



Seawater Desalination Project at Huntington Beach

*Local, Drought-Proof Source of Drinking Water
For Orange County*



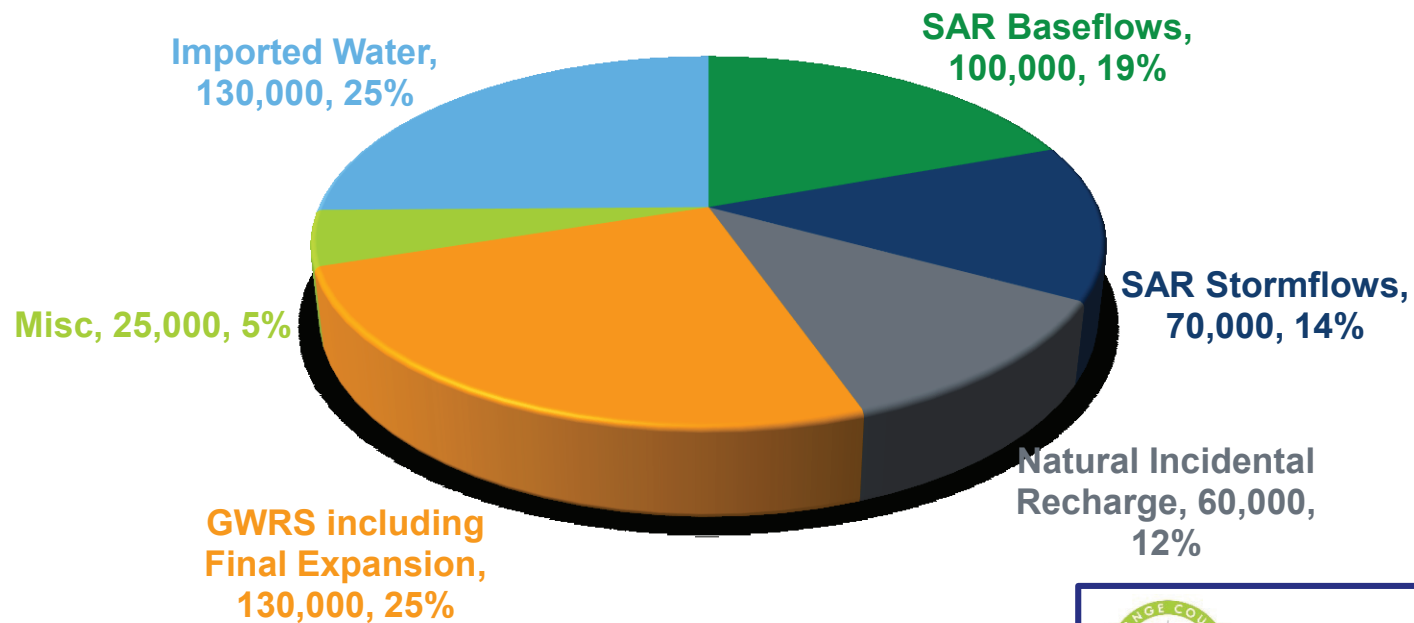
Poseidon at a Glance

Leading water infrastructure developer and manager with significant experience partnering with water agencies to deliver essential water infrastructure projects

- Founded in 1995 to develop water infrastructure projects through a Public-Private Partnership approach
- Use best available technology in an environmentally sensitive way
- Senior management team has collectively developed, financed and constructed over \$10bn in infrastructure projects
- Primary focus on seawater desalination project development but, with experience in other water treatment project opportunities
- Headquartered in Boston, MA with regional offices in California, Florida and Texas

