



Doheny Desalination Program Update Briefing

South Coast Water District
Board of Directors Meeting

October 22, 2015

Agenda

1. Introduction of GHD Team
2. Doheny Desalination Draft Program Goals
3. Phase 1 High Level Schedule
4. Status of Current Progress
5. Upcoming Board Participation and Actions
6. New Desalination Technologies



GHD Team



Overall Program
Management &
Technical Services

Michael Baker

INTERNATIONAL

Environmental
Studies and
Permitting

BUTIER

Construction Managers, Consulting Engineers

Scheduling,
Cost Estimating,
Constructability



Funding
Strategies



Public Outreach
and Stakeholder
Engagement

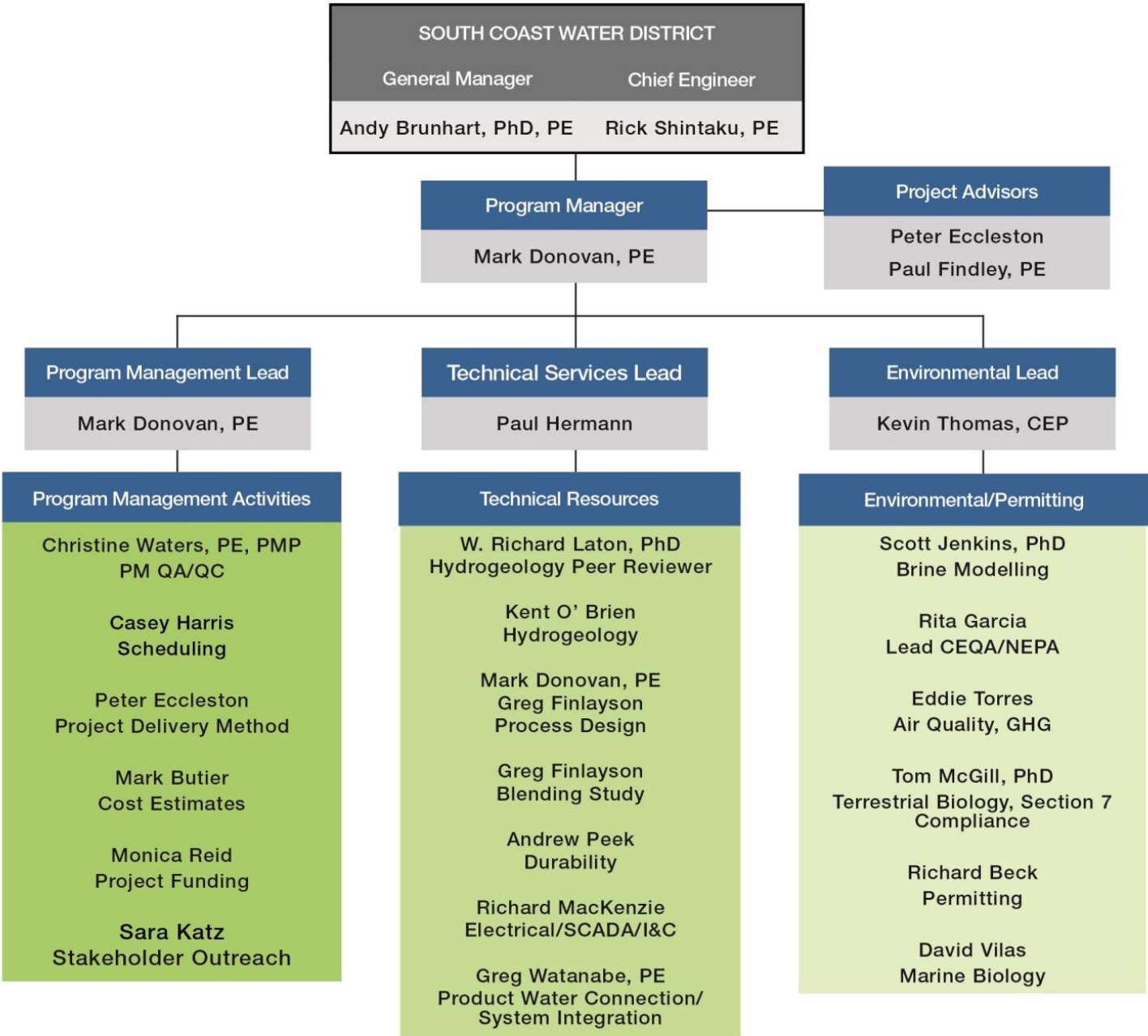


MBC

Marine Ecology



GHD Team



Doheny Ocean Desalination Project

- Slant wells located on Doheny Beach
- Brine Disposal through SOCWA Outfall
- Available Land for Desalination Facility

