with a written notice of dispute that describes the nature of the dispute and a proposed approach to resolution. Such notice must be provided to the parties within 14 days of the memorialization of the disputed issue.

Within 14 days of the issuance of the written notice of dispute, the parties, with the assistance of the Implementation Office, will form a three member panel of experts. One member of the panel will be selected by the Authorized Entity Group, one member will be selected by the Permit Oversight Group, and a third member will be selected by mutual agreement of the first two panel members. No discovery will be allowed. At its discretion, the panel may meet and confer with any of the parties regarding the matter and gather whatever available information it deems necessary and appropriate. Within 14 days of the submittal of the written positions of the parties, a non-binding recommendation will be issued by a majority of the panel, in writing, which will include a statement explaining the basis for the recommendation.

Within 14 days of issuance of the panel's nonbinding recommendation, the entity with final decision-making authority over the matter will consider those recommendations, as well as any other relevant information concerning the issue at hand, and convey its final decision regarding the matter to the Authorized Entity Group and the Permit Oversight Group.

The availability of this review process will have no effect on the ability of a party to pursue legal remedies that may otherwise be available regarding a disputed matter. The recommendations of the

panel are not intended to be given special deference by a reviewing court relative to the expert judgment of the agency making the final decision.

7.1.8 Other Regulatory Agencies

The BDCP has been developed as a habitat conservation plan pursuant to the ESA and the NCCPA. To implement the BDCP, certain implementation actions will need to conform to the requirements of various other state and federal laws and regulations not specifically addressed by the Plan. Prior to the implementation of many of the implementation actions set out in the BDCP, regulatory authorizations and approvals will need to be obtained from state and federal agencies under applicable laws. To facilitate compliance with these laws and regulations, the Implementation Office will work closely with the appropriate regulatory agencies to plan in advance of future permitting needs and to develop documentation to provide the basis for, and establish processes to expedite, such authorizations.

It is expected that the actions set out in the BDCP are likely to require the involvement of state and federal agencies that administer regulatory programs under the following statutes: California Water Code sections 1000 *et seq*. (water rights), Water Code Sections 13000 *et seq*. (water quality), Fish & Game Code sections 1600 and 5900 *et seq*. (channel modification, fish screens), Clean Water Act Section 401 (water quality) and Section 404 (placement of dredge and fill), Rivers and Harbors Act Section 408 (work on levees), Rivers and Harbors Act Section 10 (navigation), the Migratory Bird Treaty Act (migratory birds), and the Federal Energy Regulatory Act implemented by the Federal Energy Regulatory Commission.

7.1.9 Supporting Entities

The Implementation Office, through the Program Manager, may request that other entities, referred to as Supporting Entities, perform certain implementation tasks, where such entities have the authority, resources, expertise, and willingness to successfully undertake and complete the task. Where specific tasks are so assigned, the Program Manager will ensure that tasks and associated responsibilities are carried out properly and in coordination with other implementation actions. The Authorized Entities may also be Supporting Entities. Other Supporting Entities may include the following entities.

- The Delta Conservancy, which has been designated by statute as a primary state agency to implement ecosystem restoration in the Delta.
- Sponsors of regional conservation planning programs, including those engaged in natural community conservation plan (NCCP) and/or habitat conservation plan (HCP) development or implementation, or of other similar conservation programs, that overlap or are adjacent to the Plan Area.
- State and federal agencies, including NMFS, USFWS and CDFW.
- Other public agencies and private entities that have authority, capacity, or expertise to implement actions described in the conservation strategy in a cost-effective, reliable, and timely manner.

The Program Manager will oversee each Supporting Entity's performance of its responsibility for carrying out a specific task. Decisions by the Program Manager to engage another entity in the implementation of specific plan elements or actions will be accomplished by written contract and

will be based on the entity's jurisdictional authority, level of expertise, and its capacity to carry out the element or action in a timely and successful manner. The Program Manager, with the concurrence of the Authorized Entity Group, may terminate a Supporting Entity's role in Plan implementation in the event that the Supporting Entity does not perform a task adequately.

The take authorizations that will be issued pursuant to the BDCP will provide regulatory coverage under the ESA and the NCCPA for all activities covered by the Plan. As such, no additional take authorizations will be required to implement these activities, regardless of whether the action is carried out by the Implementation Office or a supporting entity.

7.1.10 Stakeholder Council

The Stakeholder Council will be formed to provide opportunities for interested parties to consider, discuss, and provide input on matters related to the implementation of the BDCP. The primary purpose of the council is to provide a forum for the stakeholders to assess the implementation of the Plan, and to propose to the Implementation Office ways in which Plan implementation may be improved. The Stakeholder Council will be organized and convened by the Program Manager, who will also serve as a member of the council.

7.1.10.1 Membership

The Stakeholder Council will consist of representatives from entities and organizations with an interest in BDCP-related issues or otherwise engaged in BDCP matters. At a minimum, representatives of the following entities will be invited to participate on the Stakeholder Council.

- Representatives of DWR and Reclamation
- Representatives of SWP and the CVP water contractors
- Representatives of Other Authorized Entities
- Representatives of USFWS, NMFS, and CDFW
- Representatives of other state and federal regulatory agencies, including the U.S. Army Corps of Engineers (USACE), the U.S. Environmental Protection Agency (EPA), and State Water Resources Control Board (State Water Board)
- A representative of the Delta Stewardship Council
- A representative of the Delta Protection Commission
- A representative of the Delta Conservancy
- A representative of the Central Valley Flood Protection Board
- Representatives of San Joaquin, Sacramento, Solano, Yolo, and Contra Costa Counties

Additional members will be selected from the following categories by the Secretary of the California Natural Resources Agency, in consultation with the directors of the relevant departments of the agency, such as DWR and CDFW. The public may submit nominations for these additional members. Each member will serve a term of 4 years, and may be reappointed without limit and may serve until such time as they are replaced.

- At least three representatives from conservation groups with expertise in fish and wildlife management and/or the management of aquatic habitats and other natural lands

- At least three representatives of local government agencies within the Delta
- At least one representative of fishing organizations
- At least one representative of hunting organizations
- At least one representative of recreation organizations
- At least two representatives of Delta reclamation districts
- At least two representatives of Delta agriculture
- At least three scientists with expertise in the management of natural lands, and native plant and animals species
- At least one representative of water agencies located in the Sacramento Valley
- At least one representative of water agencies in the San Joaquin River watershed
- One representative from organized labor working in the building trades
- One representative from the exclusive representatives of state-employed scientific or engineering professionals
- Other stakeholders whose assistance will increase the likelihood of the success of Plan implementation, including delta civic organizations and members of the general public.

7.1.10.2 Function

The Program Manager will convene and facilitate the Stakeholder Council on at least a quarterly basis to exchange information and provide input to the Program Manager concerning the current significant issues at hand. Stakeholders will have the opportunity to inquire about implementation matters, be apprised by the Program Manager of issues of interest, and make recommendations concerning pending decisions and other implementation matters. Stakeholder Council meetings will be open to the public.

For the benefit of the Stakeholder Council members and the general public, the Program Manager will provide information and conduct briefings regarding Plan implementation. Briefings will include presentations of drafts of the Annual Report, Annual Work Plan and Budget, Annual Delta Water Operation Plan, the Annual Water Operations Report, and the 5-Year Implementation Plan, as described in Chapter 6, *Plan Implementation*. In addition, to further facilitate access to information and promote transparency in decision-making, the Implementation Office will maintain a public, on-line data base of key documents and information, such as annual implementation reports, work plans, and budgets (Chapter 6, *Plan Implementation*, Section 6.3, *Planning, Compliance, and Progress Reporting*).

The Stakeholder Council will develop its own internal organization and process to consider and provide input regarding the various aspects of BDCP implementation, including matters related to work plans and budgets, water operations plans, implementation of conservation measures, adaptive management changes, monitoring and reporting activities, scientific research and review processes, and annual reports. The Technical Facilitation Subgroup will be established to provide input to the Implementation Office and the Adaptive Management Team on technical and scientific matters. The Stakeholder Council process will complement, but not substitute for, ongoing collaboration and communication between stakeholders and the Implementation Office; the Authorized Entity Group, the Permit Oversight Group, and their member entities. The

Implementation Office will organize, help convene, and provide support to the Stakeholder Council and its proceedings.

7.1.10.3 Dispute Resolution

With respect to those matters that are considered by the Stakeholder Council, it is expected that the council will make reasonable efforts to provide input to the Program Manager and the Authorized Entity Group that reflects the general agreement of the members. Any member of the council, however, will have the right to object to any proposal of the Program Manager concerning the annual work plans, annual reports, budgets, the acquisition of land and water interests, or the major elements of the adaptive management program, as set out in Chapter 3, *Conservation Strategy*, and Chapter 6, *Plan Implementation*. Any member may also object to any prior implementation action taken by the Program Manager. Any such objections will be made on the basis that the proposed or prior action will not adequately contribute to achievement of the goals and objectives of the BDCP, or is inconsistent with the requirements of the Plan, and/or the permits and authorizations.

In consultation with the Implementation Office, the Stakeholder Council will establish a process for efficient consideration and resolution of any objections that may arise within the council related to Plan implementation. Under that process, a member of the Stakeholder Council may, at its discretion, object to a proposal or prior action related to such implementation. The member may object on behalf of itself or an entity it represents. The council will make reasonable efforts to resolve the dispute by general agreement. The Stakeholder Council will take action on a dispute within 60 days. If the dispute is not resolved within the 60-day period, the issue in dispute will be elevated to the Authorized Entity Group for its consideration. If the issue remains unresolved between the Authorized Entity Group and objecting member(s) of the Stakeholder Council for over 90 days, it will be referred for decision by the entity with the locus of responsibility for the matter in dispute. For this purpose, *locus of responsibility* means primary responsibility to decide the matter, after which the matter will be ripe for implementation, while recognizing that multiple entities may have some relevant responsibility.

For those matters in which the Stakeholder Council has provided input, the position of the council, including any dissenting views, will be conveyed to the Implementation Office in a timely manner. Those position(s) will help inform decisions regarding the specific matter at hand. The objection procedures and dispute resolution process described above provide a means by which issues properly before the Stakeholder Council may be considered by the decision maker with the locus of responsibility for making the final decision with respect to the issue in controversy. This dispute resolution process, however, does not create a legal right nor does it give rise to a right of action with regards to the members of the Stakeholder Council nor may it be used by any member of the council to delay, or otherwise impede, the proper implementation of the BDCP. The Implementation Office, or other parties responsible for developing proposals or rendering decisions regarding implementation actions, will execute their responsibilities notwithstanding a pending unresolved dispute within the Stakeholder Council.

This process does not substitute for any right or claim which a member of the Stakeholder Council or other entity may have under existing law or contract (e.g., with respect to claims related to private property damage associated with Plan implementation). The process does not create a new right or claim that does not arise under existing law.

7.1.11 General Public

The BDCP implementation process will provide for ongoing and frequent engagement and participation of the public. Other entities with interests in the conservation of Delta resources, may participate in BDCP implementation through the public outreach process coordinated by the Implementation Office (Section 7.5, *Public Outreach*) or through the Stakeholder Council, if eligible for membership. Stakeholder Council meetings will be noticed in advance and open to the public, and will be conducted in a manner that provides adequate opportunity for public comment.

The Implementation Office will also establish a process by which landowners who believe they have been adversely affected by BDCP implementation actions may bring the matter to the attention of the Program Manager. The process will be designed to afford landowners an opportunity to obtain resolution of the matter, such as redress for property damage caused by the actions of public agencies. The process developed by the Implementation Office will be consistent with the requirements of existing claims procedures established by the applicable Authorized Entities and other public agencies for such purposes. Through this process, the Implementation Office can serve as an important resource for landowners seeking timely and efficient disposition of their claims and other grievances. For example, where landowners in the Delta believe that BDCP implementation actions have damaged their property, the Implementation Office will be available to discuss their concerns and provide advice on methods to address their claims, such as assisting the landowner in contacting the appropriate implementing agency to seek resolution of the claim.

7.2 Implementation Office

The Program Manager will direct, oversee, and select staff for the Implementation Office. The Implementation Office, which will not be a legal entity authorized to enter into contracts directly or hold property in its own name, will administer the implementation of the BDCP under the existing authorities of the Authorized Entities. By relying on the legal authorities of the Authorized Entities, the Implementation Office will be equipped with the resources and capacity necessary to carry out BDCP implementation tasks for which it will be responsible. This structure also contemplates that DWR and Reclamation will maintain their historical roles as operators of the SWP and the CVP, but provides flexibility for changing those roles if so directed by Congress, the California Legislature, or through administrative processes.

Proper implementation of the Plan will require a skilled and expert team consisting of administrators, policy-makers, scientists, engineers, data analysts, and regulatory specialists, capable of working together in a cohesive and unified manner. In addition, effective implementation will necessitate adequate financing of and support for the Implementation Office. The BDCP includes assurances (Chapter 8, *Implementation Costs and Funding Sources*) that sufficient funds will be available to provide the Implementation Office with the capacity and resources to carry out the responsibilities described in this chapter.

Specific implementation tasks may be performed by other entities that have the authority, resources, and expertise to successfully complete the task in a timely manner. These Supporting Entities may include, at the discretion of the Program Manager, water agencies, water contractors, regulatory agencies, nongovernment organizations, or other appropriate entities. Where specific tasks are so assigned, the Program Manager will ensure that tasks and associated responsibilities are carried out properly and in coordination with other implementation actions. The Supporting

Entity will be responsible, subject to oversight by the Program Manager, for entering into the necessary contracts and acquiring interests in real and personal property, in some cases obtaining permits or other authorizations, and taking all other steps needed to complete the implementation task.

The primary functions and responsibilities of the Implementation Office are described in the following subsections.

7.2.1 Establishing Administrative Capacity

The Program Manager will oversee and manage the Implementation Office. The Program Manager will arrange for and equip office space to house the Implementation Office, hire a staff of sufficient size to effectively implement the BDCP, and effectuate contracts (through the authorities of DWR, Reclamation, other state and federal agencies, and/or the SWP and CVP contractors) necessary to build capacity to become fully functional and operational.

The Program Manager, with the consent of and pursuant to agreements with any affected agencies, may enlist current employees of the Authorized Entities, as well as employees of other state, federal, or local agencies, who possess the expertise and experience necessary to carry out the tasks associated with BDCP implementation. The specific staffing needs of the Implementation Office will be determined by the Program Manager. All Implementation Office staff, including staff from entities that are represented on the Authorized Entity Group, will work at the direction of the Program Manager.

7.2.2 Preparing Annual Work Plans and Budgets and Managing Expenditures

The Implementation Office will prepare, on behalf of the Authorized Entity Group, the Annual Work Plan and Budget. The Annual Work Plan and Budget will address matters related to general program administration and Plan implementation.[4]

The Program Manager will take into consideration guidance provided by the Adaptive Management Team and will solicit input on the draft plan and budget from the Permit Oversight Group and the Stakeholder Council. The Program Manager will submit the plan and budget to the Authorized Entity Group for review and approval. As part of this process, the Permit Oversight Group will review the draft plan and provide written concurrence, within 30 days, or as soon as practicable thereafter, that the draft accurately sets forth and makes adequate provision for the implementation of the applicable joint decisions of the Authorized Entity Group and the Permit Oversight Group or decisions of an agency within the Permit Oversight Group with authority over the matter, particularly with respect to matters involving adaptive management and biological monitoring and research. If the Permit Oversight Group concludes that the plan does not do so, it will provide written notification to the Program Manager and the Authorized Entity Group, within the 30 day timeframe, or as soon as practicable thereafter, of the specific reasons for its conclusion. In such event, the Authorized Entity Group may direct the Program Manager to modify the plan to the satisfaction of the Permit Oversight Group. If the Authorized Entity Group does not, the Program Manager, Authorized Entity Group and the Permit Oversight Group will, in a timely manner, meet

[4] Annual Delta Water Operations Plans, as developed through the process described in Section 7.1.4, *DWR and Reclamation: Operation of the SWP and CVP*, will be incorporated into the Annual Work Plans.

and confer in an effort to resolve the matter in dispute. If the parties are unable to reach resolution, the review process described in Section 7.1.7, *Review of Disputes Regarding Implementation Decisions*, may be invoked by any member of the Authorized Entity Group or the Permit Oversight Group.

The Program Manager will establish systems and processes to centralize oversight of implementation budgets and expenditures of funds. The Program Manager will also generally review and oversee budgets and expenditures related to implementation actions carried out by Authorized Entities or Supporting Entities. For those activities involving functions that, under state or federal law, cannot be delegated to the Program Manager, including contracting, procurement, and expenditures of state or federal funds, the Program Manager will coordinate with the appropriate designated state and/or federal official to ensure that the necessary function is properly carried out.

7.2.3 Contracting for Services

The Implementation Office, through an appropriate entity with contracting authority, may contract for services as necessary to implement the BDCP, in a manner consistent with state and/or federal law governing such contracts. Such contracts may be for a range of professional services, including those related to the following matters.

- Acquisition and protection of habitat
- Habitat restoration and management
- Monitoring and scientific research
- Legal and regulatory matters
- Environmental and technical services
- Engineering and construction (e.g., conservation facilities, water facilities, levees)
- Funding and grant agreements pertaining to state and federal programs and executing sub grants to third parties to conduct specific actions
- Operations and maintenance

The Program Manager, in coordination with the appropriate entity, will be responsible for the administration of any such contracts. The Program Manager will coordinate with the appropriate designated contact for the Authorized Entities or designated state or federal official to effectuate the execution, administration and implementation of contracts in support of activities of the Implementation Office.

7.2.4 Securing, Holding, and Managing Funds to Support Implementation Actions

The Program Manager will coordinate the expenditure of funds from state, federal, and other sources that have been dedicated to the implementation of the BDCP. In most instances, DWR and Reclamation will serve as fiscal agents, consistent with their existing agency authorities, for the expenditure of funds by the Implementation Office, from both public and private sources, to support implementation actions. The Program Manager will coordinate with the designated fiscal agents to ensure that sufficient funds are available for implementation actions. The Implementation Office,

however, will not be authorized to manage the expenditure of funds related to design, construction, operation, and maintenance of water diversion and conveyance facilities which are or will be elements of the SWP or the CVP.

7.2.5 Coordinating with the Authorized Entities, the Authorized Entity Group, and Supporting Entities

The Program Manager will convene meetings and facilitate communication with the Authorized Entities, Authorized Entity Group, the Permit Oversight Group, and Supporting Entities. The Program Manager will maintain frequent contact with these entities and provide regular updates concerning implementation matters, including progress in meeting BDCP timetables, dissemination of information, and maintenance and availability of BDCP records and reports.

7.2.6 Coordinating with Regulatory Agencies

The Implementation Office will coordinate and confer with the state and federal fish and wildlife agencies, including the Permit Oversight Group, USACE, EPA, State Water Board, and other appropriate regulatory agencies on matters potentially affecting compliance with the provisions of the BDCP, its associated regulatory authorizations, and other regulatory authorizations required to implement BDCP actions. The specific roles of the state and federal fish and wildlife agencies in various implementation actions are described primarily in this chapter and Chapter 3, *Conservation Strategy*. The Program Manager will coordinate and lead meetings convened for such purposes.

7.2.7 Coordinating with the Delta Stewardship Council, Delta Science Program, and Delta Conservancy

The Program Manager will facilitate and monitor the effective and efficient incorporation of the BDCP into the Delta Stewardship Council's Delta Plan (Delta Plan) (California Water Code Section 85320). The Program Manager will ensure that the Delta Stewardship Council receives regular updates on the progress of BDCP implementation, including the status of monitoring programs and adaptive management, as required by California Water Code Section 85320(f). The Implementation Office will also respond to questions or concerns raised by the Delta Stewardship Council regarding the implementation of the BDCP.

The Adaptive Management Team, chaired by the Science Manager, will have primary responsibility for the administration of the Adaptive Management and Monitoring Program described in Chapter 3, *Conservation Strategy*, Section 3.6, *Adaptive Management and Monitoring Program*. The Science Manager, with guidance from the Adaptive Management Team, will coordinate with the Delta Science Program, the IEP Coordinators; the Management, Analysis, and Synthesis Team; and, as necessary, the Delta Independent Science Board (California Water Code Section 85280), regarding matters relating to these monitoring activities and research efforts. The Adaptive Management Team will ensure an appropriate level of integration between the BDCP adaptive management and monitoring program and the Delta Science Plan.

The Implementation Office will further coordinate with the Delta Conservancy as it initiates planning and implementation of ecosystem restoration projects carried out pursuant to the conservation strategy. The Implementation Office and the Delta Conservancy will maintain close

coordination on other programs being carried out by the Delta Conservancy that potentially affect implementation actions.

7.2.8 Coordinating with Local Governments, Delta Protection Commission, and Other Public Agencies

[Note to reader: At the time of this Public Draft, the California Natural Resources Agency is working with representatives from Delta counties to identify an appropriate mechanism to involve Delta counties in Plan implementation. It is the intention of the agency to incorporate revisions to the implementation structure set forth in this chapter that address further Delta county participation in a final plan.]

The Program Manager will serve as the main point of contact for local, state, and federal agencies interested or engaged in implementation issues. The Program Manager will prepare, publish, and distribute general information about the BDCP to those agencies and represent the BDCP at public meetings convened by cities, counties, water and reclamation districts, and other public agencies with jurisdiction within the Delta. The Program Manager will encourage local government participation on the Stakeholder Council.

Where regional conservation plans overlap with or adjoin the Plan Area, the Implementation Office will collaborate and coordinate with the sponsors of those regional conservation plans on the acquisition and management of habitat lands to be preserved and/or restored in areas common to both plans. The Program Manager will, as appropriate, enlist sponsors of those regional conservation plans and local governments to serve as Supporting Entities to assist in the acquisition and/or management of conservation lands. This coordination will also ensure consistency between overlapping plans and encourage complementary actions. The Implementation Office will further work with plan sponsors to avoid conflicts between conservation plans; where conflicts are unavoidable, the Implementation Office will ensure that the conservation strategy of the regional plan is neither compromised nor otherwise adversely affected.[5] Where mutually beneficial, the Implementation Office will encourage joint acquisitions of land with local government plan sponsors to realize economies-of-scale and to secure large, contiguous blocks of habitat. The Implementation Office will explore opportunities to fund early conservation actions (i.e., habitat acquisition and/or restoration) that may benefit both the BDCP and other regional conservation plans.

7.2.9 Coordinating with Flood Control Agencies

In the design and implementation of implementation actions that could directly or indirectly affect flood control capabilities, the Implementation Office will coordinate and consult with agencies responsible for flood control in the Plan Area, including USACE, DWR, Central Valley Flood Protection Board, Reclamation districts in the Delta, local flood control agencies, and water districts.

7.2.10 Addressing Legal Matters

The Implementation Office, in coordination with the Authorized Entities, state and federal fish and wildlife agencies, and other appropriate public agencies, will, as appropriate, provide support to

[5] Actions will include addressing the effects of BDCP tidal and floodplain restoration activities on existing conservation easements, and ensuring that acquisition of cultivated land easements do not preclude the overlapping plan from meetings its cultivated land protection requirements.

entities with the responsibility for handling legal matters that may arise out of the implementation of the BDCP. To the extent permitted by applicable law, the Implementation Office may also use legal counsel, retained by an appropriate entity, to address the range of regulatory matters associated with implementation, including compliance with the BDCP and its Implementing Agreement; compliance with various state and federal laws; transactional and other issues related to land acquisition; and general, routine, in-house legal matters. No federal funds will be used to retain such counsel.

7.2.11 Overseeing Plan Amendments

In the event that an amendment to the BDCP and its authorizations is necessary, the Implementation Office will be responsible for compiling information and preparing the documentation necessary to support a proposal for such an amendment and for working with the applicable state and federal fish and wildlife agencies to obtain approval. Prior to submitting such documentation, the Program Manager will seek input from the Authorized Entity Group, the Permit Oversight Group, and the Stakeholder Council regarding the issue at hand. As required by law, the applicable fish and wildlife agencies will determine whether proposed amendments will be approved.

7.2.12 Implementing NEPA and CEQA Mitigation Measures

Subject to the approval of the lead agencies conducting the environmental review of the BDCP under the National Environmental Policy Act (NEPA) and/or the California Environmental Quality Act (CEQA) and the concurrence of the Authorized Entity Group, the Implementation Office will effectuate the implementation of some or all of the adopted mitigation measures identified in the mitigation and monitoring plan associated with the environmental documentation for the BDCP. Similarly, the Implementation Office may assume, subject to lead agency approval, responsibility for the implementation of adopted CEQA/NEPA mitigation measures related to the implementation of specific implementation actions. The role of the Implementation Office in implementing such mitigation measures will be limited to those measures associated with either the BDCP environmental impact statement (EIS)/environmental impact report (EIR) or subsequent environmental documentation that is required for implementation actions.

7.3 Implementation of the Conservation Strategy

The Program Manager, through the Implementation Office and on behalf of the Authorized Entities, will generally be responsible for the planning, oversight, and implementation of actions set out in the conservation strategy. Certain components of the conservation strategy, however, will be the responsibility of other Plan participants, including those related to water operations and the Adaptive Management and Monitoring Program (Chapter 3, *Conservation Strategy,* and Chapter 6, *Plan Implementation*). DWR will implement actions associated with construction of *CM1 Water Facilities and Operation.* With respect to water operations-related conservation measures, DWR and Reclamation will coordinate implementation of actions associated with *CM1 Water Facilities and Operations* and water operations aspects of *CM2 Yolo Bypass Fisheries Enhancement*. The Adaptive Management Team, which will be chaired by the Science Manager, will have primary responsibility for administration of the Adaptive Management and Monitoring Program (Chapter 3, *Conservation Strategy*, Section 3.6, *Adaptive Management and Monitoring Program*).

The Program Manager will be afforded sufficient flexibility to use supporting entities, including the Authorized Entities and the state and federal fish and wildlife agencies, to undertake certain actions that enhance the overall effectiveness of the conservation strategy and yield greater efficiencies in Plan implementation.

The tasks and responsibilities of the Implementation Office regarding the implementation of the conservation strategy are described in the subsections below.