Future 2035 OCWD Water Supply Sources

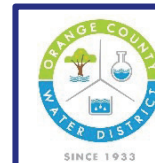
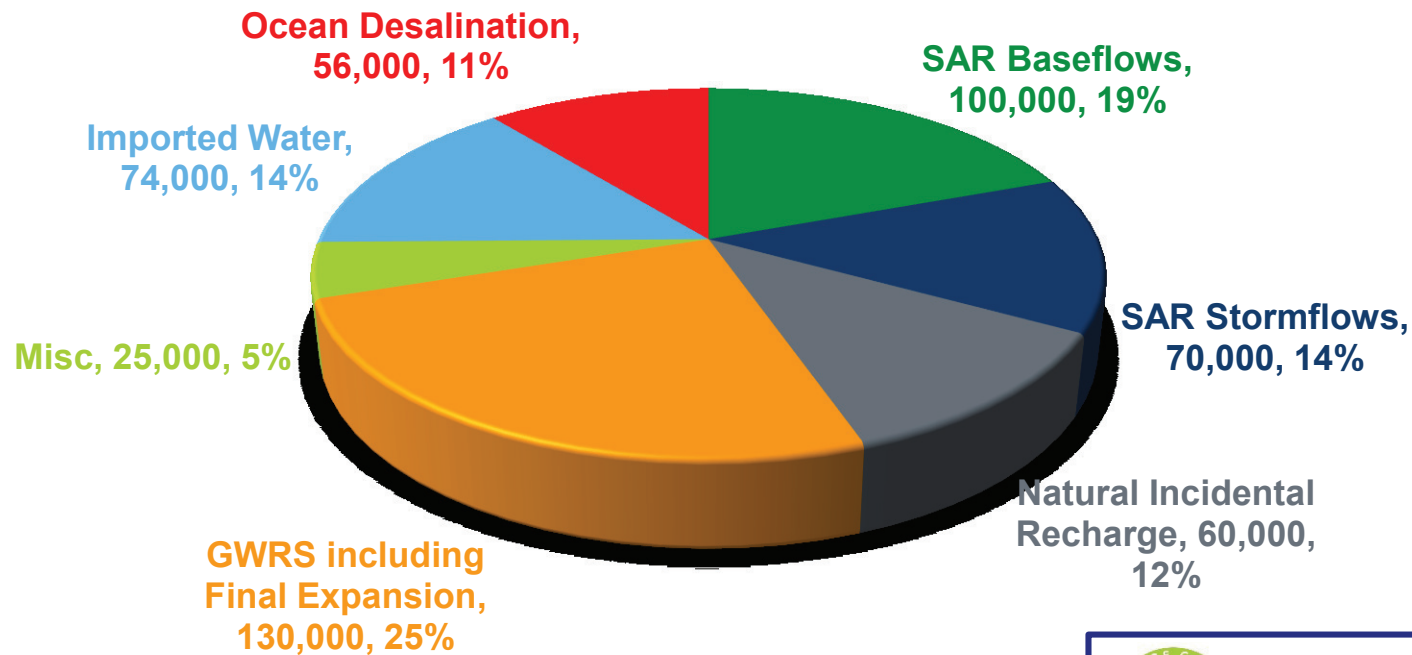
Total Water Demand 515,000 af/y without desalination