Location of facilities is indicative



Doheny Desalination Draft Program Goals

- Use ocean desalination as a means to provide a ***reliable, long term, sustainable, drought-proof supply of potable water*** to customers
- Develop a large scale, regional ocean desalination facility using environmentally responsible methods in all aspects of the project, including the methods used for seawater intake and brine disposal
- Engage, inform, and educate the Public about the benefits and key features of the Ocean Desalination Program

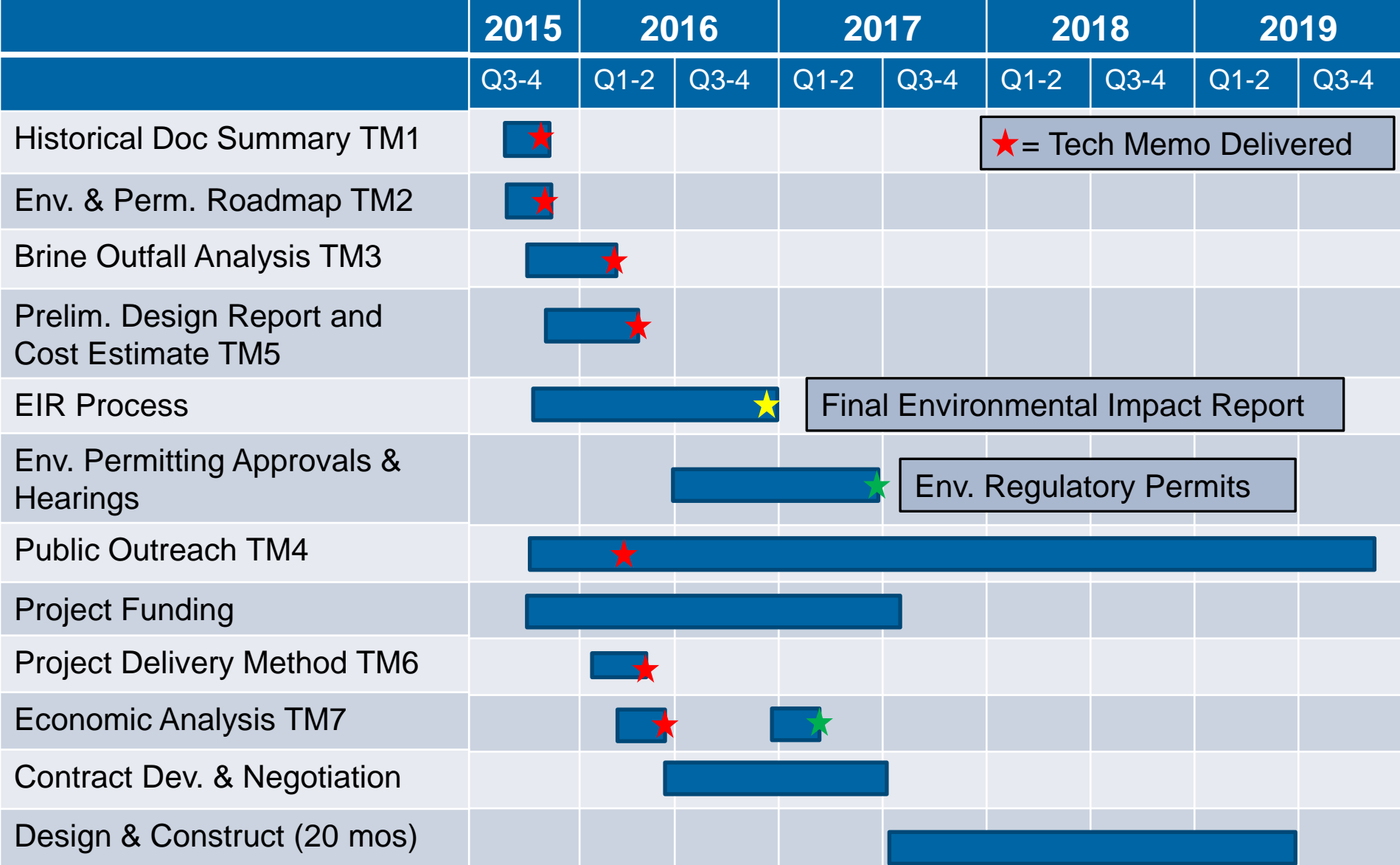
Near Term Objectives


- Complete the 4 to 5 MGD Phase 1 Demonstration Production Facility utilizing subsurface slant well intake technology by mid-2019
- Utilize the Phase 1 Demonstration Production Facility as a means to:
 - Educate the Public
 - Confirm and optimize key aspects of the design
 - Pilot test various promising new desalination technologies

Benefits of Phase 1 Ocean Desalination Demonstration Production Facility

- A 4 to 5 MGD Ocean Desalination Demonstration Production Facility will increase potable water supply reliability in the near term
- Allow for a better understanding of slant well intake performance and feedwater quality over time, allowing for optimizing full scale plant design and minimizing full scale project risk
- A smaller desalination facility can be constructed in a shorter time frame and with less capital expenditure
- Slant wells located on Doheny Beach will act as a seawater intrusion barrier to San Juan Basin