7.3.1 Implementation of the Habitat Protection and Restoration Conservation Measures

The Implementation Office will take actions, either directly or through Supporting Entities, to implement conservation measures related to the protection of existing habitat and the enhancement and restoration of habitat within the identified restoration opportunity areas (ROAs) and conservation zones, as well as within other areas in the Plan Area, as described in Chapter 3, *Conservation Strategy*. These measures will largely involve the acquisition of habitat lands, the restoration or enhancement of habitat conditions, and the management and maintenance of habitat lands. The Implementation Office will work with, and may effectuate contracts with, the Delta Conservancy or other Supporting Entities to carry out the conservation measures associated with habitat protection and restoration.

7.3.1.1 Acquisition and/or Lease of Property Interests

Pursuant to the authorities of the Authorized Entities, the Implementation Office will facilitate the acquisitions of interests in real property as part of the implementation of conservation measures associated with the protection and/or restoration of habitat. Similarly, under the direction of the Implementation Office, Supporting Entities that have been selected to help implement such conservation measures may also acquire interests in real property, as described in Chapter 3, *Conservation Strategy*. Interests in land acquired pursuant to the BDCP may be conveyed to the Delta Conservancy, CDFW, USFWS, or other Supporting Entities, as appropriate.

The acquisition of fee interest and/or conservation easements, for the purpose of habitat protection, restoration, and creation, will include the following tasks.

- Routine due diligence review of real property
- Biological due diligence to assess habitat/restoration values
- Appraisal of property, including oversight of the appraisal process
- Negotiation and execution of the transaction
- Receipt of title or easement to lands
- Selection of appropriate mechanism or instrument to ensure the protection of conservation lands

The Implementation Office may, through an Authorized Entity or other Supporting Entity, acquire or lease lands or facilities for the purpose of conducting scientific research and monitoring, housing administrative offices and equipment, or undertaking other activities as necessary to administer and implement the measure.

7.3.1.2 Management of Land

The Implementation Office will oversee the management and maintenance of lands acquired for conservation purposes, as described in Chapter 3, *Conservation Strategy*. The Implementation Office may select Supporting Entities to carry out such management and maintenance activities. Land management will generally include the following tasks.

- Habitat management
- Invasive species control
- Security patrol
- Liaison with neighboring landowners
- Payment of appropriate in lieu fees
- Enforcement of easement terms and conditions
- Mosquito abatement
- Management of vegetation on flood control facilities to maintain flood flow capacity
- Species and habitat monitoring
- Public access management
- Emergency response
- Safety of nearby aircraft operations
- Research activities
- Educational services
- Agricultural easement oversight

7.3.1.3 Maintenance of Facilities and Improvements

The Implementation Office will oversee the maintenance and operation of all facilities and improvements associated with lands acquired for any BDCP purpose, including for the conservation of habitat, as described in Chapter 3, *Conservation Strategy*. The Implementation Office may also oversee the maintenance of facilities and improvements on lands acquired for the purpose of satisfying mitigation obligations adopted through the environmental review process for the BDCP or for specific actions implemented under the Plan.

7.3.1.4 Funding of Activities of Other Entities

The Implementation Office may direct funds to other entities (such as local governments engaged in regional conservation planning processes), subject to the authorities of the Authorized Entities or other participating agencies and under appropriate conditions and oversight, to implement habitat and species conservation efforts that help advance the biological goals and objectives of the BDCP, as described in Chapter 3, *Conservation Strategy*.

7.3.2 Implementation of Water Operations Conservation Measures

Implementation of *CM1 Water Facilities and Operations* and water operations aspects of *CM2 Yolo Bypass Fisheries Enhancement*, as described in Chapter 3, *Conservation Strategy,* will be the responsibility of DWR and Reclamation, consistent with their existing responsibilities and authorities. The state and federal fish and wildlife agencies, in conjunction with DWR and Reclamation, will participate in real-time operational decisions with respect to certain operational parameters. The nature and scope of such real-time adjustments, as well as the process by which such decisions will be made, are set out in Chapter 3, *Conservation Strategy*.

7.3.2.1 Annual Reporting and Planning for Water Operations

The Implementation Office will provide input to DWR and Reclamation regarding plans and reports related to Delta water operations. The planning and reporting requirements related to water operations are set out in Chapter 6, *Plan Implementation*, Section 6.3, *Planning, Compliance, and Progress Reporting.*

The Annual Delta Water Operations Plan will be prepared by DWR and Reclamation, with input from the Implementation Office, the Permit Oversight Group, the Adaptive Management Team, and the Stakeholder Council. DWR and Reclamation will retain final approval authority over the plan. However, the Permit Oversight Group will, within 30 days of receipt of the draft plan, or as soon thereafter as practicable, review the draft plan and provide written concurrence that the plan is consistent with the provisions of the BDCP, the Implementing Agreement, and the regulatory authorizations, as described in Section 7.1.4, *DWR and Reclamation: Operation of the SWP and CVP.*

The Implementation Office will prepare, on an annual basis, with input from DWR and Reclamation, the water contractors, the state and federal fish and wildlife agencies, and the Stakeholder Council, a Water Operations Report. Among other things, the reports will include a summary of the prior year's operations, including a comparison of the actual operations with planned operations, and an evaluation of the effectiveness of actions for covered fish species and ecological processes, including the responses to real-time operational changes the prior water year's operational effects on covered species. The Annual Water Operations Report will be submitted to the Authorized Entity Group for its review and approval. Upon approval of the report by the Authorized Entity Group, the Implementation Office will submit the report to the Permit Oversight Group for its acceptance.

The Program Manager will post on the BDCP website the Annual Delta Water Operations Plan and the Annual Water Operations Report, including subsequent revisions to those plans or reports. As part of those postings, the Program Manager will include information, on a daily basis, about planned and actual water diversions, including updates on revisions to the Annual Delta Water Operations Plan that are made through the Seasonal Operations Strategy process. An accounting of actual diversions, including daily, weekly, monthly, and yearly operational levels, will also be posted. The Program Manager will describe and explain operational changes, including departures from planned or anticipated diversion levels, in terms that are understandable to the general public.

7.3.3 Implementation of Other Conservation Measures

The Implementation Office will be responsible for the implementation of other conservation measures, including conservation measures designed to address other stressors, as described in

Chapter 3, *Conservation Strategy*. The Implementation Office may implement these other conservation measures either directly or through Supporting Entities, which may receive funds through the Implementation Office to carry out such actions. Supporting Entities, for instance, may help implement other stressor conservation measures that reduce the adverse effects of toxic contaminants, nonnative predatory species, low dissolved oxygen zones, and entrainment unrelated to covered activities.

7.3.4 Coordination of Adaptive Management and Monitoring Program

The Adaptive Management Team will have primary responsibility for the administration of the BDCP adaptive management and monitoring program, as described in Chapter 3, *Conservation Strategy,* Section 3.6, *Adaptive Management and Monitoring Program*. The Implementation Office will work in close collaboration with the Adaptive Management Team regarding such matters. The Adaptive Management Team, through the Science Manager, will coordinate its efforts with the Authorized Entity Group, Permit Oversight Group, Stakeholder Council, the IEP, and Delta Science Program.

The Adaptive Management Team will establish a framework for the monitoring program (e.g., scope, methods, and protocols), in coordination with IEP, the fish and wildlife agencies, Delta Science Program, and other parties, as appropriate. The Science Manager will work with the entities identified by the Adaptive Management Team to determine technical staffing needs and other support requirements that will be necessary to adequately implement the monitoring program. The Science Manager, with guidance from the Adaptive Management Team, will enlist the assistance of the IEP in carrying out the monitoring program. As part of this effort, the Science Manager, with the guidance of the Adaptive Management Team, will help develop and implement a process for compiling, evaluating, and synthesizing the results of monitoring activities, and will prepare a plan to maintain databases and the results of data analysis obtained through the monitoring program.

The Adaptive Management Team will manage the BDCP research program, as described in Chapter 3, *Conservation Strategy,* Section 3.6, *Adaptive Management and Monitoring Program*, in coordination with IEP and the Delta Science Program. The Adaptive Management Team will identify research priorities to address specific uncertainties, and will administer a process to select and coordinate researchers who will be involved in the program. In addition, the Adaptive Management Team will be responsible for the compilation and synthesis of the results of studies and analysis undertaken by other entities and organizations that are assisting in the implementation of the Plan. With guidance from the Adaptive Management Team, the Science Manager will coordinate BDCP funding for research by other entities and organizations, as described in Section 3.6, *Adaptive Management and Monitoring Program*.

The Adaptive Management Team will administer and commission independent science review, as determined to be necessary, and may enlist the Delta Science Program and Independent Science Board to provide science support and review. As appropriate, the Adaptive Management Team obtain input and advice from independent scientists through the Delta Science Program and other science programs. Matters relating to the conduct of scientific reviews, and the acquisition of independent scientific advice to assist in the implementation of the BDCP, will be conducted in a manner that ensures their independence and scientific integrity. The Adaptive Management Team, through the Science Manager, will work with the Lead Scientist for the Delta Science Program and

IEP Lead Scientist to ensure that BDCP science activities, reporting, and reviews are coordinated with other science activities being conducted in the Delta.

7.3.4.1 Compliance Monitoring and Reporting

The Implementation Office will track implementation actions and carry out the reporting requirements of the Plan, as described in Chapter 6, *Plan Implementation*, Section 6.3, *Planning, Compliance, and Progress Reporting.* Reports prepared by the Implementation Office will include, among other things, the results of monitoring and research efforts undertaken by the Adaptive Management Team and, under its direction, by other parties; assessments of overall plan performance; and an accounting of the distribution and expenditures of funding associated with the various entities engaged in implementation actions. See Section 6.3 for more specific information regarding reporting requirements under the Plan. The Program Manager will ensure that all such reports are posted in a timely manner on the BDCP website.

7.3.5 Management of the Adaptive Management Program

The Adaptive Management Team will have primary responsibility for the administration of the adaptive management program, in accordance with Chapter 3, *Conservation Strategy,* Section 3.6, *Adaptive Management and Monitoring Program*. The Science Manager will chair the Adaptive Management Team, which will work with IEP and other science programs to assemble, synthesize, and analyze the results of BDCP monitoring efforts and integrate the results of new and relevant scientific research and studies conducted by other parties, including the Delta Science Program. The Science Manager will facilitate discussion and consideration of adaptive management matters by the Adaptive Management Team and will convey any proposed changes to conservation measures or biological objectives, or other adaptive management matters for which the Adaptive Management Team has been unable to reach consensus, to the Program Manager. The Program Manager will forward, without modification, the recommendations of the Adaptive Management Team to the Authorized Entity Group and the Permit Oversight Group. The Program Manager may include any additional material they deem necessary or useful to the Authorized Entity Group or Permit Oversight Group in making their decision.

The Program Manager and Science Manager will ensure that issues related to policy, law, budget, schedule, and other matters of concern to BDCP implementation and the Authorized Entity Group are raised to the attention of the Adaptive Management Team and duly considered.

7.3.6 Implementation of Measures in Response to Changed Circumstances

The Permit Oversight Group and/or the Implementation Office will be responsible for identifying and responding to changed circumstances, as described in the BDCP, and the Implementation Office will be responsible for implementing the responses set out in the Plan to address those changed circumstances, as described in Chapter 6, *Plan Implementation*, Section 6.4, *Regulatory Assurances, Changed Circumstances, and Unforeseen Circumstances*. The Program Manager will establish a process to ensure timely engagement of the Authorized Entity Group; fish and wildlife agencies, including the Permit Oversight Group; and the Stakeholder Council when a changed circumstance has been identified and a response to such changed circumstances is required.

7.4 Regulatory Compliance Related to BDCP Implementation

The Program Manager, through the Implementation Office, will be responsible for ensuring that the BDCP is properly implemented, including maintaining compliance with the elements of the Plan and the provisions of the associated regulatory authorizations. The Implementation Office, on behalf of the appropriate Authorized Entities, will also identify and take steps to obtain from state and federal agencies any other regulatory permits or authorizations that are necessary to effectuate Plan implementation. To further ensure that the BDCP is properly implemented over time, the Implementation Office will maintain regular contact with the Permit Oversight Group and its member agencies.

7.4.1 Maintaining Permits and Authorizations and Obtaining Amendments

The Implementation Office will establish a process to ensure compliance with the provisions of the BDCP and its associated regulatory authorizations. If amendments or modifications to the BDCP and/or its regulatory authorizations become necessary, the Implementation Office and the responsible Authorized Entities will work with the Permit Oversight Group or the responsible agency to develop the necessary documentation to support such amendments.

7.4.2 Obtaining Additional Regulatory Authorizations

In addition to take authorizations issued under the ESA and the NCCPA, other state and federal regulatory authorizations will be required to implement certain BDCP actions. The Implementation Office will oversee efforts to obtain any such regulatory authorizations that are necessary for the implementation of BDCP actions. The Implementation Office will generally assume responsibility for identifying and preparing the necessary documentation to support the issuance of such regulatory authorizations, unless the applicable Authorized Entity chooses to do so. The Implementation Office may also assign the responsibility to a Supporting Entity to obtain such authorizations.

The EIR/EIS for the BDCP will provide sufficient environmental review and analysis of the proposed adoption of the Plan by DWR, the implementation of CVP-related actions in the Delta undertaken by Reclamation, and the proposed issuance of take authorizations by the state and federal fish and wildlife agencies pursuant to the Plan. The EIR/EIS may also provide sufficient environmental review to support other anticipated federal and state regulatory authorizations necessary for Plan implementation. However, additional NEPA and CEQA review, as well as compliance with other environmental laws, will be necessary for a number of BDCP-related actions.

The Implementation Office may seek, oversee and monitor state and/or federal authorizations, as directed by the Authorized Entity Group. In addition the Implementation Office may conduct appropriate environmental review necessary for the implementation of BDCP conservation measures. In the event that a Supporting Entity assumes responsibility for obtaining such authorizations, the Implementation Office will assist that entity in its efforts. Compliance with the following laws and regulatory processes, among others, will likely be necessary for the following BDCP actions.

- Sections 404 and 401 of the Clean Water Act

- Sections 10 (33 USC 403) and 14 (33 USC 408) of the Rivers & Harbors Act of 1899
- Section 1602 of the Fish & Game Code (Streambed and Lakebed Alteration Agreements)
- Section 106 of the National Historic Preservation Act
- Encroachment permits from the Central Valley Flood Protection Board and Reclamation districts to conduct work on levees
- Federal Energy Regulatory Act compliance through the Federal Energy Regulatory Commission
- NEPA and CEQA, as necessary for certain project-related actions

The Program Manager will be responsible for identifying all such authorizations necessary for Plan implementation and for ensuring that such authorizations have been obtained, consistent with the implementation schedule set out in Chapter 6, *Plan Implementation.*

7.5 Public Outreach

The Implementation Office will implement a public outreach and education program to promote public awareness and provide opportunities for public input on matters concerning Plan implementation. The outreach program will meet the following objectives.

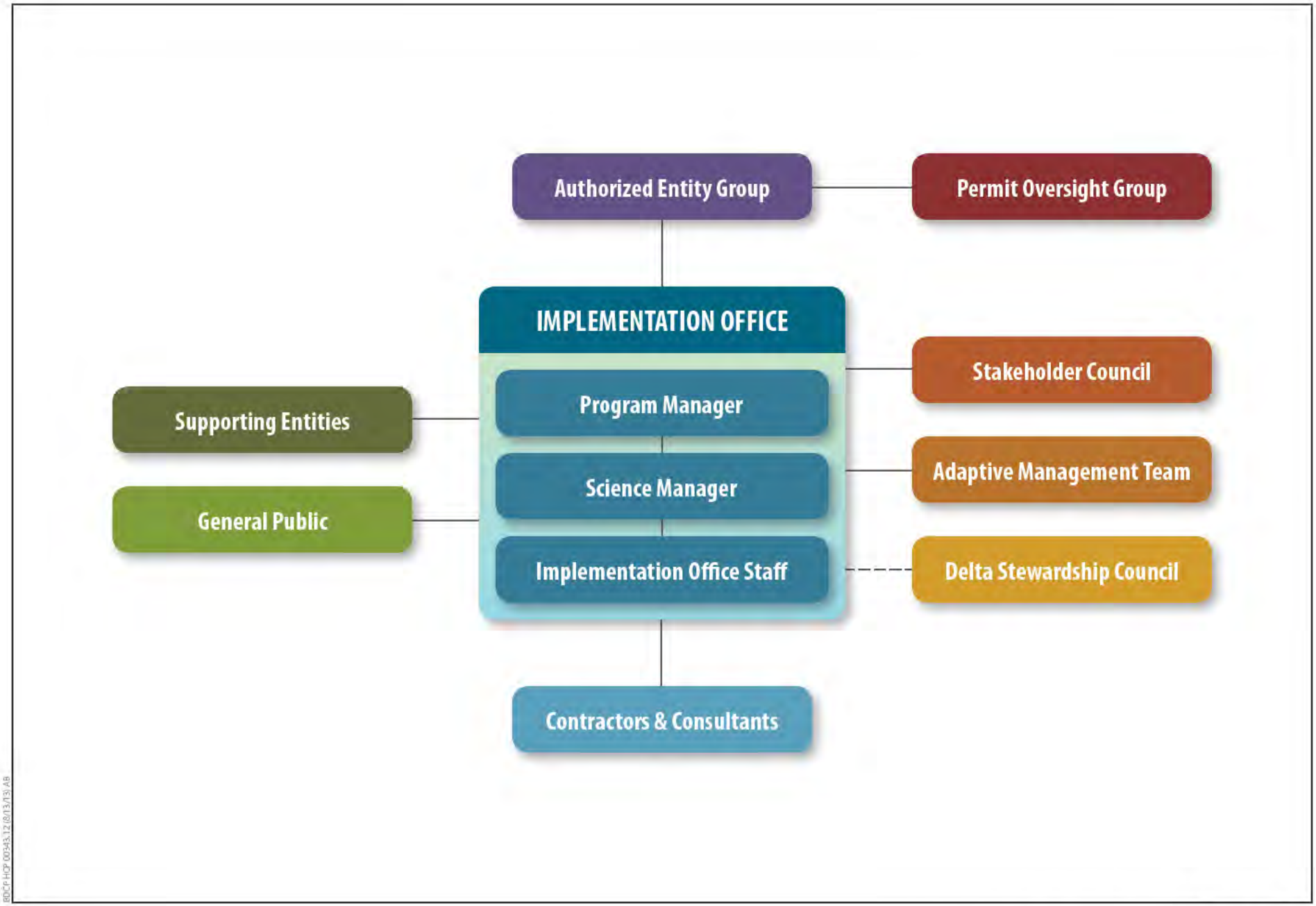
- Promote public awareness of and understanding about the Plan's purpose, specific conservation measures and their implementation.
- Provide streamlined and timely access to information.
- Provide opportunities to engage with decision-makers.
- Maintain a transparent process for understanding, clarifying and addressing public input and comments.

Particular emphasis will be placed on outreach efforts focused on the following stakeholders: Delta residents, including landowners, farmers, and business owners; environmental community; agricultural community; boaters; commercial fishing interests; recreational anglers; local governments; reclamation districts; irrigation districts; public utilities; public and private landowners adjacent to BDCP conservation areas; and Native American tribes.

The public outreach and education program will include the following elements, at a minimum.

- **Informational material.** The preparation and distribution of general information materials such as reports, quarterly electronic newsletters, and issue-specific fact sheets in timely manner so as to facilitate public understanding and meaningful public input.
- **Interactive website.** Development and maintenance of an interactive website that provides real-time access to information, updates regarding implementation activities, and expanded opportunities for public engagement and input. Visual elements such as maps and webcasts will be used to further aid information sharing and public understanding.
- **Speakers bureau.** Presentation of BDCP implementation information to various groups and at public meetings that occur throughout the state, as well as targeted audiences, including Delta communities, tribes, and specific statewide stakeholder interests.

- **Annual public workshops.** Commitment to annual public workshops and others as needed to provide timely opportunities for public dialogue, input and comment regarding a wide range of implementation issues.
- **Environmental justice.** An environmental justice outreach program will be integrated into overall outreach activities described above to provide minority and low-income communities in and near the Delta with access to information about Plan implementation and opportunities for input. Outreach techniques will include creating and maintaining a dedicated multilingual web page, providing translation services at public workshops and community presentations, and contacting ethnic media outlets.



BDCP HCP 00343.12 (8/13/13) AB

Figure 7-1
Organization of BDCP Implementation

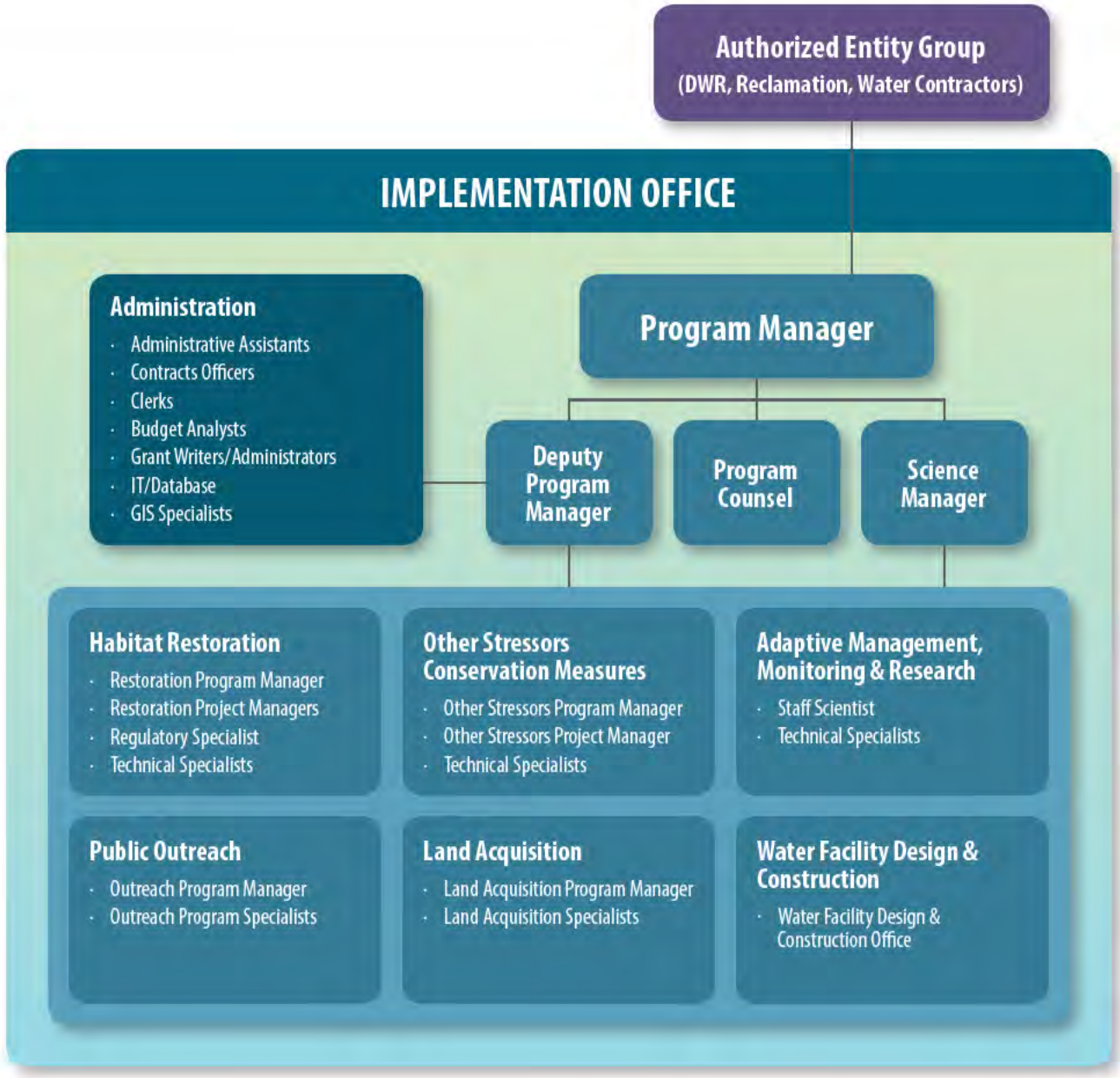


Figure 7-2
Staff Organization for BDCP Implementation Office

Item 2

Water Emergency Response Organization of Orange County

Planning & Operations Committee
Municipal Water District of Orange County
Monday, May 5, 2014 at 8:30 am

WEROC History & Funding

- Originally created in 1983 as VEPO, Volunteer Emergency Preparedness Organization
- Current Funding (FY 05/06):
  - City of Anaheim
  - City of Fullerton
  - City of Santa Ana
  - Municipal Water District of Orange County
  - Orange County Sanitation District
  - Orange County Water District
  - South Orange County Wastewater Authority

MISSION

- Support the utilities state of preparedness for emergency response
- Restore the systems through coordination and support during and immediately following an emergency
- Represent the utility interests as a liaison to outside coordinating partners during all phases of emergency management

WEROC AGREEMENT

- Indemnification agreement
- Release of liability
- Covers both water and wastewater agencies
- Mutual assistance

SIGNATORIES – 35 TOTAL

Cities:

1. Anaheim
2. Brea
3. Buena Park
4. Fountain Valley
5. Fullerton
6. Garden grove
7. Huntington Beach
8. La Habra
9. La Palma
10. Newport Beach
11. Orange
12. San Clemente
13. San Juan Capistrano
14. Santa Ana
15. Seal Beach
16. Tustin – Coming Soon
17. Westminster

Special Districts:

1. Costa Mesa Sanitary District
2. East Orange County Water District
3. El Toro Water District
4. Irvine Ranch Water District
5. Laguna Beach County Water District
6. Mesa Water District
7. Midway City Sanitary District
8. Moulton Niguel Water District
9. Municipal Water District of Orange County
10. Orange County Sanitation District
11. Orange County Water District
12. Santa Margarita Water District
13. Serrano Water District
14. South Coast Water District
15. South Orange County Wastewater Authority
16. Trabuco Canyon Water District
17. Yorba Linda Water District

Private:

1. Golden State Water Company

PLANS & TRAINING

- Review of local agency plans
  - Emergency response
  - Disaster Specific Templates
- Regional coordination plans
  - Water Sector Position
  - AlertOC
- Training and exercises
  - Multi-agency tabletop and functional exercises
  - All-hazard EOC training programs

6

Training Statistics

- 26 Types of Training Tracked
- 2,581 Attendees
- Total of 8,697 Contact Hours
- Participating Agencies:
  - All WEROC Member Agencies
  - Metropolitan Water District Of Southern California
  - California Department of Public Health
  - Other Outside Agencies

Response

- Recognized by the County Operational Area
  - Seat at the Operational Area EOC
- Coordinates
  - Information sharing
  - Resource management
  - Damage assessments
  - Multi-Agency cooperation

Response Cont.