Orange County Water District
Water Issues Committee
July 17, 2013

Future 2035 OCWD Water Supply Sources

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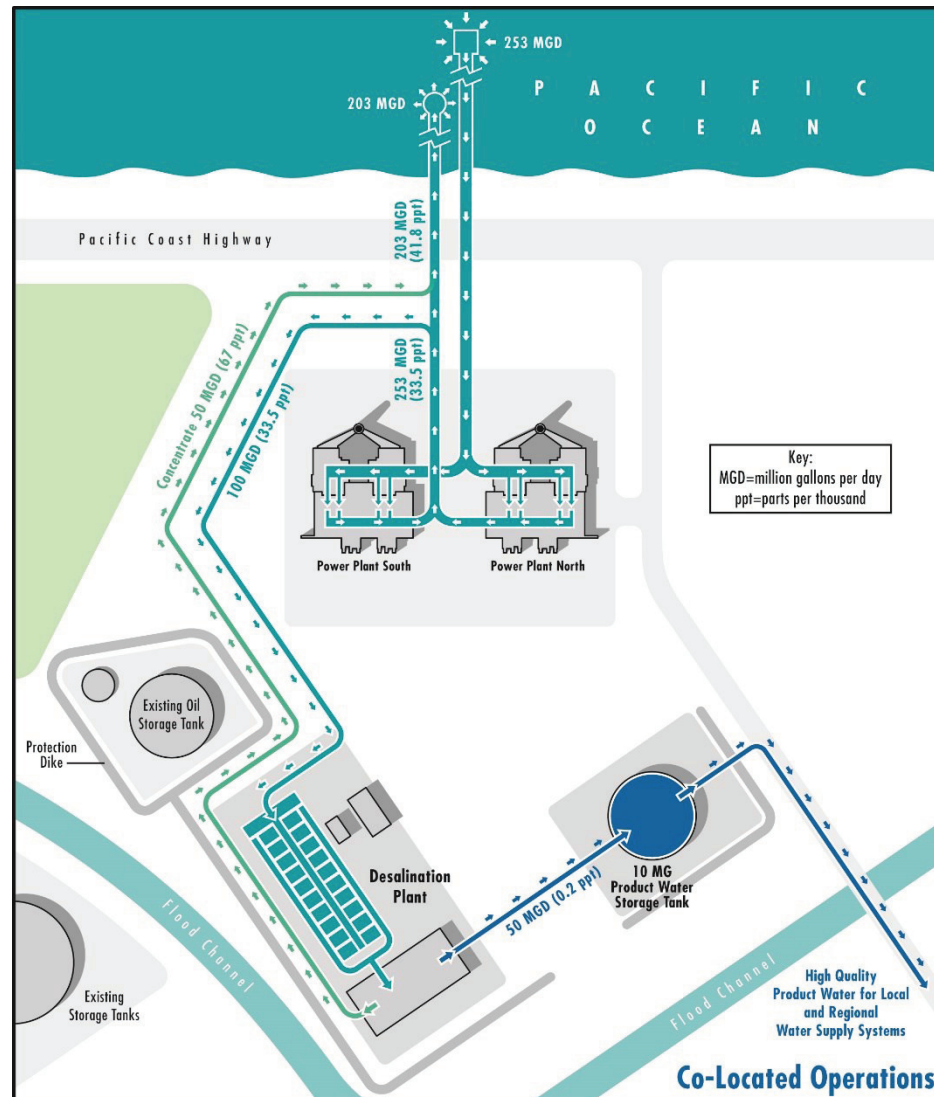
Huntington Beach Site Existing



Huntington Beach Desalination Project



Huntington Beach Desalination Project



Permitting Status



Local Land Use Permits:

EIR Certified – Sept 2005
SEIR Certified – Sept 2010
HB Conditional Use Permit – Feb 2006/10
HB Coastal Development Permit- Feb 2006/10