Phase 1 Desalination Facility High Level Schedule



 = Tech Memo Delivered

Final Environmental Impact Report

Env. Regulatory Permits

Technical Work - Current Progress

- Providing Review Comments on Technical Memoranda developed as part of MWD Foundational Action Funding Program (FAFP)
 - Carollo - Conceptual Design of Small Scale Initial Desal Facility
 - Geoscience - Groundwater Modelling
- Completing TM1, Summary of Historical Documentation, by Nov 13, 2015
- Developed Scope of Work for TM3, Brine Dilution Modeling and Coastal Hazards Analysis. Task Order approval in process

Technical Work – Next Steps

- Completion of Detailed Project Schedule by November 20, 2015
- Develop Scope of Work for Preliminary Design Report and Cost Estimate by November 20, 2015
- Completion of FAFP by January 30, 2016
- Execute Preliminary Design Report and Cost Estimate by March 2016
- Develop and Execute Additional Technical Studies As Needed throughout 2016

Environmental/Permitting Work - Current Progress

Environmental/Permitting Roadmap – TM2

- Complete by November 13, 2015
- Evaluates potential regulatory permits
- Recommends CEQA compliance process
- Identifies required studies

Next Steps

CEQA Process

- Complete a draft Project Description by December 2015
- Initiate the CEQA Process with Notice of Preparation by December 2015
- Public Scoping January 2016
- Regulatory Agency/Stakeholder Outreach

Key Regulatory Permits Required

- City of Dana Point (Local Coastal Plan)
- State Parks (Doheny State Beach)
- California Coastal Commission (CDP)
- California State Lands Commission (lease)
- Regional Water Quality Control Board (NPDES/WDR, 401 Certification)
- Caltrans (Encroachment Permit)
- U.S. Army Corps of Engineers (Section 10 Permit)
- USFWS/NOAA Fisheries (Endangered Species Act Section 7 consultation)
- SHPO Section 106 Consultation
- CDW (CA Endangered Species Act consultation)

Programmatic Work - Current Progress

- Public Outreach – Developing Initial Public Outreach Plan and Budget for Consideration and Task Order
- Project Funding – Identifying Potential Sources of Grant Funding and Starting Prop 1 Application

Next Steps

- Create and Execute a Partnership Agreement with LBCWD and any other agencies that might want to be partners at this time by January 30, 2016
- Select Project Delivery Method – Design-Build, Design Bid Build, etc. by April 2016
- Complete Economic Analyses by May 2016

Upcoming Board Participation and Decisions

Workshops

- Project Delivery Methods – February 2016
- Economic Analysis Review – March 2016

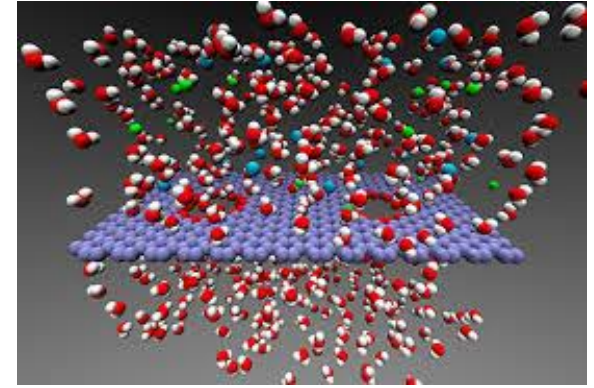
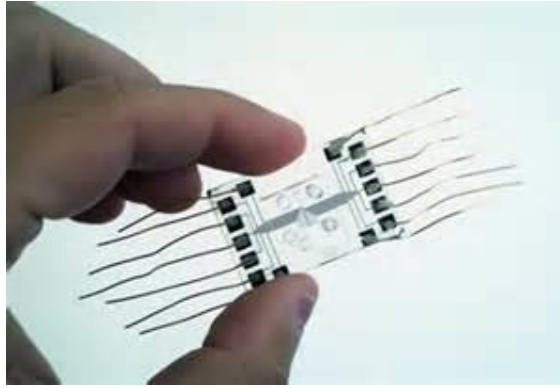
Required Actions

- Approve Final Project Delivery Method – April 2016
- Certify Final Environmental Impact Report – December 2016

Task Order Approvals

- Brine Modeling and Coastal Hazards – October 2015
- Initial Public Outreach – October 2015
- Preliminary Design Report and Cost Estimate – November 2015
- Project Delivery Methods – December 2015
- Economic Analysis – January 2016

New Desalination Technologies



- Reverse Osmosis is the most proven and trusted desalination method in the US for potable water production
- California Division of Drinking Water must approve all treatment processes for potable water production
- GHD recommends including R&D test facilities in the design of Doheny Desalination Facility

QUESTIONS ?