- WEROC Emergency Operations Centers
  - Plans, procedures, & support documents
  - Communications systems
  - Standardized maps
  - Volunteer staffing

- Liaison to:
  - Orange County
  - Metropolitan Water District of Southern California
  - Ca & OC Department of Public Health
  - Other Utilities

Recovery & Mitigation

- Recovery
  - Resource coordination
  - Fiscal documentation and reimbursement
  - After Action/Corrective Action sharing process
- OC Multi-Agency Multi-Hazard Mitigation Plan

10

Regional Policy Development & Coordination

- County
  - Orange County Emergency Management Organization (OCEMO)
  - Operational Area Executive Board
  - City and special districts coordination
  - Drought Task Force
- Metropolitan
  - Metropolitan Agency Radio System (MARS) communications
  - Joint coordination efforts
- State
  - California Southern Region Emergency Operations Center (REOC)
  - California Water/Wastewater Agency Response Network (CalWARN)
  - Southern Region Drought Task Force
- National
  - American Water Works Association (AWWA)
  - Infragard

11

Accomplishments

Grant Funding

- First Non-Traditional Emergency Response Agency to Receive Funding

- Summary of Received Funds:
  - Hazard Mitigation Plan (2005) - $168,053
  - EOC Remodel & Mapping (2009) - $76,290
  - Trainings & Conferences (2010-2014) - $14,320
  - Water Trailers (2011) - $497, 304

Total: $755,967

Grant Proposals

- Proposed:
  - Generator Cabling & Connections (2014) - $16,000
  - Fuel Delivery Trailers (2014) - $100,000

PLANS

- WEROC Drinking Water Distribution Plan
- WEROC Point of Distribution Plan for Anthrax Response
- Statewide Water Procurement & Distribution Plan
- Statewide Water Sector Unit Position

DECLARED DISASTER RESPONSE

- Diemer Shutdown 2007
- Earthquakes
  - Northridge (1996), Chino (2008), Easter (Baja) 2010, La Habra (2014)
- Winter Storms
  - 2005, 2006, 2008, 2010
- Fires
  - Sierra Fire (2006), Santiago Fire (2007), Freeway Complex Fire (2008)
- Power Outage (2011)

Other Successes

- Participation in:
  - County Communication Programs
  - Grant Advisory Groups
- Coordination with Southern California Office of Emergency Services
- National Incident Management System (NIMS) Compliance
- Social Media Presence

Looking to 2014

- MWDOC staff training
- Fuel and Energy Reliability Planning
- Grants
- Tapping into Member Agency staffing & resources

Current Conditions Report

- Fires
- Drought
- Power Supply

Kelly Hubbard
WEROC Emergency Manager
Municipal Water District of Orange County
(714) 593-5010
KHUBBARD@MWDOC.COM

Be Water Prepared!
Protecting Water Through Preparedness & Response Coordination

INFORMATION ITEM
May 5, 2014

TO: **Planning & Operations Committee**
(Directors Osborne, Barbre, Hinman)

FROM: **Robert Hunter, General Manager**

Staff Contact: Lee Jacobi

SUBJECT: **Overview of OCWD's Purchases of Imported Water and MWDOC's Tier 1 Limit in 2014**

STAFF RECOMMENDATION

Staff recommends the Planning & Operations Committee read and file:

COMMITTEE RECOMMENDATION

Committee recommends (to be determined at Committee Meeting)

SUMMARY

MWDOC's imported water purchases in 2014 will be up sharply from 2013's, due mostly to OCWD purchases, but MWDOC is still projected to stay under the Tier 1 Limit. MWDOC staff is working closely with our Member Agencies, especially with OCWD, to monitor purchase volumes. And, staff will continue to provide monthly updates to the Board.

DETAILED REPORT

One of the tasks performed by MWDOC staff is a monthly accumulation of our "Firm" water purchases. The purpose of this report is to evaluate whether MWDOC will be over the Tier 1 Limit in 2014, based on actual purchases to date and projections to the end of the calendar year.

MET's Tiered Rate Structure

Budgeted (Y/N):	Budgeted amount:	Core __	Choice __
Action item amount:	Line item:		
Fiscal Impact (explain if unbudgeted):			

Beginning in 2003, Metropolitan (MET) instituted a tiered rate structure, with the aim of managing the growth of demand for its imported water supply. The tiered rate structure sends a wholesale pricing signal that encourages local resource development and water use efficiency. There are just two tiers. Annual usage, summed over a calendar year, is compared to a Tier 1 Limit that is based on the highest volume of "Firm" imported water purchases in recent years. "Firm" purchases would include all other than those considered interruptible. Firm water usage below the Tier 1 Limit is billed at the Tier 1 Rate, while usage above the Tier 1 Limit is billed at the Tier 2 Rate. As of 2014, the Tier 2 rate is $142 per AF higher than the Tier 1 rate. If we purchase 10,000 AF over our Tier 1 Limit, that would cost us an additional $1.4 million in Tier 2 costs. MWDOC's recent annual Firm water purchases and our Tier 1 Limit are shown in Fig. 1. The Tier 1 Limit for MWDOC was increased by about 50,000 AF in 2012, to 280,592 AF, because OCWD's replenishment purchases and any agricultural purchases by MWDOC are now counted as Firm purchases.

In 2013, MWDOC's imported water purchases were about 216,000 AF. In 2014, MWDOC's import purchases are expected to be significantly higher than last year. That is due mostly to sharply increased OCWD purchases, and to increased purchases by IRWD and Serrano WD for Irvine Lake.

OCWD's Replenishment Purchases

Orange County Water District (OCWD) buys imported water as one of the ways that it replenishes the Orange County Groundwater Basin. OCWD in the past has bought as little as zero and as much as 100,000 AF of imported water a year, depending on the availability of local sources, pumping demands, the Basin storage level, and other considerations. Local runoff (Santa Ana River flows, etc.) is significantly down from normal, while pumping has been increasing. Basin storage levels are dropping. OCWD projects the Basin level to be -322,000 AF (as compared to full) as of the end of June 2014. OCWD purchased about 30,000 AF from MWDOC in Calendar 2013. Through the end of March 2014, OCWD has purchased about 15,000 AF, and MWDOC projects additional purchase of 69,000 AF, for a Calendar Year 2014 total of about 84,000 AF.

IRWD and Serrano Purchases for Irvine Lake

Irvine Ranch WD and Serrano WD purchase imported water that they place into Irvine Lake-- little to none in wet years, but up to 20,000 AF in dry years. IRWD and Serrano purchased about 3,000 AF into Irvine Lake in 2013. So far in 2014, IRWD and Serrano have purchased about 4,000 AF, and MWDOC anticipates an additional purchase of 7,000 AF, for a calendar year total of about 11,000 AF.

Consumptive Use of Imported Water

Imported water purchased by the retailers for "consumptive" use is the largest portion of MWDOC's total, but this usage has relatively small variation year to year. Demand increases in dry years and decreases in wet years. Agencies with shallow wells in local basins import more in dry years. However, agencies that increase local production and/or increase water use efficiency (WUE) are importing less. The state of the economy affects retail demand and therefore also affects how much water MWDOC imports. Year-to-year variation in "consumptive" water use is on the order of 7% for the county as a whole. In 2013, "consumptive" use of imported water in MWDOC was about 180,000 AF. In the first three months of 2014, "consumptive" use of imported water was about 34,000 AF. MWDOC projects additional purchases of about 132,000 AF in the remaining nine months, with a range of range of ± 7% or ± 9,000 AF. It should be noted that these projections

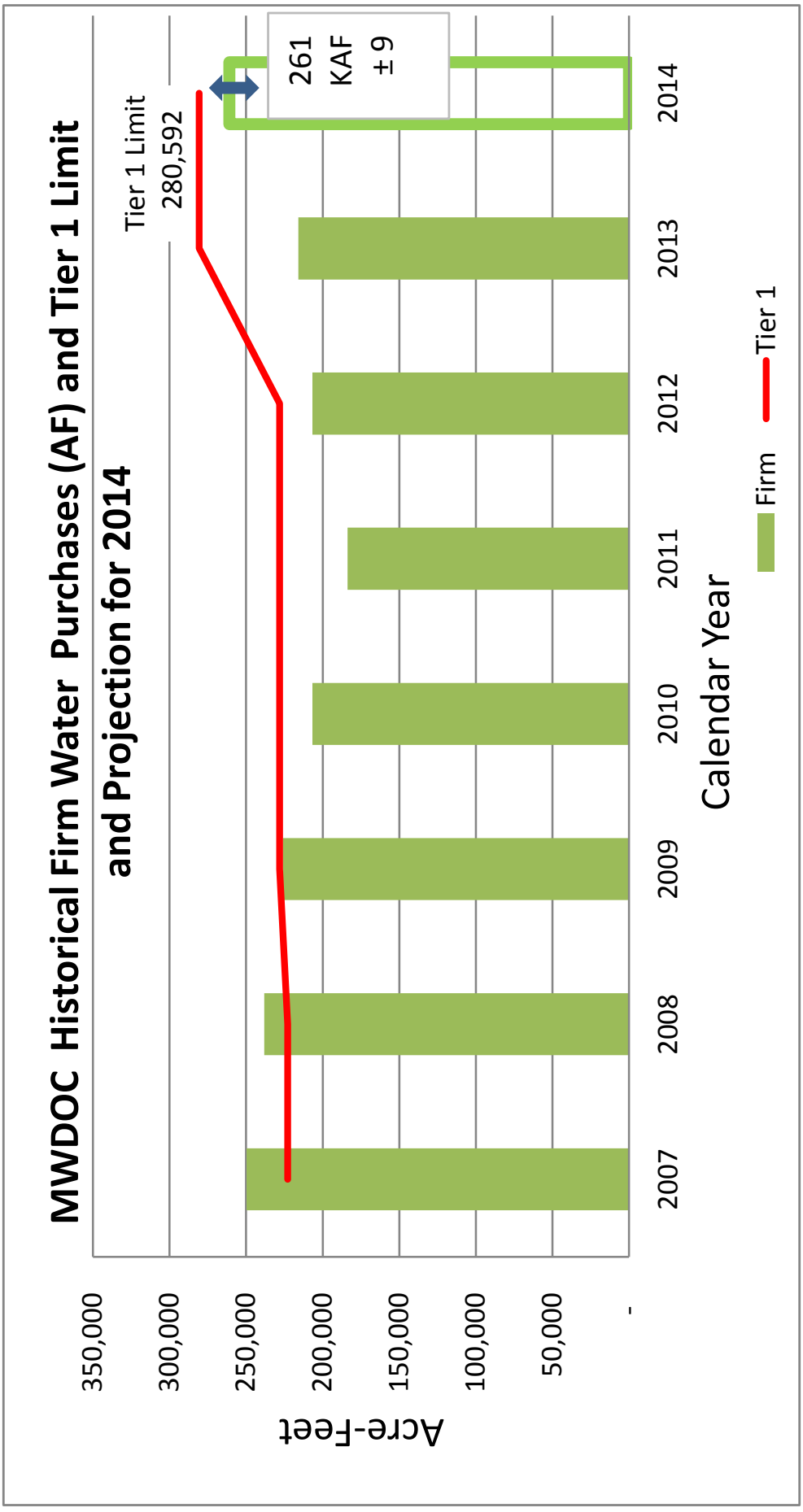
assume normal weather conditions, and that the Basin Production Percentage (BPP) increases from 70% to 72% as of July 2014. The 2014 calendar year total for "consumptive" use of imported water in MWDOC is projected to be about 166,000 AF ± 9,000 AF.

MWDOC Total 2014 Purchases

With the above assumptions, the MWDOC import for calendar 2014 is projected to be about 261,000 AF ± 9,000 AF, as graphed in Fig. 2. That is up sharply from the 216,000 AF purchased in calendar 2013. The high estimate of 270,000 AF is about 10,000 AF under the Tier 1 Limit of 280,592 AF. This estimate is subject to change due to several factors, including: the vagaries of weather; emergency demands; unexpected loss of local supplies; and customers heeding the call to conserve water.

MWDOC staff is working closely with our Member Agencies, especially with OCWD, to monitor purchase volumes over the remaining months of 2014. Staff will continue to keep the Board informed with monthly updates of the accumulated purchases and projection through the end of the calendar year.

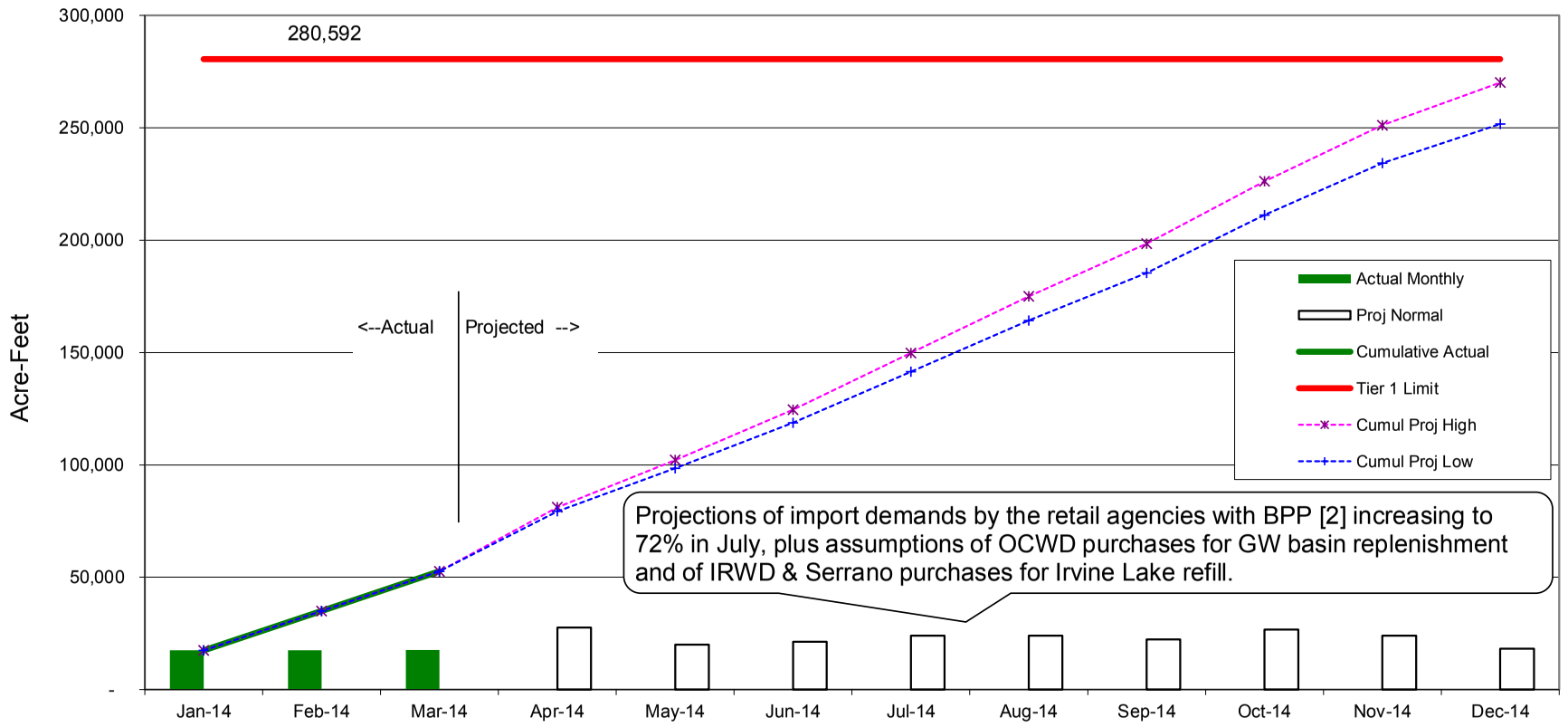
Figure 1


MWDOC Historical Firm Water Purchases (AF) and Tier 1 Limit
and Projection for 2014
Tier 1 Limit
280,592
261
KAF
± 9
350,000
300,000
250,000
200,000
150,000
100,000
50,000
-
Acre-Feet
2007
2008
2009
2010
2011
2012
2013
2014
Calendar Year
Firm
Tier 1

DRAFT

Fig. 2 MWDOC's Firm Water Purchases in CY 2014

Monthly Actual and Projected to CY Total



Notes

1. "Firm" includes Full Service (both Treated and Untreated) and Barrier water.

2. Basin Pumping Percentage (BPP) is the percentage of a retail water agency's total water demand that they are limited to pump from the OCWD-managed groundwater basin. BPP pertains to Basin agencies only. For example, if a Basin agency's total demand is 10,000 AF/yr and OCWD sets the BPP at 72%, then the agency is limited to 7,200 AF of groundwater that year. There may be certain exceptions and/or adjustments to that simple calculation. OCWD sets the BPP for the Basin agencies, usually as of July 1st. Import demands for Jan.-Jun. were with BPP of 70% for Basin agencies; for Jul.-Dec. they are projected with BPP of 72%.

Overview of OCWD's Purchases of Imported Water and MWDOC's Tier 1 Limit in 2014

MWDOC P&O Committee

May 5, 2014

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

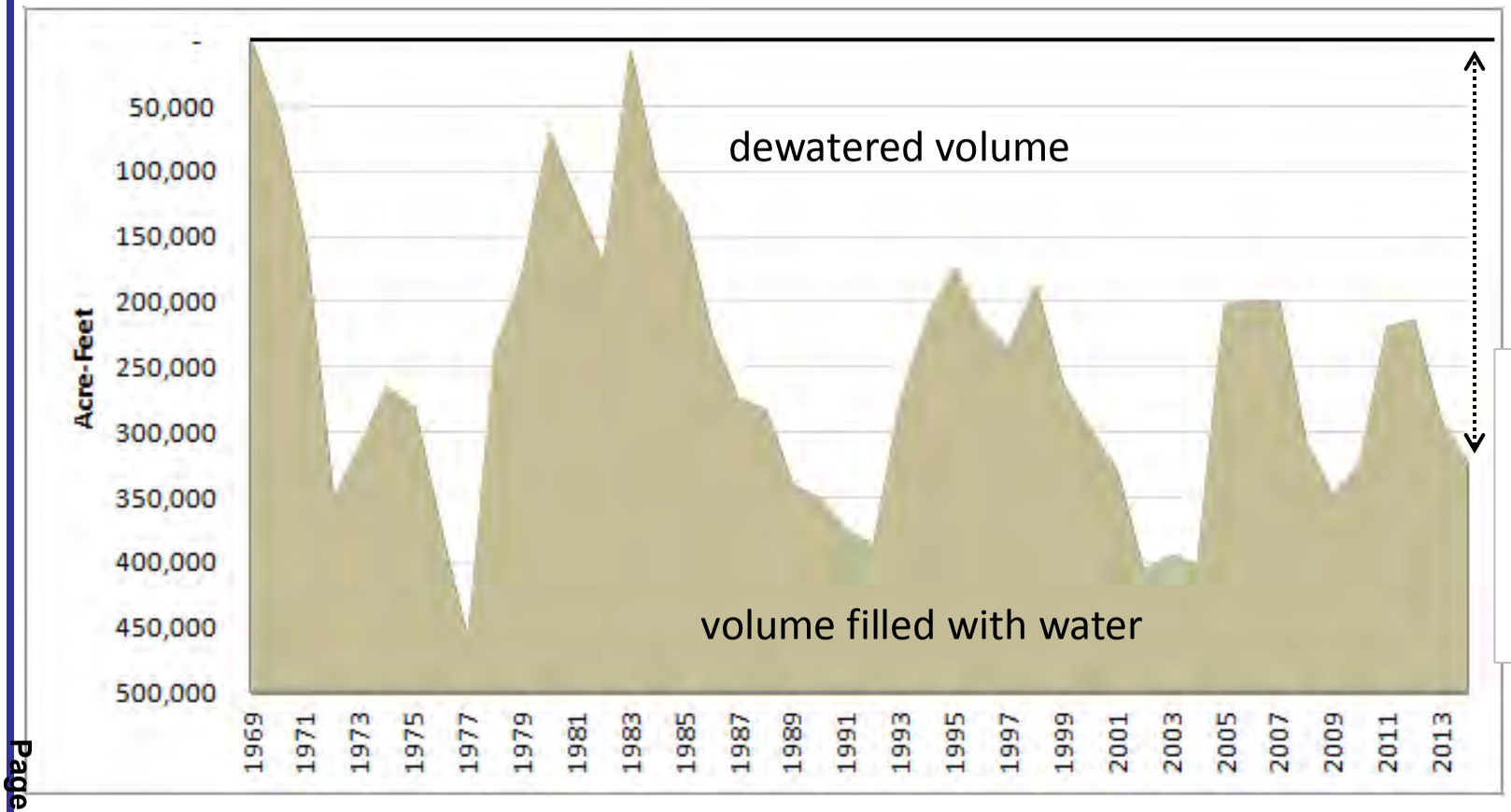
"Firm" Water Purchases and the Tier 1 Limit

- "Firm" water was formerly "Full Service" and "Barrier"
- "Replenishment" and "Agricultural" rates have been discontinued
- Now all MWDOC's Imported water purchases are "Firm"

- Tier 1 Limit set as 90% of max recent historical "Firm" AF
- MWDOC's Tier 1 Limit was increased by about 50,000 AF when replenishment and agricultural purchases became "Firm"
- MWDOC's present Tier 1 Limit = 280,592 AF
- Purchases above the Tier 1 Limit pay $142/AF more; 10,000 AF of Tier 2 water costs an additional $1.42 Million

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

OCWD Basin Levels are Dropping…



projected -322,000 AF at end of June 2014

and the danger is **Seawater Intrusion**

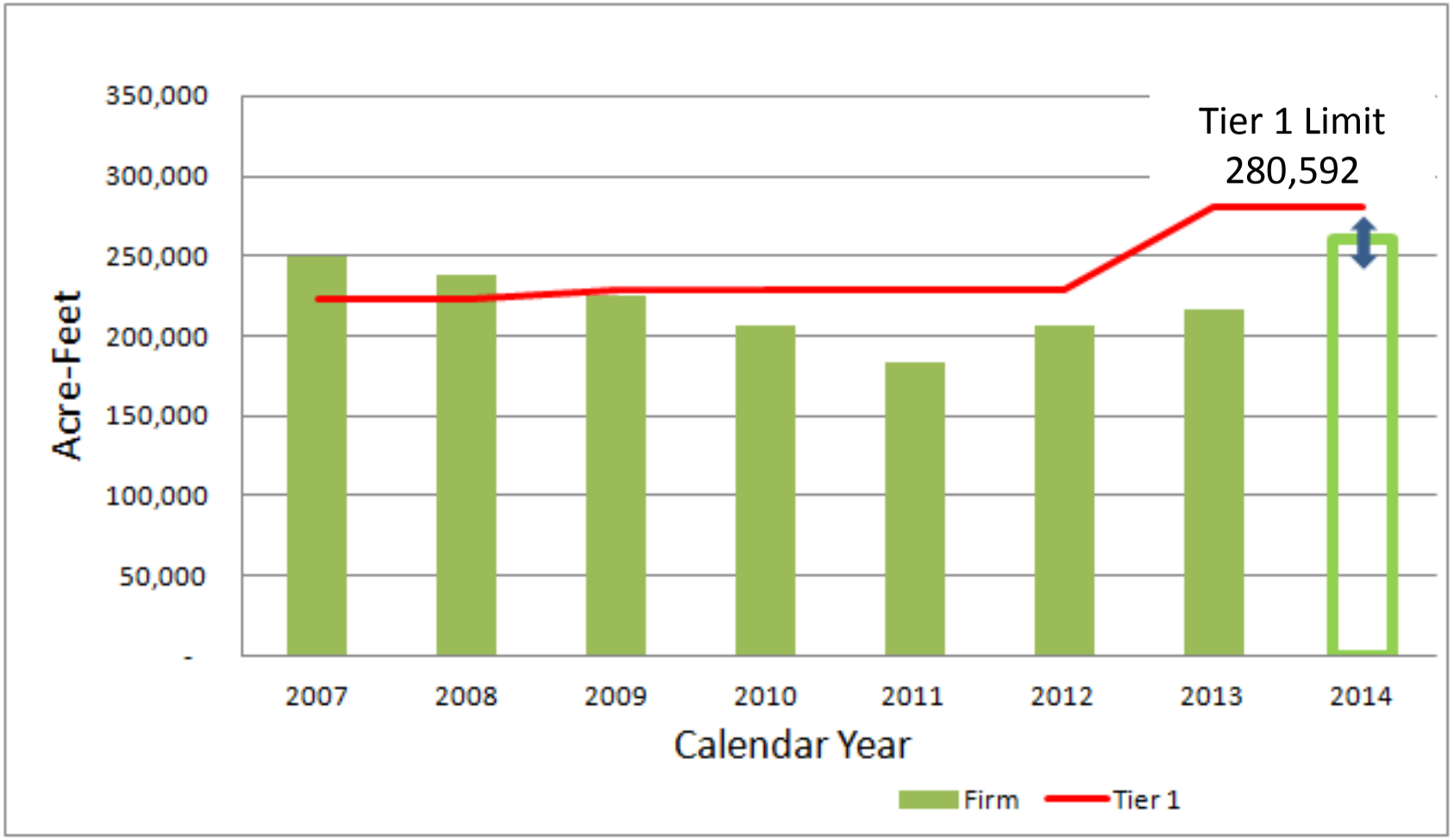
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

The GW Basin Needs More Replenishment

Source	FY 2012-13 AF	Typical AF	Notes
Santa Ana R. Base Flow	85,000	95,000*	*Base Flows are decreasing
Captured Santa Ana R. Storm Flow	18,000	50,000	Prado sedimentation
Incidental Recharge	22,000	60,000	
GWRS	73,000	73,000	GWRS is very reliable
subtotal Local Supplies	198,000	278,000	
Purchase from Long Bch.	2,000	2,000	Alamitos Barrier
Purchase from MWDOC	**24,000**	**53,000**	OCWD formerly estimated 20,000 AF/yr typical purchase
Total Replenishment	224,000	333,000	Compare to total pumping 309,000 actual FY 12-13 327,000 OCWD estim. FY 14-15

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

MWDOC's Historical "Firm" Water Purchases and its Tier 1 Limit



MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Components of MWDOC's Imported Water Purchases

OCWD's purchases

- For replenishment of the Basin
- Historical 0 - 100,000 AF/yr
- 53,000 AF/yr as an average in the future

IRWD & Serrano WD Irvine Lake purchases

- Historical 0 - 20,000 AF/yr

"Consumptive" Demand

- All other Import is consumed upon purchase.
- Varies with weather, state of the economy, and other factors.