NPDES Permit

Permit Issued –Aug 2006
Permit Renewed – Feb 2012



Department of Public Health Services

Conceptual Approval – August 2002



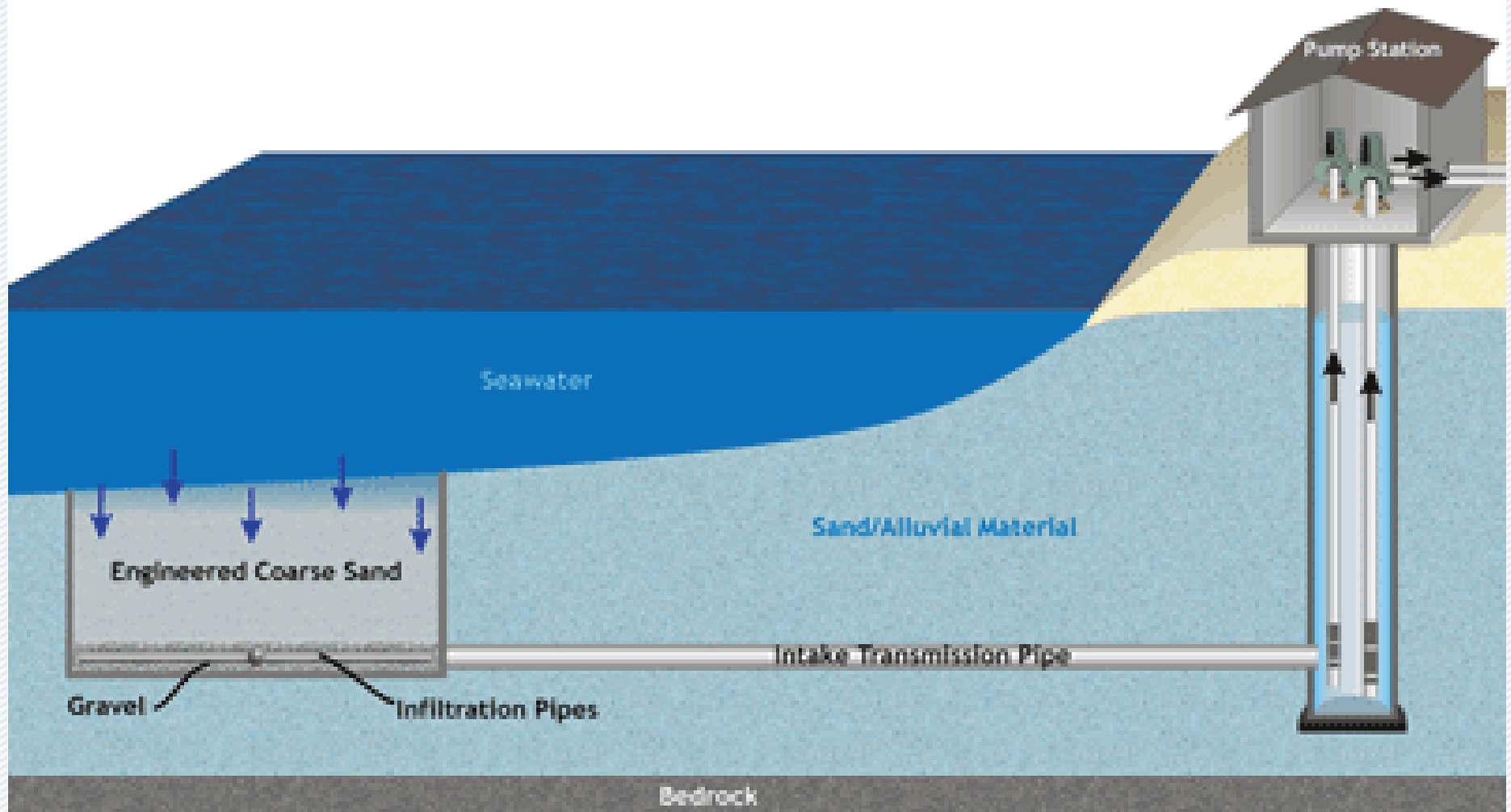
State Lands Commission

Lease for Intake and Discharge Piping – Approved - October 2010

California Coastal Commission

Coastal Development Permit – Pending

WHAT IS A SEAFLOOR INFILTRATION GALLERY?



CONCEPTUAL DESIGN - LOCATION



CONSTRUCTION HIGHLIGHTS



SIG vs. Screened Intake Pipe

	SIG	Existing Pipe
Construction Time	7 years	1 year
Construction Cost	\$1.5 billion	\$0
Seafloor Excavation	500,000 cubic yards	0 cubic yards
Seafloor habitat	30 acres removed	0 acres removed
Impact on Public Beach Access	Yes	No
Increased GHG	Yes	No
Environmental Impacts at the Beach	Yes	No
Impingement of Fish	No	No
Entrainment of Microscopic Fish Eggs	No	Yes – 2 per 1,000 gallons

Commitment to Carbon Neutrality and GHG Reduction

- **Clean Air:** The Reverse Osmosis process produces no greenhouse gases
- **Renewable Power:** Poseidon is exploring powering project with 100% green power
- **Energy Minimization and GHG Reduction Plan:** If green power cannot be procured, Poseidon will purchase carbon offsets to make the project carbon neutral



Project Risk Allocation – Original Proposal

Risk Description	Poseidon	OCWD
Permitting		
Project Financing		
Construction		
Interest Rate		
Change in Law		
Technology		
Water Demand		
Operations & Maintenance	 Efficiency and cost basis	 <i>Inflation</i>
Pipeline Distribution System		
Electricity Consumption & Price	 <i>Consumption</i>	 <i>Pricing</i>

Risk Allocation – Staff Negotiated Term Sheet

Risk Description	Poseidon	OCWD
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Key Term Sheet Issues

- Linking price of desalinated water to avoided cost of MWD
- 50-year contract term
- Pricing adjustment at year 15
- Substantially all financial risks are Poseidon's responsibility

Project Progress

- Orange County Water District approved term sheet
 - May 14, 2015
- Independent review process of subsurface intakes
 - Two year process concluded / SIG determined “infeasible”
- Coastal Commission Development Permit application pending
- Coastal Commission Hearing
 - Q4 2015 / Q1 2016
- OCWD / Poseidon Water Reliability Agreement
 - Q2 2016

Carlsbad Flyover Video





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