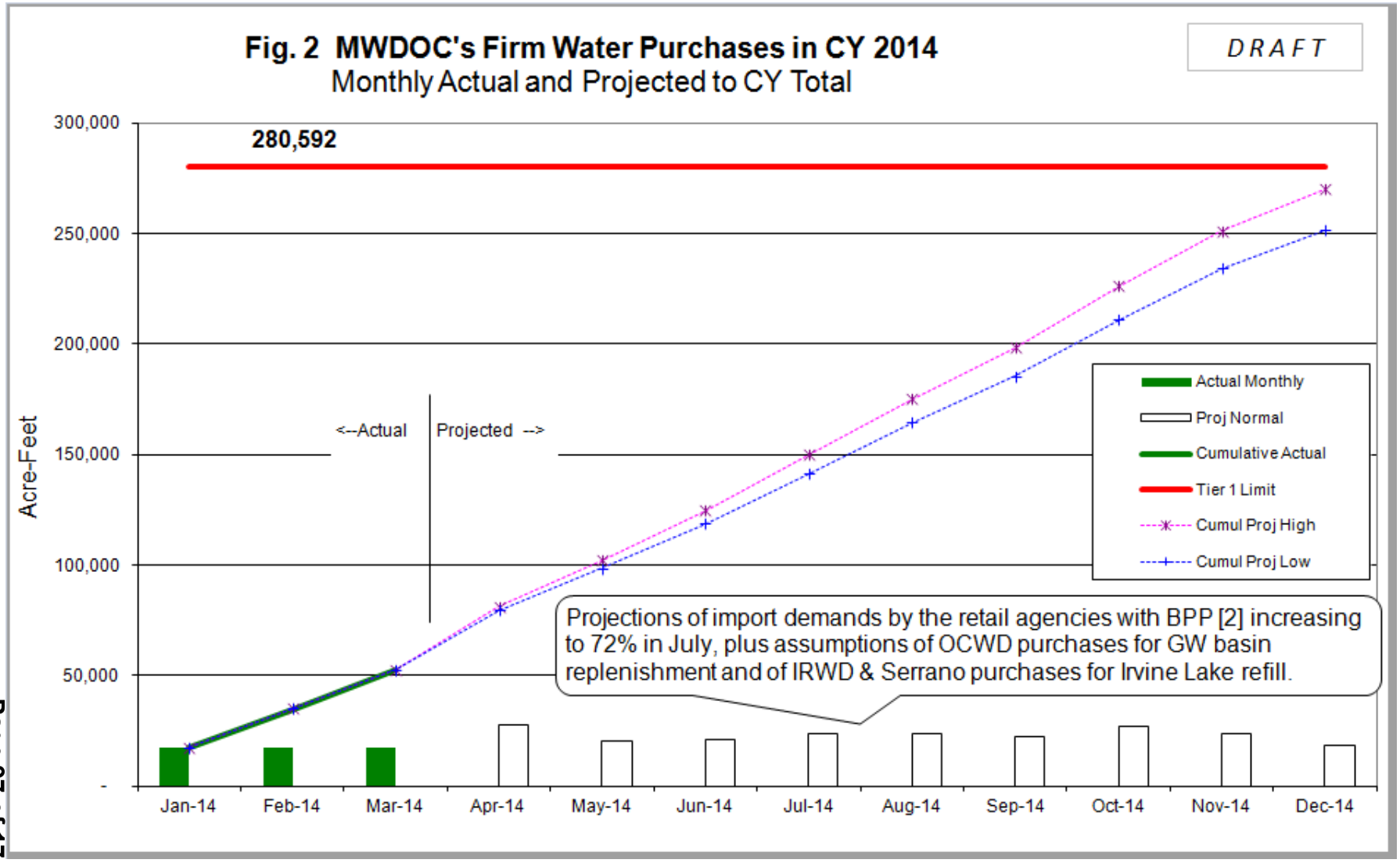
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

MWDOC's Imported Water Purchases 2014

	actuals Jan-Mar AF	estim. Apr- Dec AF	CY Total 2014 AF
OCWD	15,000	69,000	84,000
Irvine Lake	4,000	7,000	11,000
Consumptive	34,000	123,000 - 141,000	157,000 -175,000
MWDOC Total	53,000	199,000 – 217,000	**252,000 – 270,000**

- CY 2014 Total Import estimate 261,000 AF ± 9,000 AF
- Upper end of estimate, 270,000 AF, is about 10,000 AF under the Tier 1 Limit of 280,592 AF

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY



MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Monitor, Coordinate and Report

- MWDOC staff will monitor import purchases, and coordinate with OCWD and other Member Agencies
- MWDOC staff will continue to keep the Board informed, monthly

Questions?

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Item No. 4

INFORMATION ITEM
May 5, 2014

TO: **Planning & Operations Committee**
(Directors Osborne, Barbre, Hinman)

FROM: **Robert Hunter, General Manager**

Staff Contact: Karl Seckel

SUBJECT: **OCWD Long Term Facilities Plan**

STAFF RECOMMENDATION

Staff recommends the Planning & Operations Committee receives and files the report. No actions are required at this time.

COMMITTEE RECOMMENDATION

Committee recommends (To be determined at Committee Meeting)

SUMMARY

Periodically, OCWD updates their Long Term Facilities Plan. Their last update was 2009. The attached presentation was provided at a recent meeting with the Groundwater Producers. This information is being brought to the P&O Committee for the following reasons:

- Keep apprised of the groundwater basin planning
- The Poseidon Project is one of their prioritized projects
- Santa Ana River supplies create a large variation in the need for imported water
- The desire to maintain the Basin Production Percentage at 75% over the long run also creates a need for imported water for basin replenishment

Budgeted (Y/N):	Budgeted amount:	Core __	Choice __
Action item amount:	Line item:		
Fiscal Impact (explain if unbudgeted):			

OCWD staff is just beginning the review process of the projects with the Groundwater Producers and plans on preparing a report to their Board in August. A couple of brief observations from the information provided:

1. Santa Ana River Base Flows in the future could range from 37,000 AF per year to 105,000 AF per year.
2. Imported water to meet basin needs (direct and replenishment needs could range from 168,000 AF per year to 225,000 AF per year. The difference between this high and low projection is 57,000 AF per year.
3. Additional recharge needed to meet a Basin Production Percentage of 75% ranges from 51,000 AF per year to 108,000 AF per year. This water is expected to be a combination of imported water and other supply projects from the Long Term Facilities Plan.
4. The Basin Production percentage achievable without any additional recharge supplies ranges from 53% to 65%.

Staff will continue to monitor efforts by OCWD. The information will be very useful for the Reliability Planning work.

Long-Term Facilities Plan 2014 Update

Groundwater Producers Meeting

April 30, 2014

Update of LTFP

- Strategic planning tool to prioritize potential projects
- Update every 3-5 years
- Last update in 2009

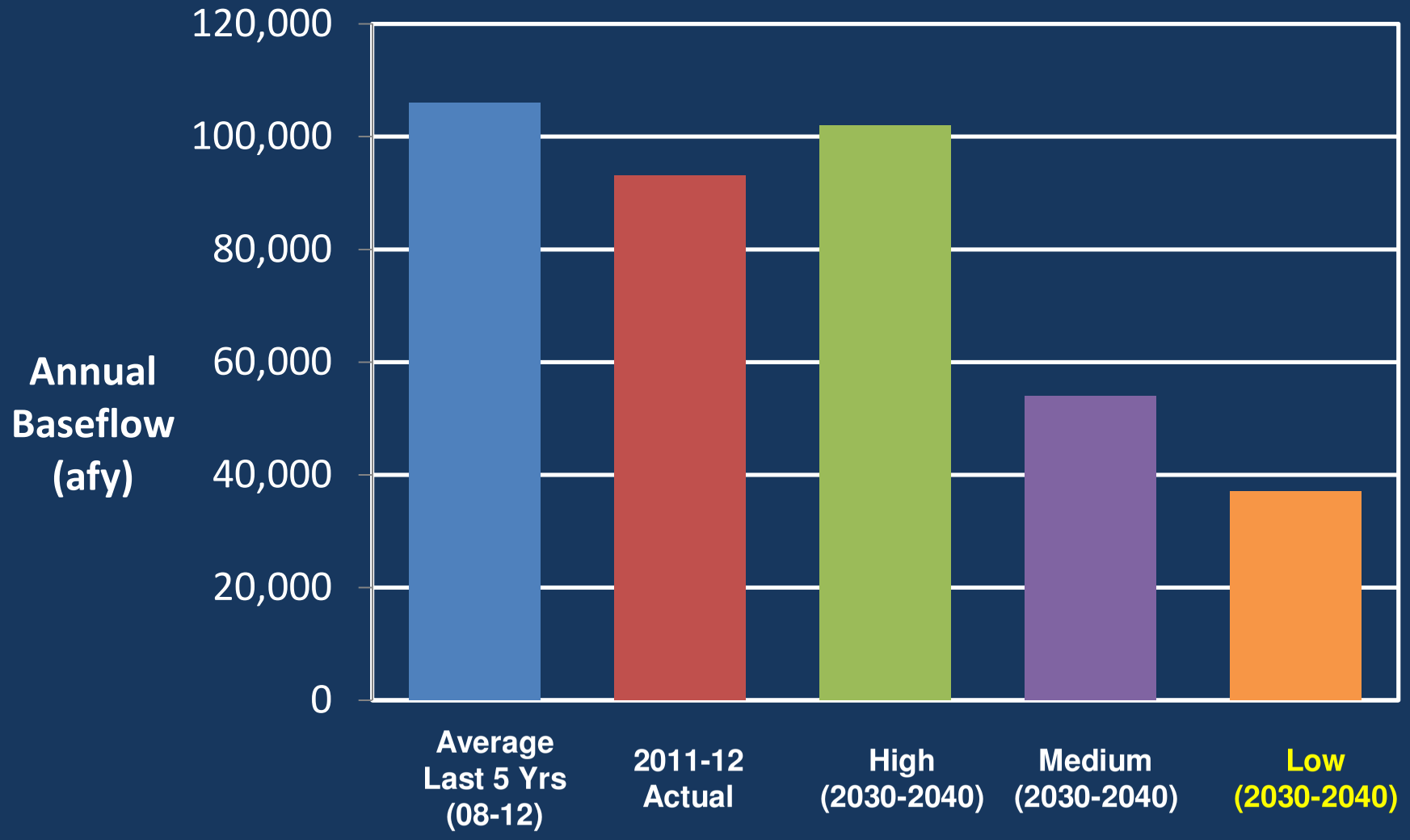
Purpose of LTFP

- Identify projects that:
  - Increase water supply reliability and increase basin's sustainable yield
  - Protect/enhance groundwater quality
  - Increase operational efficiency

Santa Ana River Flow Projections

- Future estimates developed to support Corps' Prado Feasibility Study
- Upper watershed model developed for SAWPA used to estimate future base and stormflows arriving at Prado Dam
- Range of SAR baseflow estimates developed (High and Medium)
- Low condition added for LTFP
  - 37,000 afy
  - Min. flow per 1969 Judgment w. Credits

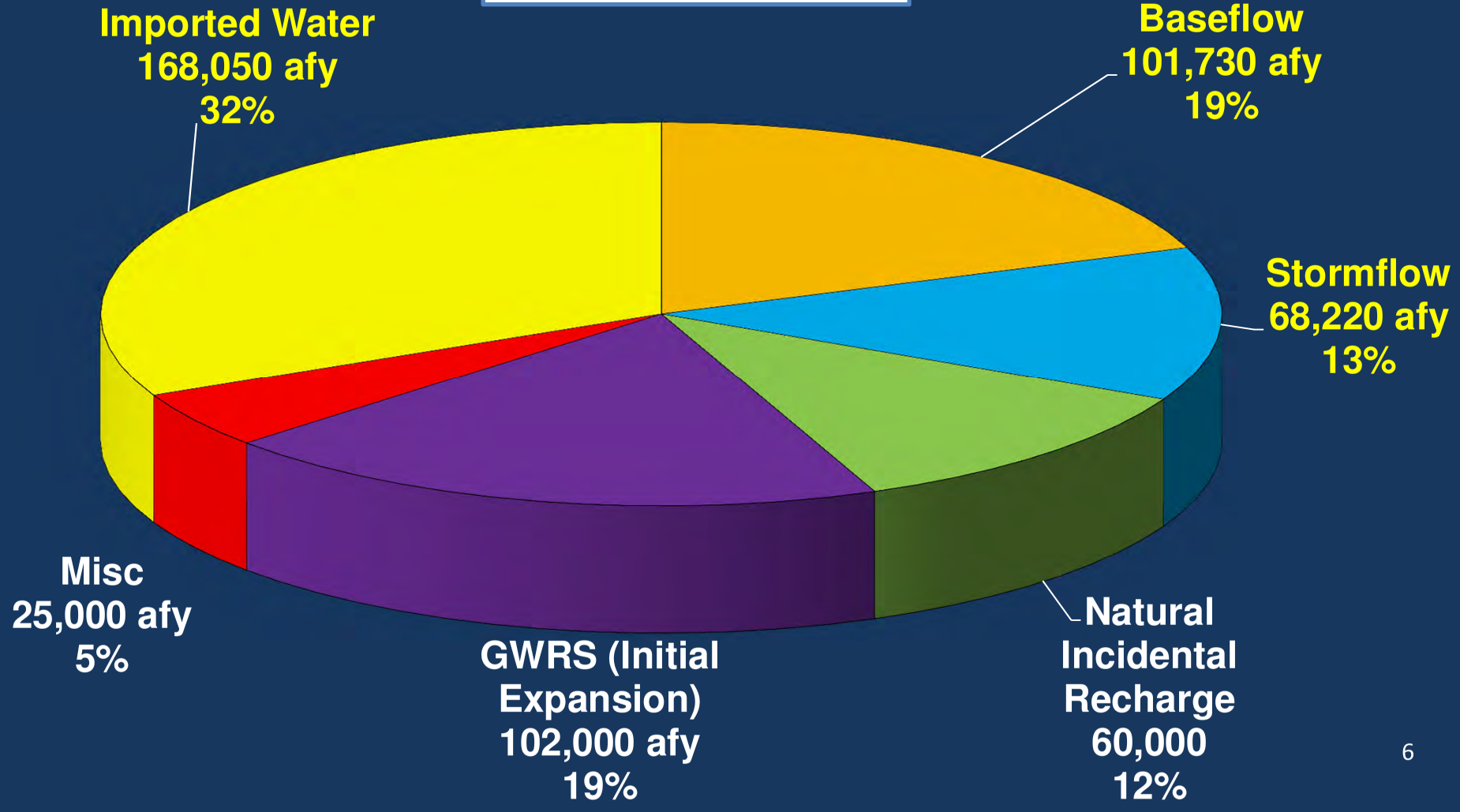
Range of Santa Ana River Baseflows



Future OCWD Service Territory Water Supply Sources - Updated

Total Water Demands 525,000 afy

High Baseflow Conditions



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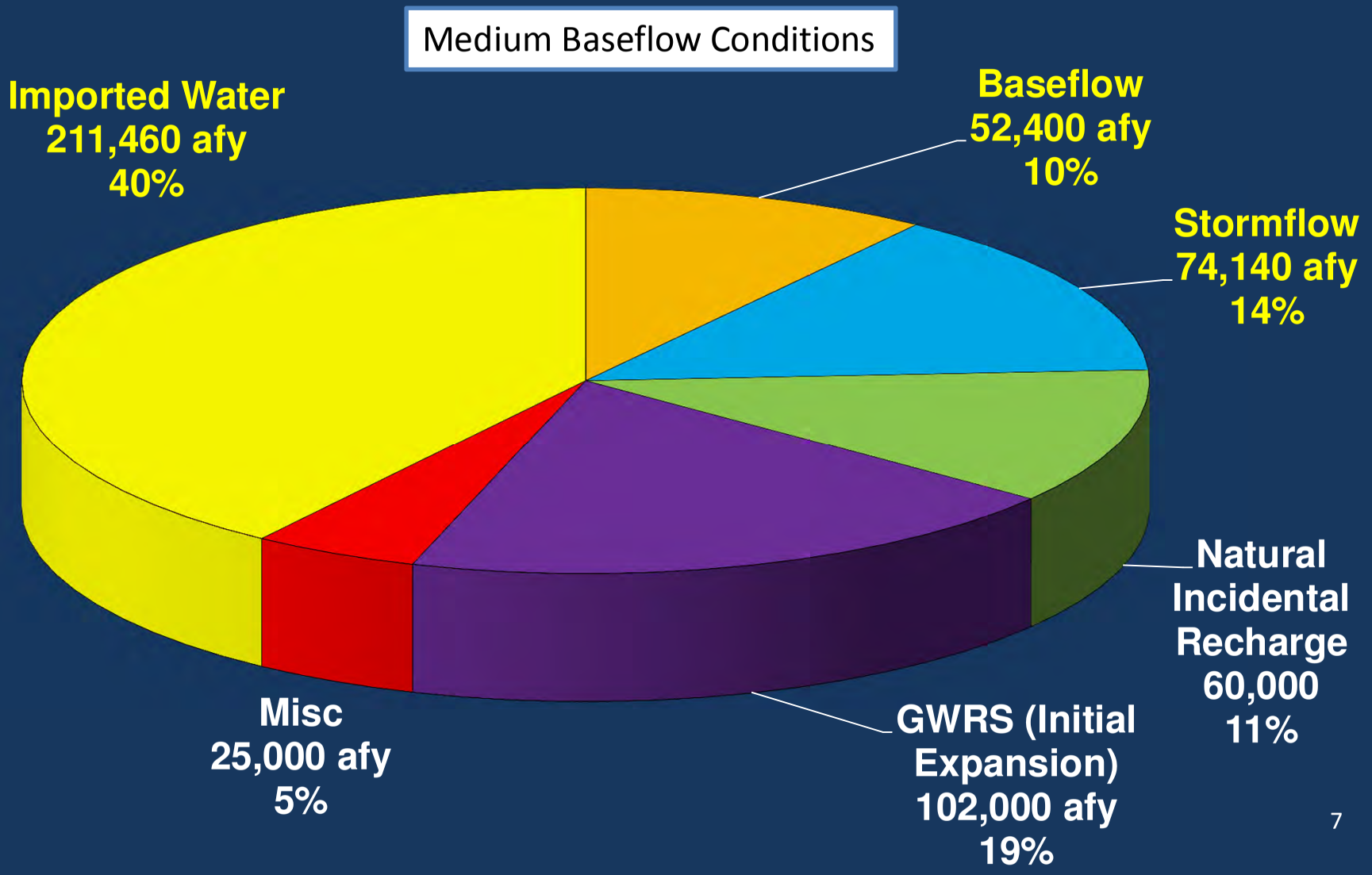
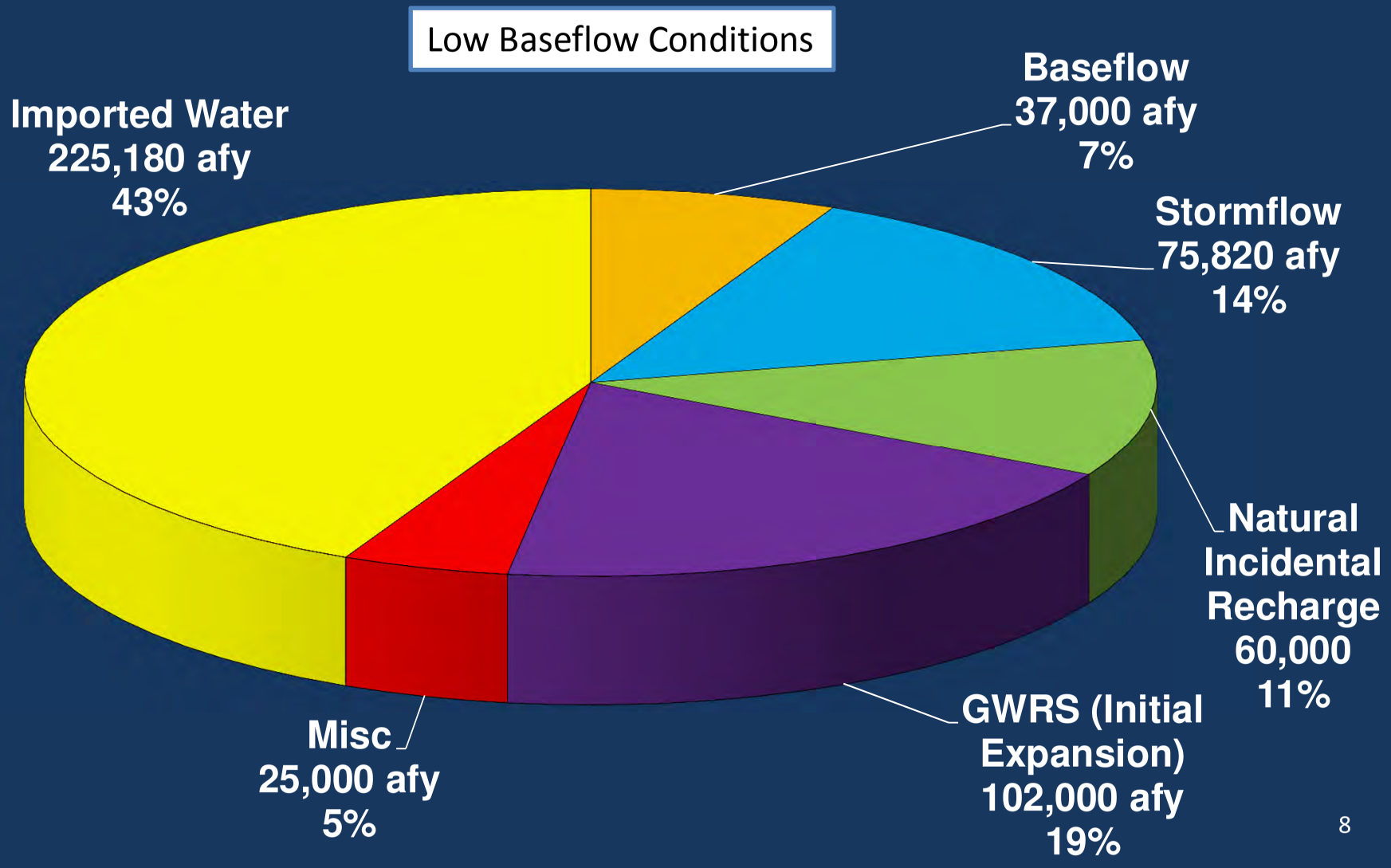
Total Water Demands 525,000 afy

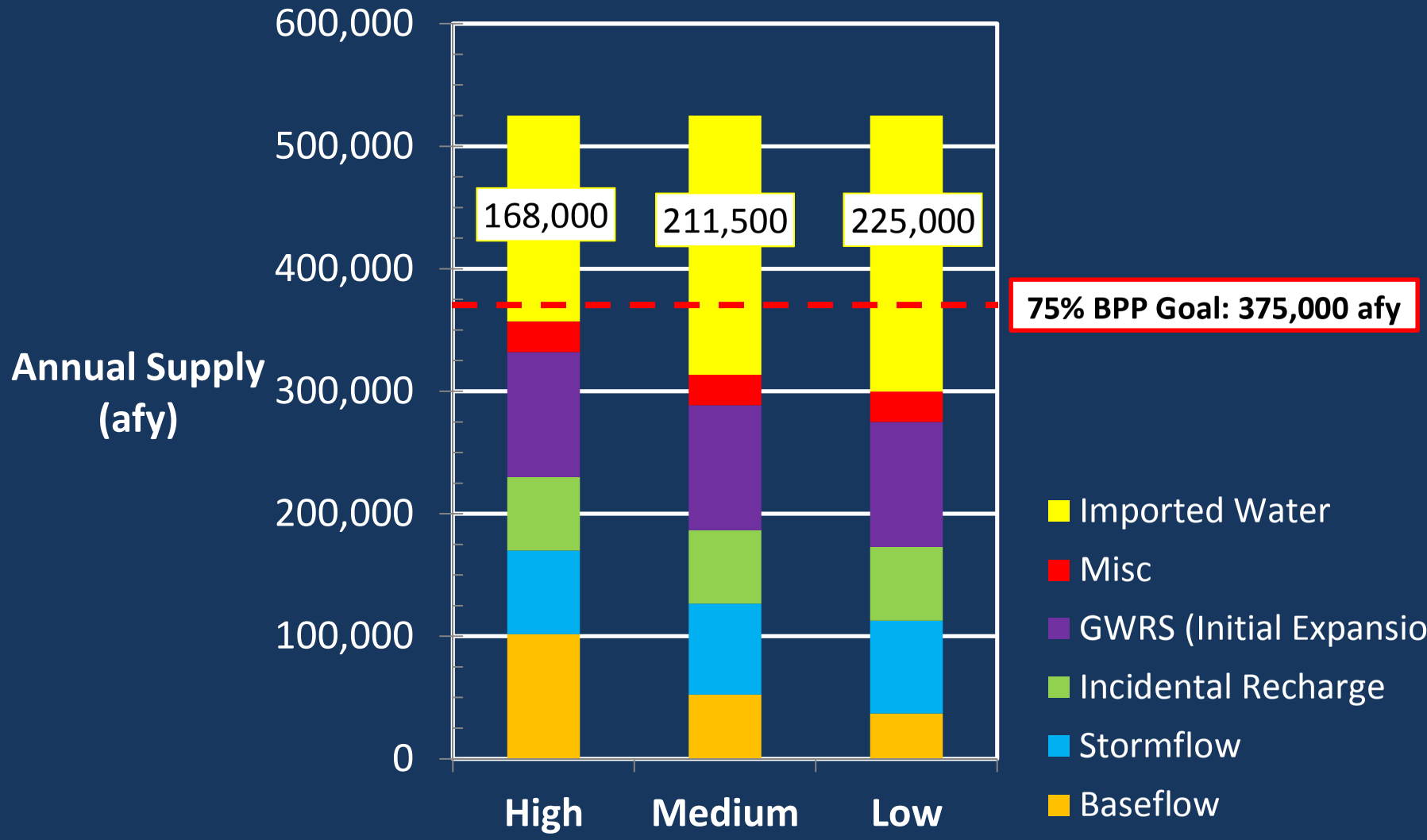


Future OCWD Service Territory Water Supply Sources (New)

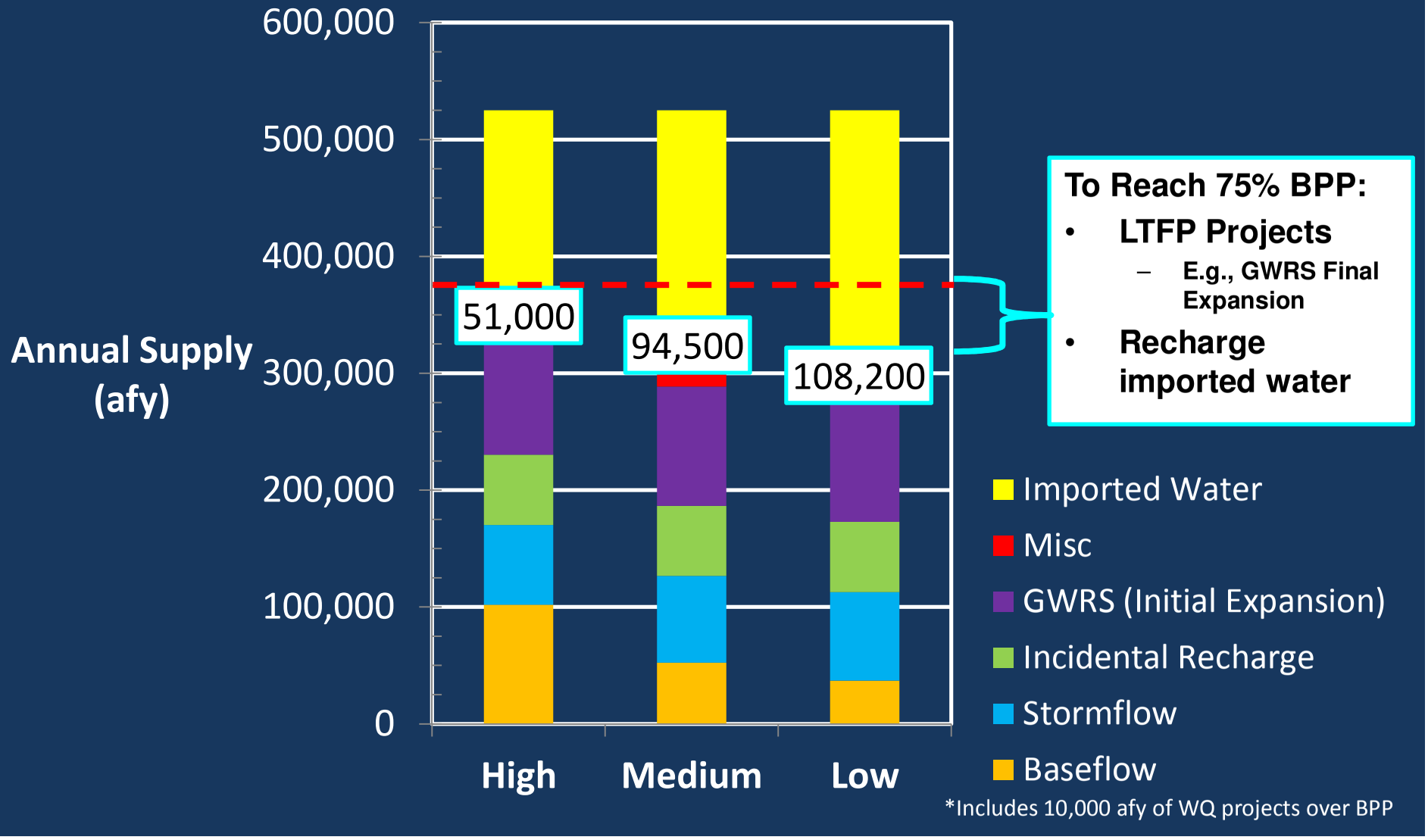
Total Water Demands 525,000 afy



Future OCWD Service Territory Water Supply Sources

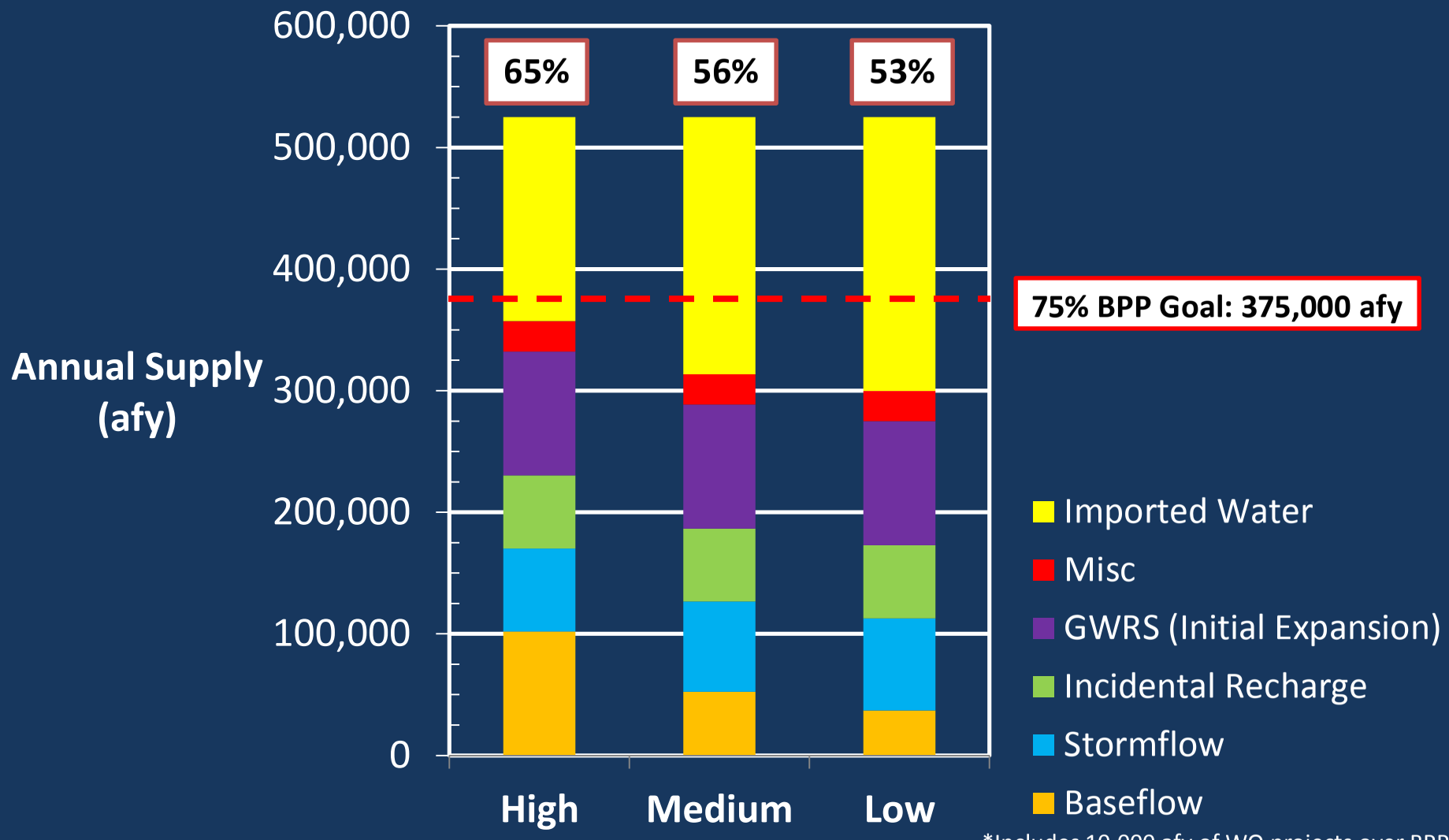


Additional Recharge Required to Achieve 75% BPP*



*Includes 10,000 afy of WQ projects over BPP

BPP with No Additional Recharge *



*Includes 10,000 afy of WQ projects over BPP

Estimated Project Yields

- Yields of SAR recharge projects estimated using Recharge Facilities Model (RFM)
- Yields estimated for high and medium SAR baseflow conditions
- Additional work needed to evaluate low SAR baseflow conditions
- Yield data used in evaluating project priorities

Potential Projects

- Staff identified 62 potential projects in 5 categories:
  - Water Supply Facilities
  - Recharge Facilities
  - Basin Management Facilities
  - Operational Improvements
  - Alternative Energy Projects
- Projects ranked - 14 identified as priority projects

Priority Projects

- Identifies for staff those projects that should receive more detailed consideration
- Helps staff allocate resources
- Does not mean the District has decided to implement the project

Proposed Priority Projects: Water Supply Facilities

- GWRS Final Expansion
- GWRS: Urban Runoff Diversion to OCSD Plant #1
- Prado Basin Sediment Management
- HB Desal Plant Product Water Agreement (Poseidon)
- Recovery of ET Loss in Prado Basin
- Treat SARI Flows in Anaheim

Proposed Priority Projects: Recharge Facilities

- Mid-Basin Injection
- Enhanced Recharge in SAR Below Ball Road
- Subsurface Recharge & Collection System in Off-River & Five Coves

Proposed Priority Projects: Basin Management

- West OC Enhanced Pumping
- Sunset Gap Barrier/Desalter
- Talbert Barrier Recharge Wells at Deep Well Sites
- Alamitos Barrier Expansion (Landing Hill)

Proposed Priority Projects: Alternative Energy

- Power Generation in Fountain Valley

Project Concepts

- GWRS Final Expansion
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- Water Wheeling

Priority Projects

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- GWRS: Urban Runoff Diversion to OCSD Plant #1
- Power Generation in Fountain Valley
- HB Desalination Plant Product Water Agreement (Poseidon)
- Recovery of Evapotranspiration Loss in Prado Basin
- **Treat SARI Flows in Anaheim**

Potential Future Engineer's Report and CEQA Prepared for Board review (per each project)

Schedule

TASK	DATE
Review Priority Projects	April 2014
Draft Report to BOD & Producers for review	June 2014
Receive Comments/Prepare Final Draft	July 2014
BOD Receives & Files Final Report	August 2014

Priority Projects and LTFP Objectives

Proposed List of Priority Projects	Increase Water Supply Reliability and Basin Yield	Protect/Enhance GW Quality	Increase Operational Efficiency
GWRS Final Expansion	√	√	
Mid-Basin Injection	√	√	√
Prado Basin Sediment Management	√		
West Orange County Enhanced Pumping	√		
Enhanced Recharge in SAR Below Ball Road	√		√
Sunset Gap Barrier/Desalter	√	√	
Additional Talbert Barrier Recharge Wells at Deep Well Sites	√	√	√
Alamitos Barrier Expansion (Landing Hill)	√	√	
Subsurface Recharge & Collection in Off-River and Five Coves	√		√
GWRS: Urban Runoff Diversion to OCSD Plant #1	√		
Power Generation in Fountain Valley			√
Ocean Desalter: Poseidon	√		
Recovery of ET Loss in Prado Basin	√		
Treat SARI Flows in Anaheim	√	√	

Defining Project Risks

Risk Category	High Risk	Low Risk
Financial	Large cost range, high uncertainty	Costs well defined
Regulatory	Numerous known and unknown regulatory requirements	Has received or likely to receive regulatory approval
Environmental	Potential significant impact to environment	Little to no impact to environment
Institutional	May have opposition from cities, agencies or public	Little to no opposition

Key		
High Risk	Medium Risk	Low Risk

Priority Projects and Potential Risks

Proposed List of Priority Projects	Financial	Regulatory	Environmental	Institutional
GWRS Final Expansion				
Mid-Basin Injection				
Prado Basin Sediment Management				
West Orange County Enhanced Pumping				
Enhanced Recharge in SAR Below Ball Road				
Sunset Gap Barrier/Desalter				
Additional Talbert Barrier Recharge Wells at Deep Well Sites				
Alamitos Barrier Expansion (Landing Hill)				
Subsurface Recharge & Collection in Off-River and Five Coves				
GWRS: Urban Runoff Diversion to OCSD Plant #1				
Power Generation in Fountain Valley				
Ocean Desalter: Poseidon				
Recovery of ET Loss in Prado Basin				
Treat SARI Flows in Anaheim				

GWRS Final Expansion

GWRS Final Expansion

- Increase capacity of AWTF from 100 MGD to 130 MGD by taking OCSD's Advanced Secondary Flows from Plant 1 & 2 (including SARI line flows).
- Required approval by DPH for treatment of SARI flows through GWRS & Mid Basin Injection Wells (15 mgd) Constructed
- 30 mgd or 33,600 afy
- $125 million capital cost
- Design 2015

GWRS: Urban Runoff Diversion to OCSD Plant No. 1

- Opportunity to increase amount of secondary flow treated by OCSD as supply to GWRS
- Divert non-storm flow from channels into OCSD system, in coordination with OCSD and flood control district

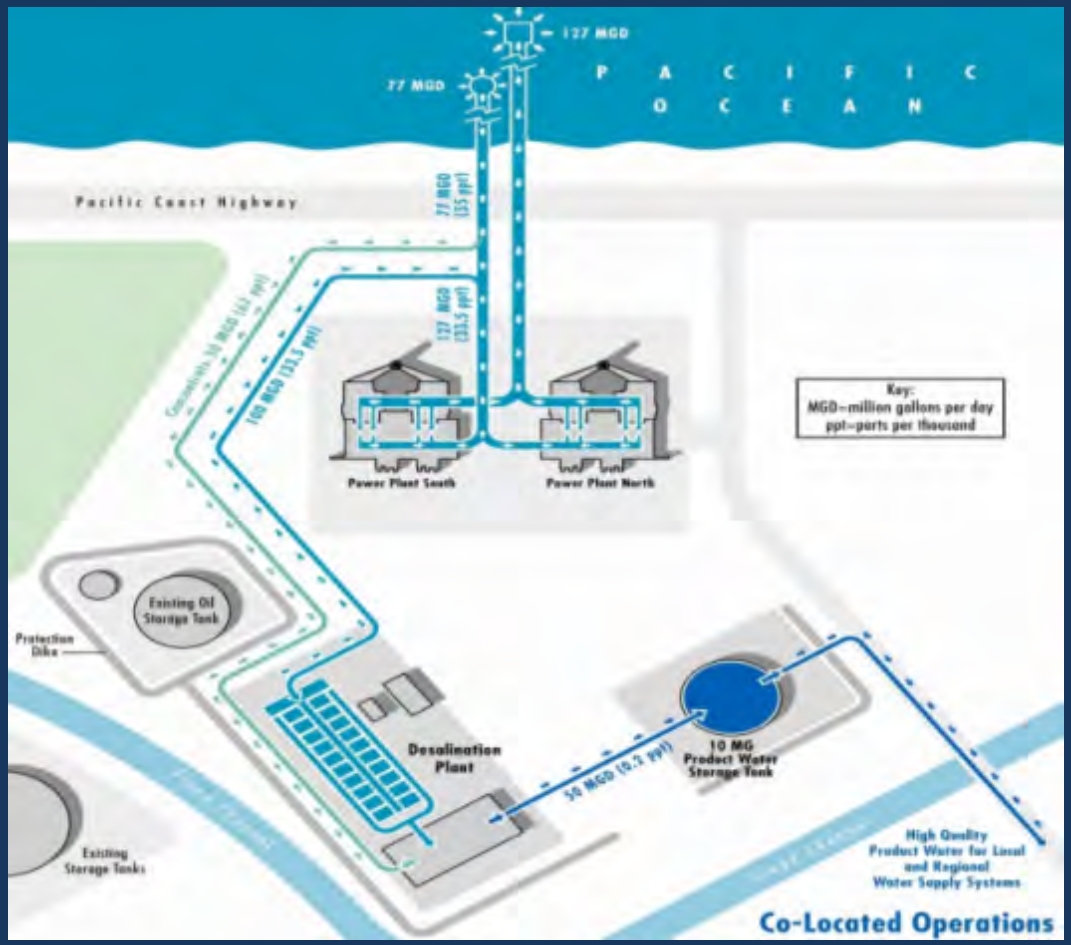
Prado Basin Sediment Management

- 25,000 af storage lost below elev. 505 from 1941-2008
- ~370 af lost per year
- In ~50 years, 505 elevation will have zero storage

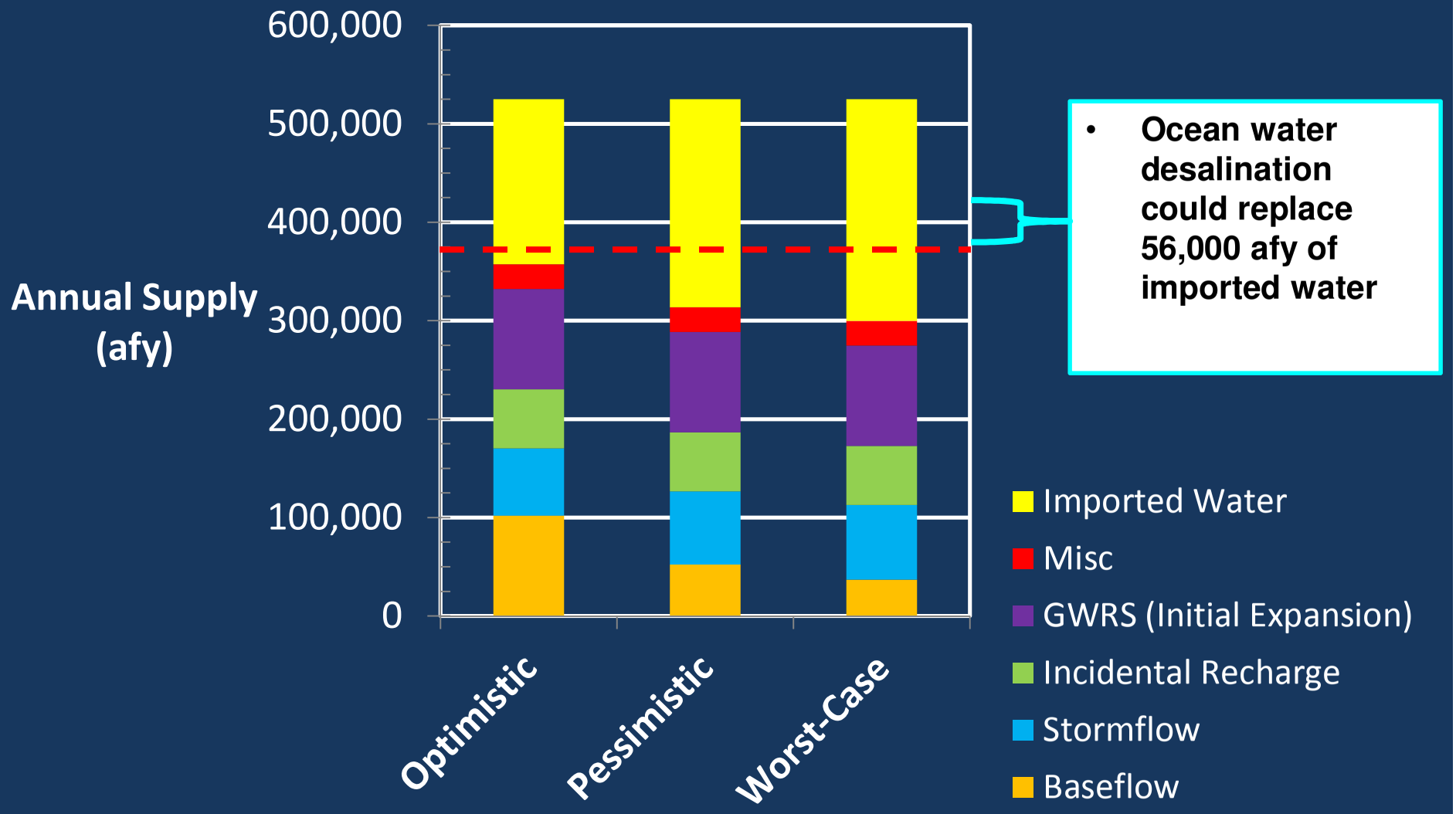
Prado Basin Sediment Management

- Remove sediment from within Prado Basin and re-entrain in river or dispose
- Removal below 505 ft increases storage; removal above 505 ft decreases sediment inflow to 505 ft (not 1:1)
- Implement pending results of Prado Basin Sediment Management Demonstration Project

Huntington Beach Desalination Plant Product Water Agreement



Desalination Would Off-Set Imported Water Deliveries



- **Ocean water desalination could replace 56,000 afy of imported water**

Recovery of ET Losses at Prado

- Recovery of Prado evapotranspiration losses from Chino Basin for delivery into SAR
  - Described in 1969 SAR Judgement
- Additional yield estimate – 5,000 afy
- To be determined if water quality treatment is needed prior to discharge to SAR

Mid-Basin Injection

- Benefits: Utilize full potential of GWRS expansion(s) water production, recharge near large volume pumping
- Constraints: Land easement/licenses, prove injection rates, potential health permit issues
- 3 mgd (2,100 gpm) per well x 10 wells = 30 mgd (33,600 afy)
- 10 more wells = $40M (Centennial $20M)


MBI-1
SAR-10
SAR-11
EDINGER AVENUE
SANTA ANA RIVER
FAIRVIEW STREET
Feed Pipeline
GWRS
Well Site
N
W
E
S
0
150
300
Feet
Mid-Basin Injection Well Project
Centennial Park

Subsurface Collection and Recharge: Off-River and Five Coves

- Utilize filtration capacity of Off-River Channel to maximize percolation in Five Coves Basins
- Additional yield expected
  - 700 afy
- Pilot Testing: 2014-2017

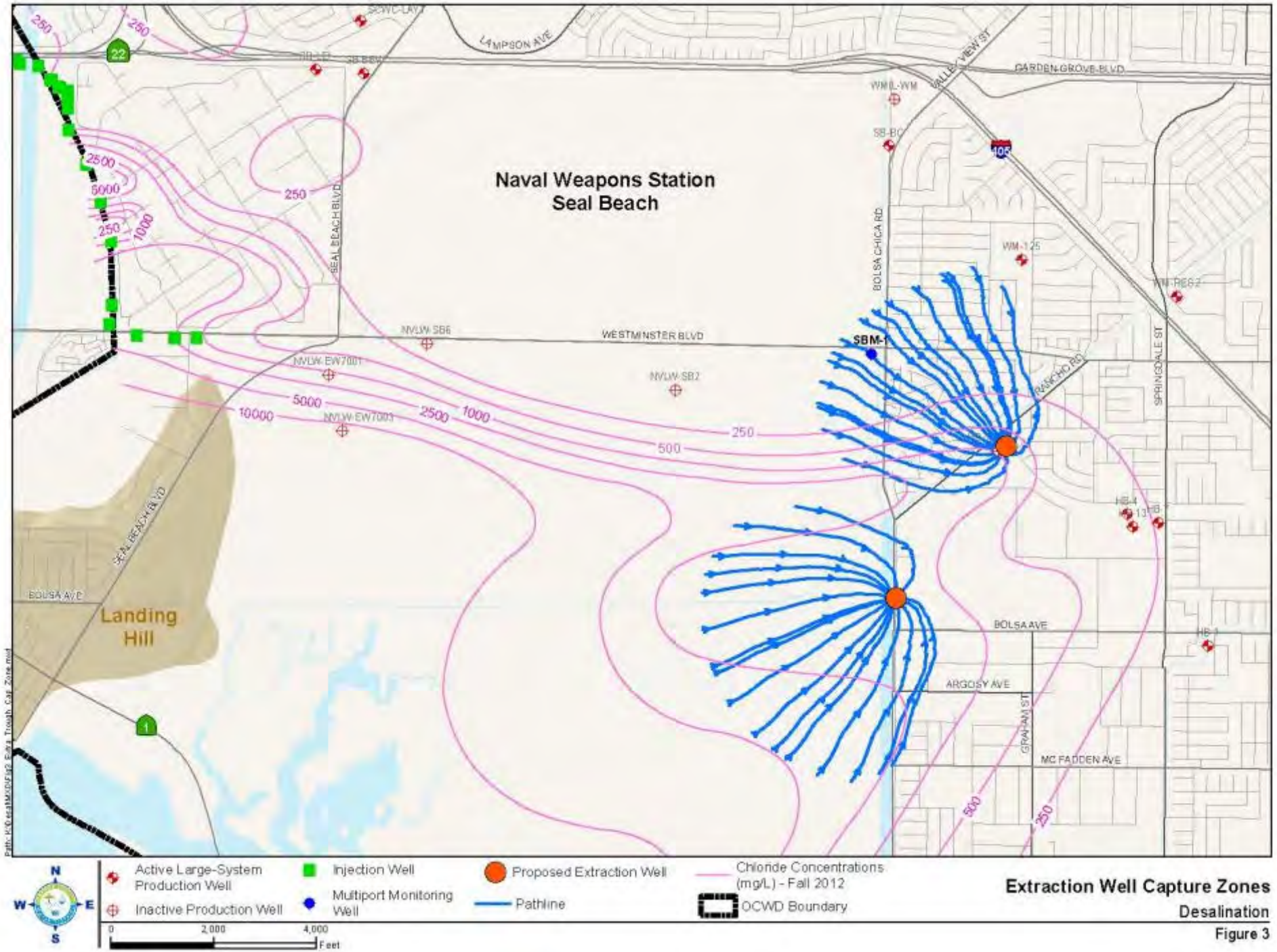

Olive Basin
Collection System
Recharge System
Lincoln Basin
N Santa Cecilia
N Santa Anita St
N Fairbarn St
N Shell St
N Garl St
N Galley St
Main St
N Canal
Santa Ana Canyon Rd
Olive Ave
N Orange Olive Rd
Sunwood St
E Rainier Ave
Pebble Creek Ln
Linden Dr
N Dell St
Riverside FWY
E Frontera St
E La Palma Ave
N Via Porto
E White Star Ave
Red Gum St
Coronado St
Gretta Ln
Park Rd
Club Ln
Pearl St
N Park Vista St
N Trevor St
S Trevor St
S Kingsley St
Jeanine Way
W Jorica St
E Virginia Ave
E Standish Ave
N Tustin Ave
Grove
Ocean Cir
91

Enhanced Recharge in SAR Below Ball Road

- Utilize lowermost portion of SAR to 22 Fwy
- Additional yield expected
  - 700 afy

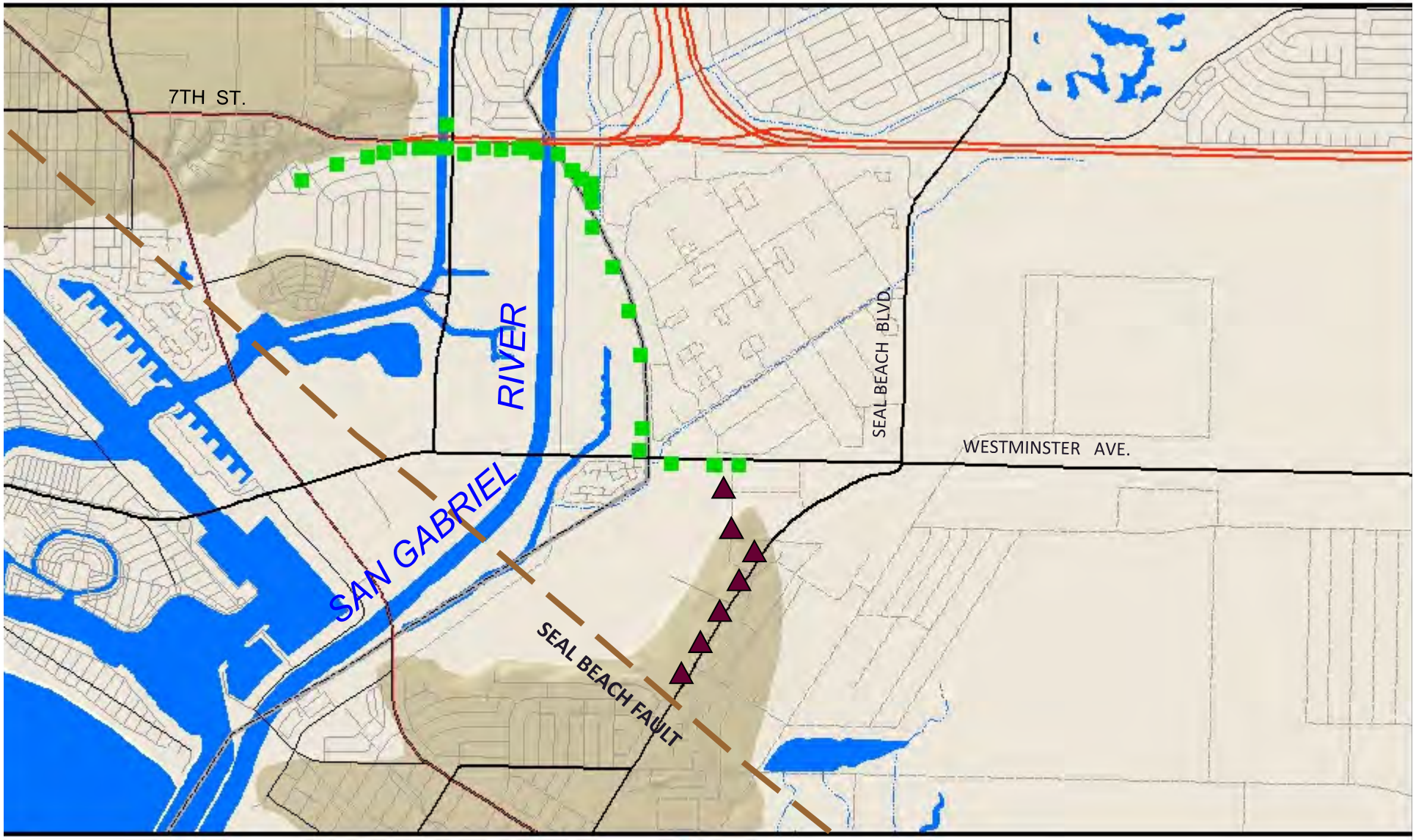
Sunset Gap Barrier/Desalter

- Extract, treat, and use brackish water intrusion beneath NWSSB that threatens downgradient wells
- ~500 gpm extraction (very preliminary)
- 2+ years – after data evaluation from new Sunset Gap monitoring wells and modeling
- Potential customers: HB, SB, NWSSB, Barrier

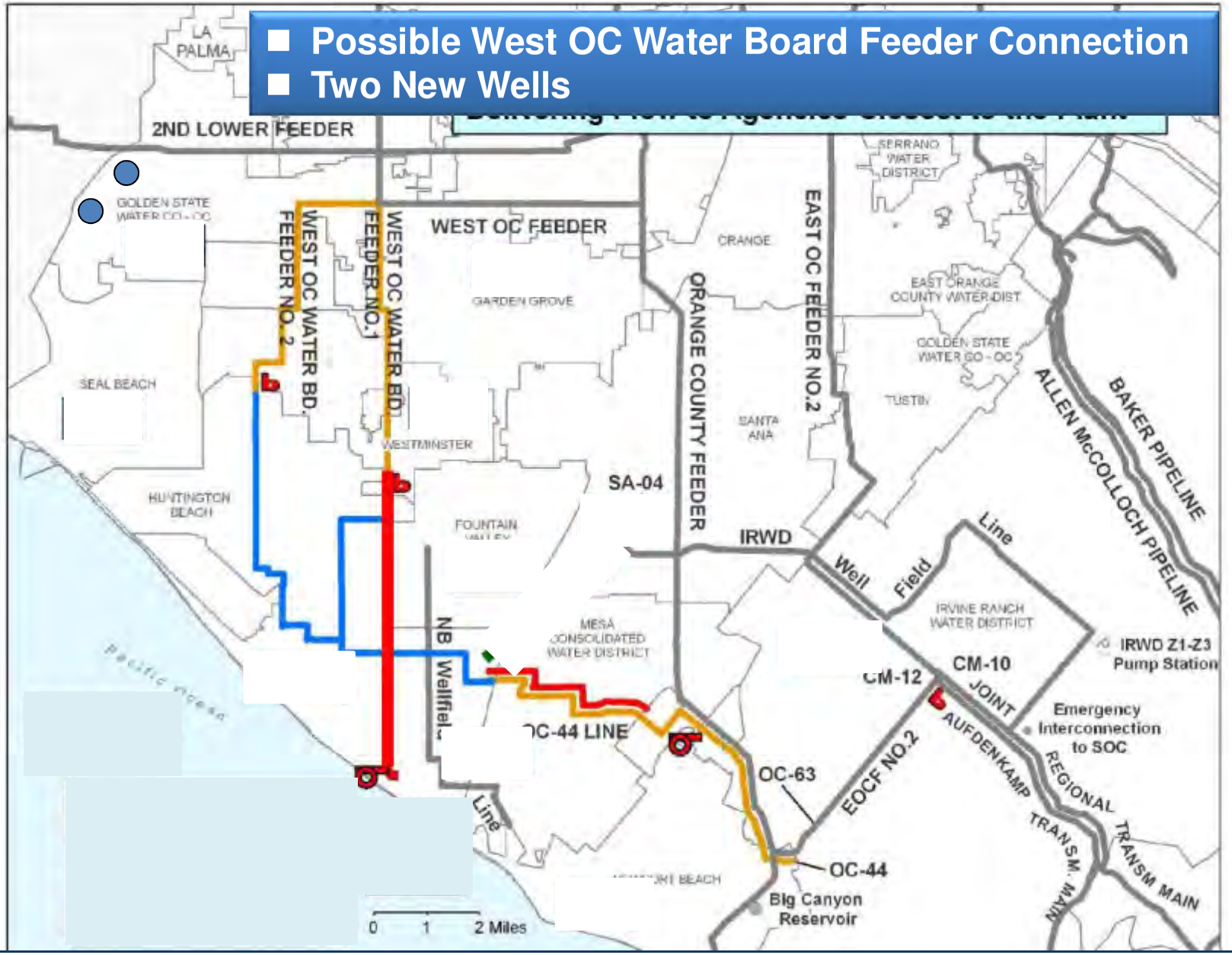

Naval Weapons Station
Seal Beach
Landing Hill
WESTMINSTER BLVD
SEAL BEACH BLVD
BOLSA CHICA RD
LAMPSON AVE
GARDEN GROVE BLVD
VALLEY VIEW ST
BOLSA AVE
ARGOSY AVE
MC FADDEN AVE
GRAHAM ST
SPRINGDALE ST
RANCHO RD
NWLW-SB6
NWLW-EW7001
NWLW-SB2
SBM-1
WM-125
WM-REG2
250
500
1000
2500
5000
10000
Active Large-System Production Well
Inactive Production Well
Injection Well
Multiport Monitoring Well
Proposed Extraction Well
Pathline
Chloride Concentrations (mg/L) - Fall 2012
OCWD Boundary
0
2,000
4,000
Feet
Extraction Well Capture Zones
Desalination
Figure 3

Alamitos Barrier Expansion (Landing Hill)

- Stop intrusion between Westminster Ave and Seal Beach Fault
- >1,000 af additional injection
- 2+ years – after data evaluation from new Sunset Gap monitoring wells and modeling

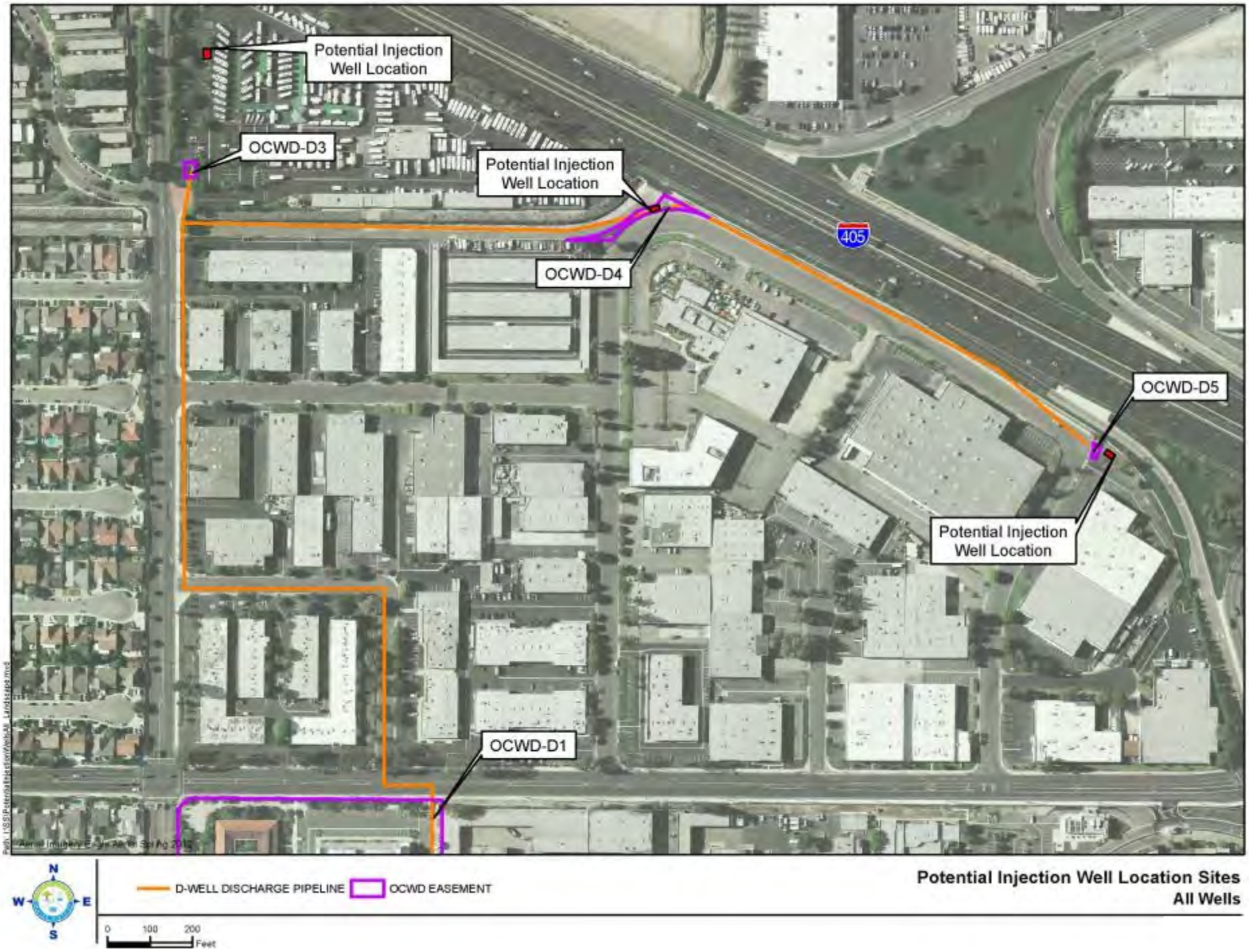

7TH ST.
SAN GABRIEL RIVER
SEAL BEACH BLVD.
WESTMINSTER AVE.
SEAL BEACH FAULT
Existing Injection Well
Future Injection Well (Conceptual)
N
W
E
S
0 350700 1,400
Feet
Alamitos Barrier Extension Concept
Reproduced with permission granted by THOMAS BROS. MAPS.®

West OC Enhanced Pumping



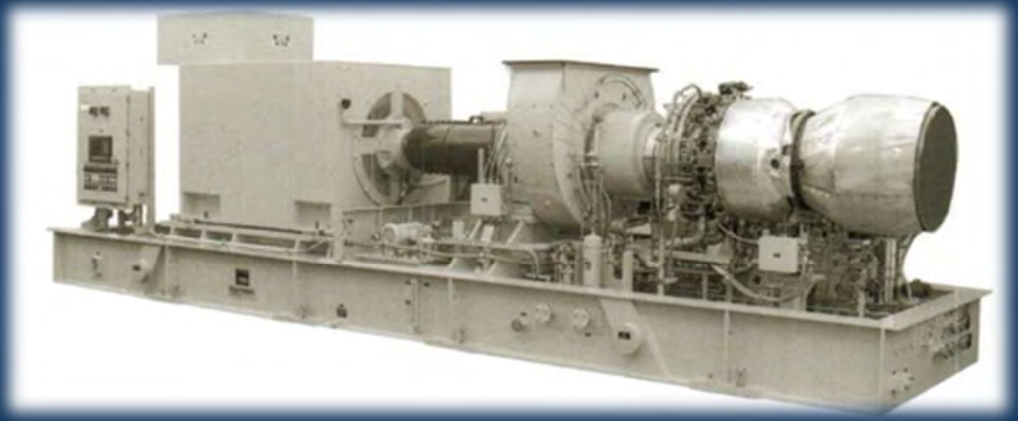
Additional Talbert Barrier Wells at Deep Well Sites

- 3 Deep wells no longer needed for GAP
- Destroy deep wells
  - Cannot be used for GWRS water
- Construct new injection wells
  - 1-2 mgd per well site
- Use existing pipeline to supply new wells

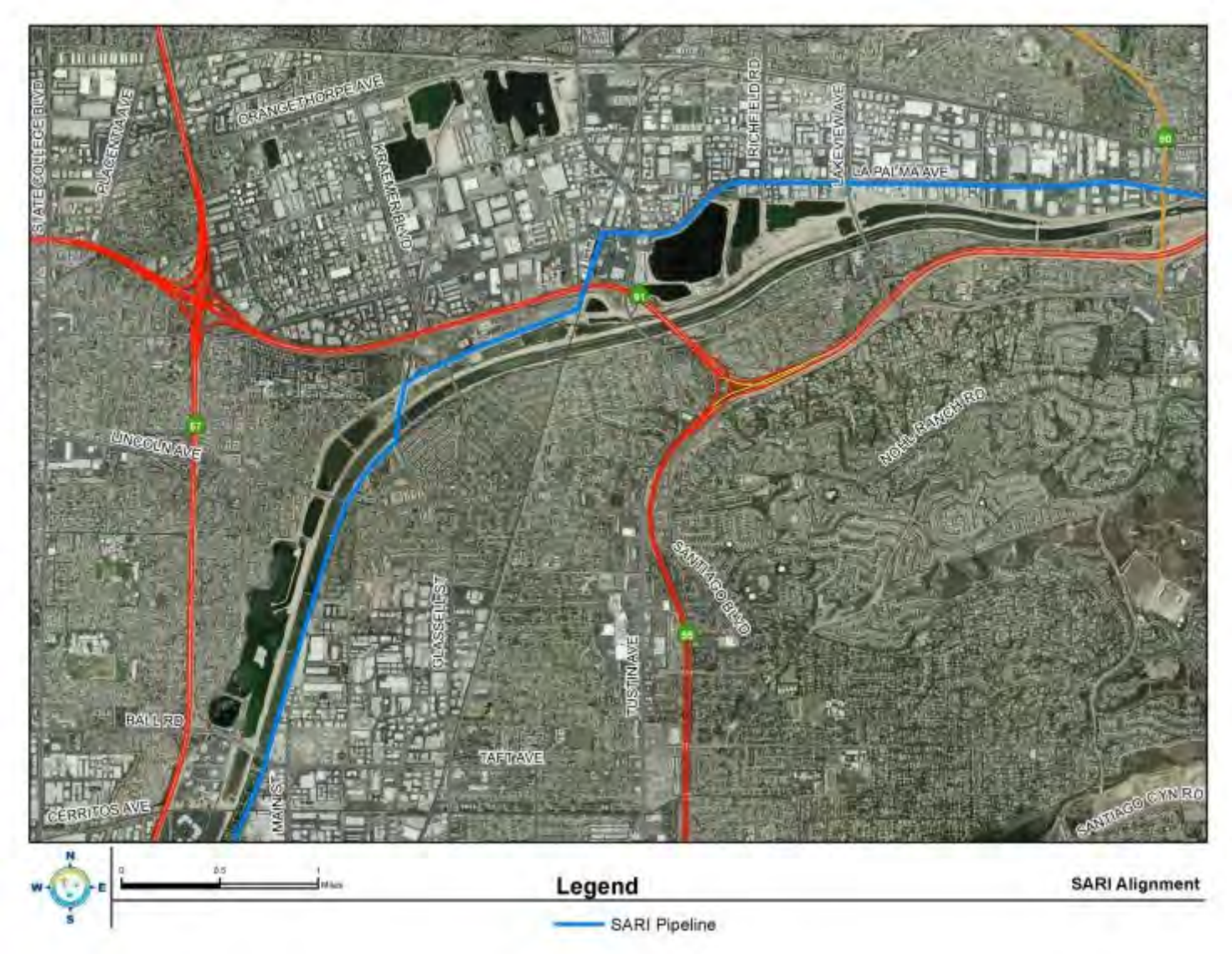

Potential Injection Well Location
OCWD-D3
Potential Injection Well Location
405
OCWD-D4
OCWD-D5
Potential Injection Well Location
OCWD-D1
N
W
E
S
D-WELL DISCHARGE PIPELINE
OCWD EASEMENT
0
100
200
Feet
Potential Injection Well Location Sites
All Wells

Power Generation in Fountain Valley

- Combustion turbine
- Solar



Treat SARI Flows in Anaheim



Treat SARI Flows in Anaheim

- Treat 30-35 mgd of SARI flows in Anaheim to produce approx. 25 mgd
  - Ball Road Basin
  - Nursery Property (near Imperial Hwy)
- Reduced pumping costs
- Potential Issues:
  - OCSD stranded treatment capacity
  - Higher salinity water, lower recovery
  - Conveying treated water to recharge facilities

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Potential Future Engineer's Report and CEQA Prepared for Board review (per each project)

End of Presentation

Status of Ongoing MWDOC Reliability and Engineering and Planning Projects

April 29, 2014

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
Baker Treatment Plant or Expansion of Baker Water Treatment Plant	IRWD, MNWD, SMWD, ETWD Trabuco CWD		On line date is late 2016	MWDOC has been asked to help secure MET's concurrence on the quality of water being introduced into the South County Pipeline. Karl Seckel and SMWD's GM, Dan Ferons, met with MET Operations and Legal staff to discuss the item (both Karl and Dan are very familiar with the multiple agreements covering the South County Pipeline dating back to the late 1980's and early 1990's and including the AMP Sale Agreement in 1994). MET staff and legal counsel are preparing a draft amendment for review. The first draft should be available in about 3 weeks.
MET Interconnections – Second Lower Cross Feeder	MWDOC			Karl Seckel has set May 15 for a meeting with the 10 Participants for the Second Lower Cross Feeder Project to review the MET report on the project and to wrap discussions among the participating agencies.
Doheny Desalination Project	MWDOC			The Phase 3 operations occurred from May 2010 to May 2012; the Phase 3 reports were completed in 2013; MWDOC is now working on the MET Foundational Action work with South Coast Water District, Laguna Beach CWD and the San Juan Basin Authority.

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
Poseidon Resources Ocean Desalination Project in Huntington Beach				MWDOC and OCWD staff met with Poseidon and MET to continue discussions related to MWDOC's application to the Local Resources Program by MET. OCWD approved their staff seeking financial consultants to help with the evaluation of the Poseidon Project. OCWD sent out an RFP and will be reviewing proposals and taking a recommendation back to their Board in May. The work is to be completed by August. The selected consultant will help review and assess all aspects of the project financing plan and improving that plan, risk transfer and keying in on the certainty of the project costs.
OC-88 Metering Issue on the South County Pipeline				The imbalance of the master meter at OC-88 compared to the seven downstream meters has been the cause of concern and investigation for several years now. Most recently, MET hired Accusonic, the manufacturer of the meter, to conduct an investigation. After many months and several shutdowns to measure the internal diameter, the final Accusonic report was submitted to MET and to MWDOC and the South County Pipeline agencies. The Accusonic meter is a sonic meter that has eight separate pathways to sense and integrate flow through the pipe. What was discovered is that the original commissioning by MET in 2004 did not take into account the mortar lining installed in the sensing pipe; simply put the internal diameter plugged into the meter was 65.256 inches compared to the recently measured 64.075 inches. This has resulted in the meter reading 3.42% too high. MET staff is working on how to compensate for the improperly registering

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
				meter over the number of years. It is finally nice to have some resolution to the issue after so much study and evaluation.
Other Meetings				
				Karl Seckel, Joe Berg and Melissa Baum-Haley met with representatives from Dudek to discuss implementation aspects of budget based tiered rates and discussed other potential tools to help consumers use water more efficiently. The first aspect of this is getting consumers to understand how much water they are currently using.
				Karl Seckel provided a presentation to the West Orange County Water Board on the current state-wide water supply situation and on BDCP.
				Karl Seckel participated in the SCE Water Energy Team Public Advisory Group (WET PAG) meeting on April 23. The group was developed at the Governor's urging originally to deal with the San Onofre shutdown and the need to energy efficiency and demand response measures to deal with heavy power grid loads in the summer. The group has continued to meet in light of the drought to look for ways to work together to achieve operational efficiencies over the long run. At the meeting, SCE reported that they are very confident they have the ability to meet projected power grid demands this coming summer in Orange County even during extended periods of very hot weather. I discussed with the group, again, the potential for the water and wastewater community to shift to emergency power

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
				generation in the event of the grid having problems meeting demands. The group was not optimistic about getting approval from AQMD from the annual hours limitations for these types of generators. They did suggest that "testing hours" could be scheduled during these types of events, if possible. They also suggested that rebates or incentives to replace diesel generators with cleaner burning generators may get support from AQMD.
				Rob Hunter and Karl Seckel participated in several meetings with OCWD regarding replacement of the common antiquated boilers and chillers that service both buildings. That work will be scheduled for later this year to install more efficient equipment that meets current codes. Also discussed were a number of other building improvements coming up over the next year.
				Karl Seckel and Director Susan Hinman attended the South Coast Water District dedication of the NEW Aliso Creek Water Harvesting Facility that will treat up to 800,000 gallons per day of water that is a combination of urban runoff from Aliso Creek and existing recycled water from the existing Advanced Wastewater Treatment Facility. The new treatment system will add about 700 AF per year to the existing recycled water system and the RO treatment will improve the salinity of the recycled water. During periods of low flow in the Creek, diversions from the Creek are not allowed.
				Karl Seckel and Legal Counsel met with EOCWD and their legal Counsel on the AMP Sale Agreement and the implications

Description	Lead Agency	Status % Complete	Scheduled Completion Date	Comments
				for service connection OC-70. At issue is the contention of whether or not the Sale Agreement requires MET to provide emergency power at the OC-70 location. A meeting is being scheduled with MET.
				Karl Seckel and Legal Counsel will be meeting on the terms and conditions of the East Orange County Feeder No. 2 pipeline agreement with MET to review issues relative to conveyance of water from alternative sources in the facility. This will be part of discussions related to the Poseidon Project as well as other projects in Orange County.
				Keith Lyon is conducting a survey of "shovel ready projects" from our agencies.
				Karl Seckel and Keith Lyon participated in a meeting with our agencies regarding energy efficiency co-sponsored by Southern California Edison and Southern California Gas Company through a company called Ecova. The goal of the Program is to reduce energy costs by engaging all levels within an organization, making everyone aware of energy and empowering them to work together to improve energy performance – thereby reducing the organization's costs. The Program is

Status of Ongoing WEROC Projects
April, 2014

Description	Comments
General Activities	Kelly Hubbard attended the Harvard Kennedy School of Government at Harvard University for 5 days of classroom instruction on "Leadership in Crisis". There were 55 attendees representing 8 countries, all levels of government, 5 branches of the US military, non-profits, private sector, elected officials and one media representative. Each class session was based on specific disaster response case studies with a topic of leadership related to those case studies. Two lead Professors and guest speakers led the class through guided discussion and instruction based on a specific topic of leadership or response and case studies related to that topic. Sessions were very interactive and progressed based on discussion. The instructors were excellent at leading the class to explore specific areas of discussion. Examples of the case studies include the 2007 Southern California Firestorm, 9-11 World Trade Center and Pentagon attack response, Boston Marathon Bombing, US Flight 1549 in the Hudson River, several pandemic cases, and several others. Guest speakers included the first Fire Captain onsite at the World Trade Center, the Incident Commander responding to the Pentagon, former FEMA Deputy Director, among a few others. The class provided excellent insight into many different disaster responses and leadership theory. The students added to the discussion greatly based on their background and experience. There were many lessons and concepts discussed and learned, some of which I am still processing for how it might apply to WEROC and OC. A great take away from the class is the 55 new emergency management contacts I now have with a wide-variety of backgrounds. I have already started correspondence and the sharing of resources with several of them and still plan on contacting many more of my classmates. One concept I am contemplating is the use of Plan B planning – a second "solutions team" to present a second independent solution to a presented problem. I think this concept could have good application for unique events where there may not be clear immediate answers. One of our biggest and ongoing discussions, was to define daily operations, verses routine disasters, verses non-routine disasters. The concept being that routine disasters are those we plan for and are for the most part ready for (i.e. a winter storm or urban-wildland fire). What makes these "routine disasters" non-routine are unique factors of special circumstances, size, or impact (i.e. Super Storm Sandy or the 2007 Firestorms) - all factors that are often un-predictable and hard to plan for. This has challenged me to consider how we plan

Description	Comments
	and exercise in an effective manner for the non-routine emergency. A concept that I plan on incorporating into our exercises. A very inspiring moment was on the last day when the gentleman from the House of Representatives for Nigeria indicated that he has already started writing legislation on a standard concept of emergency response for his country based on the lessons he learned from the course. This continues to stay with me as Nigeria continues to respond to a deadly bus terminal bombing and the kidnapping of 230 school girls.
Water Trailers	All 15 trailers have been picked up by the participating water utilities. Reimbursement packets have been submitted to the City of Santa Ana for all 15 trailers for a total reimbursement request of $497,304. The first reimbursement check has been received in the amount of $298,386. A second reimbursement of $165,766.00 was received on March 31, 2014. A final payment of $33,152.00 was received on April 21, 2014. Kelly Hubbard will continue to assist the agencies with their Food and Drug Administration Licensing, outreach materials for the trailers, and Standard Operating Procedures.
Member Agency Coordination	Kelly Hubbard facilitated a meeting between the Orange County Sheriff's Department (OCSD) Mounted (horse) Patrol, Orange County Intelligence Assessment Center (OCIAC), Trabuco Canyon Water District and Irvine Ranch Water District. The purpose of the meeting was to facilitate additional awareness of the water utility facilities in the canyon areas so that the OCSD Mounted Unit can provide additional security as they go about their patrols. The water utilities were going to provide the law enforcement agencies pictures and descriptions of what various pieces of infrastructure should look like and contact information for each agency. WEROC is going to provide the law enforcement agencies copies of the WEROC Atlas pages that pertain to these utilities. Kelly, Louay Toma (WEROC Program Assistant), and Leticia Villarreal (OCWD) coordinated and hosted the annual OCWA Administrative Professionals Luncheon. Kelly provided a short training to the City of La Palma's Public Works staff. The training included WEROC radio operations and disaster response protocols. The city's Water Supervisor

Description	Comments
	has been tasked with leading the city's emergency planning efforts. Kelly is assisting him with guidance and support materials. Kelly provided a 1 hour training on WebEOC for key Moulton Niguel Water District Staff.
Coordination with the County of Orange	Kelly has been asked to represent OC Water utilities on the OC Operational Area (OA) Drought Task Force. The Orange County Operational Area Drought Task Force had its first meeting on April 1. The county recognizes that Drought is not yet an emergency situation for the County, but is doing its due diligence in developing a Drought Response Plan. The primary goal of the plan is to identify trigger points for levels of response for affected agencies, what support would be needed from the Operational Area, and to define roles once those trigger points are met. The plan will be looking at impacts to the water utilities, social services, agricultural and fire services. Additionally, there will be a coordinated Joint Information System for the Public Information Officers of all of those affected agencies to work together on unified messaging. The task force will be meeting every other month at this time.
Coordination with Outside Agencies	*Ongoing (last month's report as reference): Kelly was asked to join the California Office of Emergency Services Southern Region Drought Conference Calls as the Region 1 Mutual Aid Coordinator for the California Water and Wastewater Agency Response Network (CalWARN). This is a weekly conference call to provide an update to the Southern Region and the State Operations Center (SOC) on drought impacts, activities and needs. At the request of the State, Kelly has surveyed water utilities for their specific actions. Participation has been great to bring recognition of the potential role of water utilities in the EOC for a county EOC and to enhance emergency manager's knowledge of water utilities. Additionally, Kelly has been able to contribute to discussions regarding potential Stafford Act funding for Drought response*. Kelly worked with the California Water/Wastewater Agency Response Network (CalWARN) State Steering Committee to evaluate a new website for the program that allows for greater usability by the Cal WARN signatories. A majority of the WEROC signatories have also signed the CalWARN agreement.

Description	Comments
	Kelly attended the California Emergency Services Association (CESA) State Board Meeting as a Board Director in Sacramento. The meeting is to work on the association's services to its member agencies. A true bonus is that the executive management of the State Office of Emergency Services (Cal OES) meets with the board for several hours to discuss areas of concern regarding emergency management within the state. This is always a great opportunity to work with the OES staff on issues pertaining to the WEROC member agencies. Kelly attended the Mutual Aid Response Advisory Council (MARAC) in Santa Barbara as the Region 1 Water Mutual Aid Chair. Again this is an excellent opportunity to work with Cal OES staff, as well as emergency managers from all over Southern California on emergency planning issues pertaining to the WEROC member agencies.
WEROC Emergency Operations Center (EOC) Readiness	Kelly provided an Emergency Operations Center (EOC) tour for Louay and Rob Hunter. The tour included the WEROC EOC's and the Operational Area EOC. The time was spent reviewing protocols and discussing operational concepts. Staff successfully participated in the MARS and OA Radio test this month.

Status of Water Use Efficiency Projects

May 2014

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Smart Timer Rebate Program	MWDSC	85%	September 2015	For March 2014, 55 smart timers were installed in the residential sector and 38 in the commercial sector. In March 2014, Newport Beach installed 57 smart timers through its ongoing smart timer installation program. These numbers are included in the program totals listed above. For program water savings and implementation information, see MWDOC Water Use Efficiency Program Savings and Implementation Report.
Rotating Nozzles Rebate Program	MWDSC	Ongoing	June 2015	For March 2014, 2,638 residential and 232 commercial rotating nozzles were installed in Orange County. In the month of March 2014, Newport Beach installed 2,800 rotating nozzles. These numbers are included in the program totals listed above. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
Water Smart Landscape Program	MWDOC	On-going	September 2014	In March 2014, a total of 12,373 meters received monthly irrigation performance reports comparing actual water use to a landscape irrigation budget customized to each meter. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
SoCal Water$mart Residential Indoor Rebate Program	MWDSC	On-going	June 2015	In March 2014, 141 high efficiency clothes washers and 65 high efficiency toilets were installed through this program. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
SoCal Water$mart Commercial Rebate Program	MWDSC	On-going	On-going	In March 2014, 554 high efficiency toilets, 80 flow restrictors, and 5 zero water urinals were installed through this program. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
Industrial Process Water Use Reduction Program	MWDOC	84%	December 2014	Survey scheduling is ongoing. A total of 40 Focused Surveys and 19 Comprehensive Surveys have been completed or are in progress. To date, 11 companies have signed Incentive Agreements. Updated discharger lists have been obtained, and outreach is continuing to sites with feasible water savings potential. As part of this program, UCI campus medical buildings installed 10 autoclaves and 18 faucets, yielding a total water savings of 13.5 AFY.
MWDOC Conservation Meeting	MWDOC	On-going	Monthly	This month's meeting was held on April 3, 2014 at the City of Huntington Beach. The next meeting will be on May 1, 2014 and will be hosted by the City of Newport Beach.
Metropolitan Conservation Meeting	MWDSC	On-going	Monthly	This month's meeting was held on April 17, 2014. The next meeting will be May 15, 2014 at Metropolitan.
Water Smart Hotel Program	MWDOC	75%	June 2014	MWDOC was awarded a Proposition 50 Water Use Efficiency grant and a Bureau of Reclamation grant, to be matched with Metropolitan funds, to conduct up to 105 commercial and landscape audits of hotels. Enhanced financial incentives will be provided to augment the current SoCal Water$mart rebates.

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Water Smart Hotel Program (cont.)				On April 25th, MWDOC staff met again with landscape and hotel staff for the Montage to discuss the rebate options available to the hotel.
Turf Removal Program	MWDOC	On-going	June 2014	In February 2014, 23 rebates were paid, representing 42,730 square feet of turf removed in Orange County. To date, the Turf Removal Program has removed approximately 1,419,785 square feet of turf. For program savings and implementation information, please see MWDOC Water Use Efficiency Program Savings and Implementation Report.
California Sprinkler Adjustment Notification System	MWDOC	90%	September 2014	MWDOC was awarded a grant from the Bureau of Reclamation to develop the California Sprinkler Adjustment Notification System (CSANS). This system will e-mail or "push" an irrigation index to assist property owners with making global irrigation scheduling adjustments. Participants will voluntarily register to receive this e-mail and can unsubscribe at any time. Final CSANS Testing has been completed, and pilot implementation of the CSANS began the week of March 31st. Pilot implementation is scheduled to conclude in August 2014, with broad implementation to begin throughout Orange County in September 2014.
Public Spaces Program	MWDOC	10%	December 2015	Through the Integrated Regional Watershed Management (IRWM) process, MWDOC is implementing a Proposition 84 grant to target the implementation of comprehensive landscape improvements for publicly owned landscape properties throughout the South Orange County IRWM Plan area. The program encourages the removal of non-functional turfgrass, the upgrade of antiquated irrigation timers, and the conversion of high-precipitation-rate fixed spray irrigation to

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Public Spaces Program (cont.)				low-precipitation-rate rotating nozzles and/or drip irrigation. These improvements are meant to result in water savings, a reduction of dry-weather runoff, pollution prevention, and reduced maintenance costs on not only the landscape itself, but also the asphalt street material. To date, 10 cities, water districts, or other special districts (i.e., school districts) have applied for funding through this program, and 3 project proposals have been received.
Home Certification Program	MWDOC	3%	July 2015	This program will provide single-family sites with indoor and outdoor audits to identify areas for water savings improvements and opportunities. The program will also provide rebates for the installation of residential water efficiency devices, including smart timers and high efficiency rotating nozzles. In February 2014, MWDOC received one (1) application for the Home Certification Program. One survey was conducted, and survey results are pending for the remaining applications.
Landscape Irrigation Survey Program	MWDSC	Ongoing	June 2016	Through this program, Metropolitan offers, at no cost, the services of a certified landscape irrigation auditor who will survey and provide written recommendations for qualifying non-residential properties within Metropolitan's service area. To participate, properties must have a minimum of one acre of irrigated area. Eligible landscapes include commercial and industrial sites, homeowner association common areas, and institutional sites such as schools, parks, and government facilities. To date, 93 sites in the MWDOC service area have contacted Metropolitan to request surveys.

Description	Lead Agency	Status % Complete	Scheduled Completion or Renewal Date	Comments
Spray to Drip Conversion Pilot Program	MWDOC	15%	October 2014	This is a pilot program designed to test the efficacy of replacing conventional spray heads in shrub beds with low-volume, low-precipitation drip technology. Through a rebate program format, residential sites will be encouraged to convert their existing spray nozzles to drip. The program launched in March. To date, 15 contractors have attended the drip training course, and three (3) sites have signed up to receive rebates.
Commercial, Industrial, and Institutional Performance-Based Water Use Efficiency Program	MWDOC	2%	December 2015	This program will provide enhanced rebate incentives to commercial, industrial, and institutional sites and large-landscape properties (landscapes $\geq$ 1 acre). The program is scheduled to launch during the second Quarter of 2014.
Landscape Training and Outreach	MWDOC	5%	Ongoing	The Orange County Garden Friendly (OCGF) Program promotes the use of climate appropriate plants and water efficient irrigation practices, with the overall goals of reducing water runoff and improving outdoor water use efficiency. The OCGF Program is a collaborative effort of the Orange County Stormwater Program (OCSP) and the University of California Cooperative Extension (UCCE). Each partner plays a role in planning and implementing the Program. Various water-related organizations also provide program support and assist with implementation. Upcoming events include May 3rd at the Laguna Niguel Home Depot and May 17th at the Brea Home Depot.

Orange County
Water Use Efficiency Programs Savings
and
Implementation Report

Retrofits and Acre-Feet Water Savings for Program Activity

Program	Program Start Date	Retrofits Installed in	Month Indicated		Current Fiscal Year		Overall Program		
			Interventions	Water Savings	Interventions	Water Savings	Interventions	Annual Water Savings[4]	Cumulative Water Savings[4]
High Efficiency Clothes Washer Program	2001	March-14	141	0.32	4,117	53.54	95,148	2,628	15,059
Smart Timer Program - Irrigation Timers	2004	March-14	93	2.29	834	103.14	11,035	3,735	19,654
Rotating Nozzles Rebate Program	2007	March-14	2,870	0.96	59,330	127.39	370,377	1,988	7,858
SoCal Water$mart Commercial Plumbing Fixture Rebate Program	2002	March-14	639	2.17	1,436	20.32	45,264	3,394	26,970
Water Smart Landscape Program [1]	1997	March-14	12,373	882.93	12,373	7,873.50	12,373	10,367	55,175
Industrial Process Water Use Reduction Program	2006	March-14	1	13.50	1	13.50	11	252	878
Turf Removal Program[3]	2010	February-14	42,730	0.50	342,599	48	1,419,785	199	446
High Efficiency Toilet (HET) Program	2005	March-14	65	0.23	2,108	87.09	30,681	1,134	7,093
Home Water Certification Program	2013	February-14	1	0.002	30	0.202	30	0.706	0.706
Synthetic Turf Rebate Program	2007		0	0	0	0	685,438	96	469
Ultra-Low-Flush-Toilet Programs [2]	1992		0	0	0	0	363,926	13,452	150,509
Home Water Surveys [2]	1995		0	0	0	0	11,867	160	1,708
Showerhead Replacements [2]	1991		0	0	0	0	270,604	1,667	19,083
Total Water Savings All Programs			**903**		**422,828**	**8,327**	**3,316,539**	**39,071**	**304,900**

(1) Water Smart Landscape Program participation is based on the number of water meters receiving monthly Irrigation Performance Reports.
(2) Cumulative Water Savings Program To Date totals are from a previous Water Use Efficiency Program Effort.
(3) Turf Removal Interventions are listed as square feet.
[4] Cumulative & annual water savings represents both active program savings and passive savings that continues to be realized due to plumbing code changes over time.

HIGH EFFICIENCY CLOTHES WASHERS INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 01/02	FY 02/03	FY03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY13/14	Total	Current FY Water Savings Ac/Ft (Cumulative)	Cumulative Water Savings across all Fiscal Years
Brea	17	107	178	132	143	132	175	156	42	186	144	93	79	1,584	1.02	251.05
Buena Park	9	45	88	81	84	85	114	146	59	230	145	105	87	1,278	1.16	182.97
East Orange CWD RZ	3	8	20	20	11	18	22	17	3	23	10	10	6	171	0.09	28.38
El Toro WD	21	88	108	103	83	91	113	130	32	162	112	134	85	1,262	1.22	186.34
Fountain Valley	36	127	209	196	178	205	219	243	72	289	158	115	72	2,119	0.94	344.85
Garden Grove	39	173	278	243	243	238	304	332	101	481	236	190	116	2,974	1.60	466.88
Golden State WC	37	195	339	374	342	339	401	447	168	583	485	265	219	4,194	2.55	647.64
Huntington Beach	114	486	857	738	680	761	750	751	211	963	582	334	197	7,424	2.65	1,233.70
Irvine Ranch WD	159	626	1,087	1,093	1,445	1,972	2,052	1,844	1,394	2,621	2,170	1,763	1,225	19,451	16.29	2,869.49
La Habra	8	40	86	81	66	96	136	83	22	179	128	82	78	1,085	1.01	159.84
La Palma	3	5	13	21	18	33	35	51	25	76	46	34	20	380	0.28	53.99
Laguna Beach CWD	17	88	119	84	68	57	77	77	27	96	57	38	24	829	0.27	135.47
Mesa Water District	24	117	228	240	212	239	249	246	73	232	176	114	57	2,207	0.77	373.26
Moulton Niguel WD	158	630	841	640	570	652	716	742	250	1,127	679	442	316	7,763	3.98	1,215.29
Newport Beach	17	144	343	277	243	245	270	259	57	197	142	116	65	2,375	0.89	409.46
Orange	58	247	304	358	330	366	365	403	111	349	262	218	118	3,489	1.55	580.97
Orange Park Acres	-	-	-	-	-	4	8	-	-	-	-	-	-	12	0.00	2.43
San Juan Capistrano	16	95	120	107	102	109	103	127	43	190	110	76	53	1,251	0.61	196.01
San Clemente	32	182	235	170	136	204	261	278	63	333	206	140	65	2,305	0.93	361.22
Santa Margarita WD	140	510	743	573	592	654	683	740	257	1,105	679	553	449	7,678	5.90	1,168.88
Seal Beach	13	28	57	39	46	47	46	57	7	81	51	31	19	522	0.32	81.89
Serrano WD	9	16	54	39	39	30	31	23	7	21	20	13	8	310	0.14	54.41
South Coast WD	35	138	165	97	103	107	130	148	43	183	112	89	63	1,413	0.89	218.35
Trabuco Canyon WD	10	63	76	58	44	69	60	62	28	82	62	30	36	680	0.46	106.97
Tustin	21	89	152	138	127	152	146	144	45	174	97	78	44	1,407	0.52	233.16
Westminster	37	159	235	196	186	213	171	233	74	329	208	121	55	2,217	0.64	355.16
Yorba Linda	36	214	342	355	333	288	350	367	117	394	273	181	116	3,366	1.45	556.00
MWDOC Totals	1,069	4,620	7,277	6,453	6,424	7,406	7,987	8,106	3,331	10,686	7,350	5,365	3,672	79,746	48.14	12,474.05
Anaheim	917	677	904	1,364	701	854	847	781	860	910	477	331	198	9,821	2.44	1,684.95
Fullerton	40	196	369	289	263	269	334	330	69	397	270	200	148	3,174	1.82	494.38
Santa Ana	15	69	188	269	244	236	235	257	87	355	190	163	99	2,407	1.14	405.50
Non-MWDOC Totals	972	942	1,461	1,922	1,208	1,359	1,416	1,368	1,016	1,662	937	694	445	15,402	5.40	2,584.83
Orange County Totals	2,041	5,562	8,738	8,375	7,632	8,765	9,403	9,474	4,347	12,348	8,287	6,059	4,117	95,148	53.54	15,058.89

SMART TIMERS INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 08/09		FY 09/10		FY 10/11		FY 11/12		FY 12/13		FY 13/14		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm	Res	Comm.	
Brea	3	9	0	0	2	0	8	0	9	8	4	0	37	66	293.68
Buena Park	3	1	0	0	0	0	4	19	3	0	0	0	10	20	44.07
East Orange CWD RZ	0	0	0	0	1	0	5	0	2	0	0	0	11	0	2.35
El Toro WD	0	25	2	18	5	5	26	2	7	2	7	0	61	321	1,524.68
Fountain Valley	1	0	0	6	2	2	8	2	3	2	1	0	35	17	74.26
Garden Grove	2	1	6	0	5	4	7	0	5	2	5	0	46	13	62.23
Golden State WC	1	2	9	22	7	4	13	3	9	49	3	11	89	113	310.83
Huntington Beach	13	1	6	27	6	36	15	4	18	33	14	32	117	157	431.38
Irvine Ranch WD	29	56	14	145	28	153	267	71	414	135	49	48	1,097	1,338	5,572.09
La Habra	0	0	0	21	0	0	3	0	4	7	2	0	17	29	89.27
La Palma	0	0	0	0	0	0	1	0	1	0	1	0	3	0	0.28
Laguna Beach CWD	2	0	2	14	4	1	109	2	76	2	67	0	294	19	96.32
Mesa Water District	6	7	13	7	7	22	21	0	10	2	11	2	112	73	338.01
Moulton Niguel WD	21	23	17	162	36	60	179	31	51	74	32	35	461	467	1,512.35
Newport Beach	10	27	7	58	6	0	275	12	242	26	158	74	959	344	1,370.41
Orange	5	2	2	13	5	8	25	0	20	24	11	9	145	111	461.30
San Juan Capistrano	10	0	7	49	13	1	103	2	14	18	4	0	172	79	276.35
San Clemente	81	20	13	209	46	11	212	17	26	7	8	2	940	334	1,477.56
Santa Margarita WD	25	44	10	152	61	53	262	7	53	171	44	83	566	684	2,130.57
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
Seal Beach	0	0	0	1	0	0	0	3	1	0	1	36	2	40	33.79
Serrano WD	0	0	11	0	4	0	3	0	1	0	0	0	19	0	3.78
South Coast WD	11	6	3	10	13	3	78	10	13	16	4	3	154	127	533.08
Trabuco Canyon WD	1	0	2	0	2	10	12	0	6	0	2	0	68	103	548.16
Tustin	7	9	10	14	10	0	11	0	8	4	9	1	59	35	138.18
Westminster	3	0	3	0	1	1	2	0	1	1	0	0	26	14	85.13
Yorba Linda	8	5	5	21	25	0	22	0	20	0	10	5	171	83	394.39
MWDOC Totals	242	238	142	949	289	374	1,671	185	1,017	583	447	341	5,671	4,587	17,804.51
Anaheim	9	59	5	46	12	11	23	60	19	10	7	26	118	361	1,376.27
Fullerton	2	2	2	39	9	33	22	51	9	29	5	0	71	154	384.74
Santa Ana	2	4	1	8	8	0	6	5	8	19	2	6	31	42	88.05
Non-MWDOC Totals	13	65	8	93	29	44	51	116	36	58	14	32	220	557	1,849.06
Orange County Totals	255	303	150	1,042	318	418	1,722	301	1,053	641	461	373	5,891	5,144	19,654

ROTATING NOZZLES INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	FY 09/10			FY 10/11			FY 11/12			FY 12/13			FY 13/14			Total Program			Cumulative Water Savings across all Fiscal Years
	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	Small		Large	
	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	Res	Comm.	Comm.	
Brea	8	100	0	32	0	0	130	0	0	65	120	0	84	0	0	341	220	0	6.57
Buena Park	0	0	2,535	29	0	0	32	0	0	65	0	0	53	0	0	216	75	2,535	447.88
East Orange	0	0	0	0	0	0	340	0	0	55	0	0	0	0	0	500	0	0	7.04
El Toro	145	2,874	890	174	0	0	357	76	0	23	6,281	0	36	3,288	0	823	12,809	890	296.85
Fountain Valley	21	0	0	83	0	0	108	0	0	35	0	0	0	0	0	381	0	0	6.74
Garden Grove	151	45	0	38	0	0	119	0	0	95	0	0	61	0	0	661	151	0	14.40
Golden State	280	29	0	303	943	0	294	0	0	257	2,595	0	165	0	0	1,543	3,567	0	59.59
Huntington Beach	39	3,420	305	203	625	0	458	0	0	270	0	0	120	0	0	1,505	4,909	2,681	719.35
Irvine Ranch	1,034	54,441	1,479	2,411	2,861	0	1,715	4,255	0	25,018	1,014	0	10,848	4,257	0	43,230	79,371	2,004	2303.93
La Habra	0	273	0	0	0	0	33	90	0	0	0	0	15	0	0	72	898	900	213.71
La Palma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0.24
Laguna Beach	191	0	0	156	0	0	763	0	0	3,596	0	0	2,739	878	0	7,661	925	0	65.45
Mesa Water District	195	83	0	118	0	0	297	277	0	270	0	0	338	0	0	1,499	385	343	109.98
Moulton Niguel	234	0	959	1,578	0	0	1,225	0	0	512	1,385	0	257	227	0	4,529	8,615	2,945	833.60
Newport Beach	92	4,781	0	337	1,208	0	640	3,273	0	25,365	50	0	18,787	6,835	0	45,308	16,886	0	496.92
Orange	129	0	0	135	30	0	343	0	0	264	0	0	165	0	0	2,155	193	0	43.49
San Clemente	729	1,299	0	2,612	851	0	4,266	117	1,343	631	172	0	216	5,074	0	9,038	7,538	1,343	332.17
San Juan Capistrano	656	5,709	0	1,452	0	0	949	0	0	684	30	0	283	0	0	4,528	7,399	0	220.89
Santa Margarita	1,731	937	611	3,959	3,566	0	4,817	0	0	983	0	0	318	0	0	13,052	4,571	611	379.66
Seal Beach	0	291	0	0	0	0	0	0	0	0	0	0	0	0	0	115	291	0	8.58
Serrano	1,498	0	0	364	0	0	58	0	0	190	0	0	105	0	0	2,333	0	0	41.61
South Coast	0	0	0	318	1,772	0	688	359	0	435	0	0	70	0	0	1,700	2,264	0	58.30
Trabuco Canyon	1,357	791	0	0	0	0	379	0	0	34	0	0	0	0	0	1,900	791	0	51.40
Tustin	314	0	0	512	0	0	476	1,013	0	378	0	0	329	0	0	2,581	1,013	0	50.48
Westminster	80	0	0	0	0	0	26	0	0	15	0	0	0	0	0	232	0	0	4.69
Yorba Linda	371	3,256	0	529	0	0	559	0	0	730	0	0	40	940	0	3,232	4,309	500	231.45
MWDOC Totals	9,255	78,329	6,779	15,343	11,856	0	19,072	9,460	1,343	59,970	11,647	0	35,029	21,499	0	149,145	157,180	14,752	7004.97
Anaheim	273	164	105	372	382	0	742	38,554	0	459	813	0	144	0	0	2,387	39,913	105	531.07
Fullerton	48	0	1,484	416	0	0	409	0	0	119	0	0	107	0	0	1,640	64	1,484	288.49
Santa Ana	48	572	0	53	0	0	22	65	0	99	0	0	18	2,533	0	481	3,226	0	32.98
Non-MWDOC Totals	369	736	1,589	841	382	0	1,173	38,619	0	677	813	0	269	2,533	0	4,508	43,203	1,589	852.53
Orange County Totals	9,624	79,065	8,368	16,184	12,238	0	20,245	48,079	1,343	60,647	12,460	0	35,298	24,032	0	153,653	200,383	16,341	7857.50

SOCAL WATER$MART COMMERCIAL PLUMBING FIXTURES REBATE PROGRAM[1]
INSTALLED BY AGENCY
through MWDOC and Local Agency Conservation Programs

Agency	FY 01/02	FY 02/03	FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	Totals	Cumulative Water Savings across all Fiscal Years
Brea	0	51	0	22	52	2	27	113	24	4	1	234	0	**530**	**263**
Buena Park	10	83	28	55	64	65	153	432	122	379	290	5	0	**1,686**	**691**
East Orange CWD RZ	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
El Toro WD	23	23	73	42	5	2	0	92	143	1	137	0	212	**753**	**393**
Fountain Valley	1	94	2	59	35	63	17	35	0	2	314	0	0	**622**	**409**
Garden Grove	21	199	51	297	34	136	5	298	130	22	0	4	1	**1,198**	**1,058**
Golden State WC	11	197	34	232	80	531	46	414	55	68	135	0	0	**1,803**	**1,367**
Huntington Beach	5	191	73	185	82	209	48	104	126	96	156	104	138	**1,517**	**1,076**
Irvine Ranch WD	306	1,085	87	325	1,044	429	121	789	2,708	1,002	646	1,090	433	**10,065**	**4,498**
La Habra	10	37	52	45	60	16	191	75	53	4	0	0	0	**543**	**385**
La Palma	0	0	0	0	5	0	0	140	21	0	0	0	0	**166**	**56**
Laguna Beach CWD	2	30	2	18	9	12	20	137	189	0	0	0	27	**446**	**219**
Mesa Water District	424	155	22	130	241	141	141	543	219	669	41	6	0	**2,732**	**1,438**
Moulton Niguel WD	31	74	65	172	3	0	9	69	151	6	0	0	0	**580**	**595**
Newport Beach	4	230	9	77	24	94	98	27	245	425	35	0	0	**1,268**	**873**
Orange	84	144	22	553	127	88	18	374	67	1	73	1	268	**1,820**	**1,250**
San Juan Capistrano	0	34	21	181	0	6	2	1	1	0	0	0	2	**248**	**306**
San Clemente	0	36	5	95	40	173	2	18	43	0	19	0	0	**431**	**287**
Santa Margarita WD	0	16	3	56	0	0	6	23	11	0	0	0	0	**115**	**149**
Santiago CWD	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
Seal Beach	3	34	44	40	61	45	1	2	124	0	0	0	0	**354**	**309**
Serrano WD	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**
South Coast WD	0	31	8	54	8	4	9	114	56	422	84	148	0	**938**	**304**
Trabuco Canyon WD	0	1	0	6	0	0	0	4	0	0	0	0	0	**11**	**11**
Tustin	9	114	16	82	14	7	115	145	25	230	0	0	0	**757**	**574**
Westminster	16	109	32	153	57	104	40	161	16	63	35	1	28	**815**	**731**
Yorba Linda	0	36	12	42	4	118	10	24	8	30	0	1	0	**285**	**402**
MWDOC Totals	**960**	**3,004**	**661**	**2,921**	**2,049**	**2,245**	**1,079**	**4,134**	**4,537**	**3,424**	**1,966**	**1,594**	**1,109**	**29,683**	**17,642**
Anaheim	1,042	400	947	362	1,113	780	766	3,298	582	64	48	165	320	**9,887**	**4,845**
Fullerton	28	41	138	270	91	96	133	579	29	4	0	94	0	**1,503**	**1,141**
Santa Ana	115	153	589	227	624	373	493	815	728	39	12	16	7	**4,191**	**3,341**
Non-MWDOC Totals	**1,185**	**594**	**1,674**	**859**	**1,828**	**1,249**	**1,392**	**4,692**	**1,339**	**107**	**60**	**275**	**327**	**15,581**	**9,328**
Orange County Totals	**2,145**	**3,598**	**2,335**	**3,780**	**3,877**	**3,494**	**2,471**	**8,826**	**5,876**	**3,531**	**2,026**	**1,869**	**1,436**	**45,264**	**26,970**

[1] Retrofit devices include ULF Toilets and Urinals, High Efficiency Toilets and Urinals, Zero Water Urinals, High Efficiency Clothes Washers, Cooling Tower Conductivity Controllers, Ph Cooling Tower Conductivity Controllers, Flush Valve Retrofit Kits, Pre-rinse Spray heads, Hospital X-Ray Processor Recirculating Systems, Steam Sterilizers, Food Steamers, and Water Pressurized Brooms.

Water Smart Landscape Program

Total Number of Meters in Program by Agency

Agency	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12/13	FY 13/14	Overall Water Savings To Date (AF)
Brea	0	0	0	0	0	0	0	22	22	22	34.54
Buena Park	0	0	0	0	0	17	103	101	101	101	325.76
East Orange CWD RZ	0	0	0	0	0	0	0	0	0	0	0.00
El Toro WD	88	109	227	352	384	371	820	810	812	812	3,756.00
Fountain Valley	0	0	0	0	0	0	0	0	0	0	0.00
Garden Grove	0	0	0	0	0	0	0	0	0	0	0.00
Golden State WC	0	0	0	14	34	32	34	32	32	32	157.20
Huntington Beach	0	0	0	0	0	31	33	31	31	31	106.40
Irvine Ranch WD	277	638	646	708	1,008	6,297	6,347	6,368	6,795	6,797	29,131.87
Laguna Beach CWD	0	0	0	0	57	141	143	141	124	124	564.95
La Habra	0	0	0	0	23	22	24	22	22	22	106.90
La Palma	0	0	0	0	0	0	0	0	0	0	0.00
Mesa Water District	191	170	138	165	286	285	288	450	504	511	2,248.96
Moulton Niguel WD	80	57	113	180	473	571	595	643	640	662	3,204.82
Newport Beach	32	27	23	58	142	171	191	226	262	299	1,094.58
Orange	0	0	0	0	0	0	0	0	0	0	0.00
San Clemente	191	165	204	227	233	247	271	269	269	303	1,873.90
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0	0.00
Santa Margarita WD	547	619	618	945	1,571	1,666	1,746	1,962	1,956	2,271	11,053.20
Seal Beach	0	0	0	0	0	0	0	0	0	0	0.00
Serrano WD	0	0	0	0	0	0	0	0	0	0	0.00
South Coast WD	0	0	0	62	117	108	110	118	118	118	630.53
Trabuco Canyon WD	0	0	0	12	49	48	62	60	60	60	269.17
Tustin	0	0	0	0	0	0	0	0	0	0	0.00
Westminster	0	0	0	10	18	18	20	18	18	18	92.05
Yorba Linda WD	0	0	0	0	0	0	0	0	0	0	0.00
MWDOC Totals	**1,406**	**1,785**	**1,969**	**2,733**	**4,395**	**10,025**	**10,787**	**11,273**	**11,766**	**12,183**	**54,650.8**
Anaheim	0	0	0	0	0	142	146	144	190	190	523.92
Fullerton	0	0	0	0	0	0	0	0	0	0	0.00
Santa Ana	0	0	0	0	0	0	0	0	0	0	0.00
Non-MWDOC Totals	**0**	**0**	**0**	**0**	**0**	**142**	**146**	**144**	**190**	**190**	**523.92**
Orange Co. Totals	**1,406**	**1,785**	**1,969**	**2,733**	**4,395**	**10,167**	**10,933**	**11,417**	**11,956**	**12,373**	**55,174.74**

INDUSTRIAL PROCESS WATER USE REDUCTION PROGRAM

Number of Process Changes by Agency

Agency	FY 07/08	FY 08/09	FY 09/10	FY 10/11	FY 11/12	FY 12/13	FY 13/14	Overall Program Interventions	Annual Water Savings[1]	Cumulative Water Savings across all Fiscal Years[1]
Brea	0	0	0	0	0	0	0	0	0	0
Buena Park	0	1	0	0	0	0	0	1	54	284
East Orange	0	0	0	0	0	0	0	0	0	0
El Toro	0	0	0	0	0	0	0	0	0	0
Fountain Valley	0	0	0	0	0	0	0	0	0	0
Garden Grove	0	0	0	0	0	0	0	0	0	0
Golden State	1	0	0	0	0	0	0	1	3	18
Huntington Beach	0	0	0	0	0	2	0	2	54	92
Irvine Ranch	0	0	2	1	1	1	1	6	98	219
La Habra	0	0	0	0	0	0	0	0	0	0
La Palma	0	0	0	0	0	0	0	0	0	0
Laguna Beach	0	0	0	0	0	0	0	0	0	0
Mesa Water District	0	0	0	0	0	0	0	0	0	0
Moulton Niguel	0	0	0	0	0	0	0	0	0	0
Newport Beach	0	0	0	0	0	0	0	0	0	0
Orange	1	0	0	0	0	0	0	1	43	266
San Juan Capistrano	0	0	0	0	0	0	0	0	0	0
San Clemente	0	0	0	0	0	0	0	0	0	0
Santa Margarita	0	0	0	0	0	0	0	0	0	0
Seal Beach	0	0	0	0	0	0	0	0	0	0
Serrano	0	0	0	0	0	0	0	0	0	0
South Coast	0	0	0	0	0	0	0	0	0	0
Trabuco Canyon	0	0	0	0	0	0	0	0	0	0
Tustin	0	0	0	0	0	0	0	0	0	0
Westminster	0	0	0	0	0	0	0	0	0	0
Yorba Linda	0	0	0	0	0	0	0	0	0	0
MWDOC Totals	2	1	2	1	1	3	1	11	252	878

[1] Acre feet of savings determined during a one year monitoring period.

If monitoring data is not available, the savings estimated in agreement is used.

TURF REMOVAL BY AGENCY[1]

through MWDOC and Local Agency Conservation Programs

Agency	FY 10/11		FY 11/12		FY 12/13		FY 13/14		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	0	0	3,397	9,466	7,605	0	0	0	11,002	9,466	7.53
Buena Park	0	0	0	0	0	0	0	0	0	0	-
East Orange	0	0	0	0	0	0	1,964	0	1,964	0	0.27
El Toro	0	0	4,723	0	4,680	72,718	2,908	0	12,311	72,718	24.06
Fountain Valley	0	0	1,300	0	682	7,524	1,054	0	3,036	7,524	2.99
Garden Grove	0	46,177	14,013	0	4,534	0	3,274	0	21,821	46,177	33.47
Golden State	0	0	42,593	30,973	31,813	3,200	19,884	8,424	94,290	42,597	44.66
Huntington Beach	801	3,651	27,630	48,838	9,219	12,437	13,513	0	51,163	64,926	42.56
Irvine Ranch	5,423	12,794	6,450	1,666	32,884	32,384	23,962	67,381	68,719	114,225	44.67
La Habra	0	7,775	0	8,262	0	0	0	0	0	16,037	7.82
La Palma	0	0	0	0	0	0	0	0	0	0	-
Laguna Beach	978	0	2,533	0	2,664	1,712	1,886	226	8,061	1,938	3.13
Mesa Water District	0	0	6,777	0	10,667	0	8,008	0	25,452	0	6.95
Moulton Niguel	956	16,139	4,483	26,927	11,538	84,123	3,672	20,388	20,649	147,577	52.92
Newport Beach	0	0	3,454	0	3,548	2,346	894	0	7,896	2,346	3.23
Orange	0	0	12,971	0	15,951	8,723	1,434	0	30,356	8,723	12.56
San Clemente	0	0	21,502	0	16,062	13,165	10,646	10,000	48,210	23,165	20.10
San Juan Capistrano	0	0	22,656	103,692	29,544	27,156	6,581	0	58,781	130,848	69.86
Santa Margarita	4,483	5,561	1,964	11,400	10,151	11,600	3,885	10,257	20,483	38,818	19.31
Seal Beach	0	0	0	0	3,611	0	0	0	3,611	0	1.01
Serrano	0	0	0	0	0	0	2,971	0	2,971	0	0.42
South Coast	0	16,324	6,806	0	9,429	4,395	5,627	101,127	21,862	121,846	30.82
Trabuco Canyon	0	0	272	0	1,542	22,440	2,009	0	3,823	22,440	7.11
Tustin	0	0	0	0	9,980	0	1,410	0	11,390	0	2.99
Westminster	0	0	0	0	0	0	0	0	0	0	-
Yorba Linda	11,349	0	0	0	0	0	0	0	11,349	0	6.36
MWDOC Totals	23,990	108,421	183,524	241,224	216,104	303,923	115,582	217,803	539,200	871,371	444.82
Anaheim	0	0	0	0	0	0	0	0	0	0	-
Fullerton	0	0	0	0	0	0	0	9,214	0	9,214	1.29
Santa Ana	0	0	0	0	0	0	0	0	0	0	-
Non-MWDOC Totals	0	0	0	0	0	0	0	9,214	0	9,214	1.29
Orange County Totals	23,990	108,421	183,524	241,224	216,104	303,923	115,582	227,017	539,200	880,585	446.11

[1]Installed device numbers are listed as square feet

HIGH EFFICIENCY TOILETS (HETs) INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	FY 13-14	Total	Cumulative Water Savings across all Fiscal Years
Brea	0	2	7	43	48	8	0	0	26	134	**26.43**
Buena Park	0	1	2	124	176	7	0	0	26	336	**72.35**
East Orange CWD RZ	0	0	10	12	1	0	0	0	1	24	**6.30**
El Toro WD	0	392	18	75	38	18	0	133	162	836	**187.35**
Fountain Valley	0	69	21	262	54	17	0	0	24	447	**112.06**
Garden Grove	0	14	39	443	181	24	0	0	28	729	**173.30**
Golden State WC	2	16	36	444	716	37	80	2	81	1,414	**302.81**
Huntington Beach	2	13	59	607	159	76	0	0	99	1,015	**228.75**
Irvine Ranch WD	29	1,055	826	5,088	2,114	325	0	1,449	478	11,364	**2,564.48**
Laguna Beach CWD	0	2	17	91	28	11	0	0	20	169	**37.66**
La Habra	0	3	18	296	34	20	0	0	6	377	**92.86**
La Palma	0	1	10	36	26	13	0	0	15	101	**20.90**
Mesa Water District	0	247	19	736	131	7	0	0	152	1,292	**313.23**
Moulton Niguel WD	0	20	104	447	188	46	0	0	199	1,004	**208.24**
Newport Beach	0	5	19	163	54	13	0	0	18	272	**63.46**
Orange	1	20	62	423	79	40	0	1	78	704	**160.70**
San Juan Capistrano	0	10	7	76	39	11	0	0	19	162	**35.88**
San Clemente	0	7	22	202	66	21	0	0	38	356	**79.76**
Santa Margarita WD	0	5	14	304	151	44	0	0	368	886	**138.79**
Seal Beach	0	678	8	21	12	1	0	2	2	724	**241.57**
Serrano WD	0	0	1	13	5	0	0	0	2	21	**5.53**
South Coast WD	2	2	29	102	41	12	23	64	46	321	**57.24**
Trabuco Canyon WD	2	0	4	23	23	0	0	0	5	57	**12.17**
Tustin	0	186	28	387	479	17	0	0	43	1,140	**277.14**
Westminster	0	17	25	541	167	23	0	0	21	794	**191.73**
Yorba Linda WD	0	14	89	323	96	18	0	0	24	564	**138.27**
MWDOC Totals	38	2,779	1,494	11,282	5,106	809	103	1,651	1,981	25,243	**5,748.96**
Anaheim	0	255	78	2,771	619	114	0	0	82	3,919	**972.26**
Fullerton	0	4	28	286	60	23	0	0	24	425	**100.44**
Santa Ana	0	11	25	925	89	23	0	0	21	1,094	**271.14**
Non-MWDOC Totals	0	270	131	3,982	768	160	0	0	127	5,438	**1,343.85**
Orange County Totals	38	3,049	1,625	15,264	5,874	969	103	1,651	2,108	30,681	**7,092.81**

HOME WATER SURVEYS PERFORMED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	FY 13/14		FY 14/15		Total		Cumulative
	Surveys	Cert Homes	Surveys	Cert Homes	Surveys	Cert Homes	Water Savings
Brea	0	0	0	0	0	0	0.00
Buena Park	0	0	0	0	0	0	0.00
East Orange	13	0	0	0	13	0	0.31
El Toro	0	0	0	0	0	0	0.00
Fountain Valley	2	0	0	0	2	0	0.05
Garden Grove	0	0	0	0	0	0	0.00
Golden State	0	0	0	0	0	0	0.00
Huntington Beach	0	0	0	0	0	0	0.00
Irvine Ranch	0	0	0	0	0	0	0.00
La Habra	0	0	0	0	0	0	0.00
La Palma	0	0	0	0	0	0	0.00
Laguna Beach	3	0	0	0	3	0	0.07
Mesa	0	0	0	0	0	0	0.00
Moulton Niguel	1	0	0	0	1	0	0.02
Newport Beach	0	0	0	0	0	0	0.00
Orange	0	0	0	0	0	0	0.00
San Clemente	1	0	0	0	1	0	0.02
San Juan Capistrano	1	0	0	0	1	0	0.02
Santa Margarita	7	0	0	0	7	0	0.16
Serrano	0	0	0	0	0	0	0.00
South Coast	2	0	0	0	2	0	0.05
Trabuco Canyon	0	0	0	0	0	0	0.00
Tustin	0	0	0	0	0	0	0.00
Westminster	0	0	0	0	0	0	0.00
Yorba Linda	0	0	0	0	0	0	0.00
MWDOC Totals	30	0	0	0	30	0	0.71
Anaheim	0	0	0	0	0	0	0.00
Fullerton	0	0	0	0	0	0	0.00
Santa Ana	0	0	0	0	0	0	0.00
Non-MWDOC Totals	0	0	0	0	0	0	0.00
Orange County Totals	30	0	0	0	30	0	0.706

SYNTHETIC TURF INSTALLED BY AGENCY[1]

through MWDOC and Local Agency Conservation Programs

Agency	FY 07/08		FY 08/09		FY 09/10		FY 10/11		Total Program		Cumulative Water Savings across all Fiscal Years
	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	Res	Comm.	
Brea	0	0	2,153	2,160	500	0	0	0	2,653	2,160	3.30
Buena Park	0	0	1,566	5,850	0	0	0	0	1,566	5,850	5.19
East Orange	0	0	0	0	983	0	0	0	983	0	0.55
El Toro	3,183	0	2,974	0	3,308	0	895	0	10,360	0	6.98
Fountain Valley	11,674	0	1,163	0	2,767	0	684	0	16,288	0	12.46
Garden Grove	1,860	0	0	0	3,197	0	274	0	5,331	0	3.47
Golden State	6,786	0	13,990	0	15,215	0	2,056	0	38,047	0	24.88
Huntington Beach	15,192	591	12,512	0	4,343	1,504	0	0	32,047	2,095	25.29
Irvine Ranch	11,009	876	13,669	0	2,585	0	0	0	27,263	876	21.00
La Habra	0	0	0	0	0	0	0	0	0	0	-
La Palma	429	0	0	0	0	0	0	0	429	0	0.36
Laguna Beach	3,950	0	3,026	0	725	0	0	0	7,701	0	5.84
Mesa Water District	4,114	0	3,005	78,118	4,106	0	2,198	0	13,423	78,118	63.46
Moulton Niguel	14,151	0	25,635	2,420	7,432	0	0	0	47,218	2,420	35.69
Newport Beach	2,530	0	6,628	0	270	0	0	0	9,428	0	6.92
Orange	4,169	0	7,191	0	635	0	0	0	11,995	0	8.89
San Clemente	9,328	0	11,250	455	2,514	1,285	500	0	23,592	1,740	18.37
San Juan Capistrano	0	0	7,297	639	2,730	0	4,607	0	14,634	639	9.02
Santa Margarita	12,922	0	26,069	0	21,875	0	7,926	0	68,792	0	44.68
Seal Beach	0	0	817	0	0	0	0	0	817	0	0.57
Serrano	7,347	0	1,145	0	0	0	0	0	8,492	0	6.97
South Coast	2,311	0	6,316	0	17,200	0	1,044	0	26,871	0	16.43
Trabuco Canyon	1,202	0	9,827	0	0	0	0	0	11,029	0	7.89
Tustin	6,123	0	4,717	0	2,190	0	0	0	13,030	0	9.67
Westminster	2,748	16,566	8,215	0	890	0	0	0	11,853	16,566	22.47
Yorba Linda	11,792	0	12,683	0	4,341	5,835	0	0	28,816	5,835	24.48
MWDOC Totals	132,820	18,033	181,848	89,642	97,806	8,624	20,184	0	432,658	116,299	384.83
Anaheim	4,535	0	7,735	20,093	13,555	65,300	4,122	0	29,947	85,393	69.18
Fullerton	4,865	876	5,727	0	6,223	0	105	0	16,920	876	12.36
Santa Ana	0	0	2,820	0	525	0	0	0	3,345	0	2.27
Non-MWDOC Totals	9,400	876	16,282	20,093	20,303	65,300	4,227	0	50,212	86,269	83.81
Orange County Totals	142,220	18,909	198,130	109,735	118,109	73,924	24,411	0	482,870	202,568	468.63

[1]Installed device numbers are calculated in square feet

ULF TOILETS INSTALLED BY AGENCY

through MWDOC and Local Agency Conservation Programs

Agency	Previous Years	FY 95-96	FY 96-97	FY 97-98	FY 98-99	FY 99-00	FY 00-01	FY 01-02	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	Total	Cumulative Water Savings across all Fiscal Years
Brea	378	189	299	299	122	144	867	585	341	401	26	48	17	4	0	**3,720**	**1,569.44**
Buena Park	361	147	331	802	520	469	524	1,229	2,325	1,522	50	40	18	9	0	**8,347**	**3,221.94**
East Orange CWD RZ	2	0	33	63	15	17	15	50	41	44	19	18	13	2	0	**332**	**127.24**
El Toro WD	1,169	511	678	889	711	171	310	564	472	324	176	205	61	40	0	**6,281**	**2,883.15**
Fountain Valley	638	454	635	858	1,289	2,355	1,697	1,406	1,400	802	176	111	58	32	0	**11,911**	**4,988.63**
Garden Grove	1,563	1,871	1,956	2,620	2,801	3,556	2,423	3,855	3,148	2,117	176	106	67	39	0	**26,298**	**11,284.48**
Golden State WC	3,535	1,396	3,141	1,113	3,024	2,957	1,379	2,143	3,222	1,870	167	116	501	43	0	**24,607**	**10,916.54**
Huntington Beach	3,963	1,779	2,600	2,522	2,319	3,492	3,281	2,698	3,752	1,901	367	308	143	121	0	**29,246**	**12,886.15**
Irvine Ranch WD	4,016	841	1,674	1,726	1,089	3,256	1,534	1,902	2,263	6,741	593	626	310	129	0	**26,700**	**10,965.00**
Laguna Beach CWD	283	93	118	74	149	306	220	85	271	118	32	26	29	6	0	**1,810**	**785.75**
La Habra	594	146	254	775	703	105	582	645	1,697	1,225	12	31	6	7	0	**6,782**	**2,733.13**
La Palma	65	180	222	125	44	132	518	173	343	193	31	27	20	17	0	**2,090**	**858.31**
Mesa Water District	1,610	851	1,052	2,046	2,114	1,956	1,393	1,505	2,387	988	192	124	56	14	0	**16,288**	**7,114.85**
Moulton Niguel WD	744	309	761	698	523	475	716	891	728	684	410	381	187	100	0	**7,607**	**3,119.21**
Newport Beach	369	293	390	571	912	1,223	438	463	396	1,883	153	76	36	16	0	**7,219**	**2,927.69**
Orange	683	1,252	1,155	1,355	533	2,263	1,778	2,444	2,682	1,899	193	218	88	53	4	**16,600**	**6,798.18**
San Juan Capistrano	1,234	284	193	168	323	1,319	347	152	201	151	85	125	42	39	0	**4,663**	**2,170.00**
San Clemente	225	113	191	65	158	198	667	483	201	547	91	66	37	34	0	**3,076**	**1,212.77**
Santa Margarita WD	577	324	553	843	345	456	1,258	790	664	260	179	143	101	29	0	**6,522**	**2,785.02**
Seal Beach	74	66	312	609	47	155	132	81	134	729	29	10	6	12	0	**2,396**	**994.45**
Serrano WD	81	56	68	41	19	52	95	73	123	98	20	15	14	2	0	**757**	**313.59**
South Coast WD	110	176	177	114	182	181	133	358	191	469	88	72	32	22	0	**2,305**	**913.71**
Trabuco Canyon WD	10	78	42	42	25	21	40	181	102	30	17	20	12	14	0	**634**	**252.02**
Tustin	968	668	557	824	429	1,292	1,508	1,206	1,096	827	69	89	26	12	0	**9,571**	**4,106.91**
Westminster	747	493	969	1,066	2,336	2,291	2,304	1,523	2,492	1,118	145	105	70	24	0	**15,683**	**6,544.89**
Yorba Linda WD	257	309	417	457	404	1,400	759	1,690	1,155	627	158	136	81	41	0	**7,891**	**3,148.16**
MWDOC Totals	24,256	12,879	18,778	20,765	21,136	30,242	24,918	27,175	31,827	27,568	3,654	3,242	2,031	861	4	**249,336**	**105,621.20**
Anaheim	447	1,054	1,788	3,661	1,755	7,551	4,593	6,346	9,707	5,075	473	371	462	341	1	**43,625**	**16,914.77**
Fullerton	1,453	1,143	694	1,193	1,364	2,138	1,926	2,130	2,213	1,749	172	77	44	23	2	**16,321**	**6,894.71**
Santa Ana	1,111	1,964	1,205	2,729	2,088	8,788	5,614	10,822	10,716	9,164	279	134	25	5	0	**54,644**	**21,078.27**
Non-MWDOC Totals	3,011	4,161	3,687	7,583	5,207	18,477	12,133	19,298	22,636	15,988	924	582	531	369	3	**114,590**	**44,887.75**
Orange County Totals	27,267	17,040	22,465	28,348	26,343	48,719	37,051	46,473	54,463	43,556	4,578	3,824	2,562	1,230	7	**363,926**	**150,508.96**