Oceanside Seawater Desalination Feasibility Study

Jason Dafforn
Water Utilities Division Manager
A Facility with Many Names:
- Mission Basin Desalting Facility
- Desalter
- RO Plant
Reverse Osmosis Treatment
Brackish Groundwater Extraction From Basin
6.37 MGD Rated Capacity
Approx. 75% Recovery
Goals Moving Forward

* Increase Local Supply and Production
* Reduce Dependency on Imported Water
* Increase Sustainability and Reliability
Constraints

- Limited Water Supply in Basin
- Extraction Capabilities
- Environmental Regulations
Water Supply

- Locate a New Supply
- Quality
- Quantity
- Location
The City of Oceanside Seawater Desalination Project
“The primary objective of the pilot study was to develop design parameters for a treatment process which supports implementation of a full-scale seawater desalination project at MBGPF.”

-Seawater Desalination Feasibility Report 2010
Project Objectives

* Pilot Test Site Selection
* Monitoring/Test Well Siting, Design and Construction
* Pilot Testing
* Raw Water Pipeline Alignment Study
* Brine Line Analysis
* Preliminary Plant Design
* Cost of Facilities
* Recommend Additional Studies
Alignment Study

Proposed Well Locations

Existing Treatment Site

18,355 LF or 3.5 Miles
Proposed Alignment
Estimated Costs

* 5 MGD Facility - $90 Million

* 10 MGD Facility - $150 Million
Conclusions of Feasibility and Pilot Study

* Estimate Quality of Water
* Pumping Characteristics (Quantity)
* Estimated Project Costs
* Moving Forward with Well Siting Study
Well Siting Study

- Perform Surface Geophysical Surveys
- Exploratory Borings
- Install Monitoring Wells
- Construct Test Well
- Well Pump Test
- Evaluation, Analysis, and Conclusions
- Recommendations
Exploratory Borings
Monitoring Wells
Proposed Test Well
Next Steps

* Construct Test Well
* Perform Pump Test
* Analyze Data
* Recommendations
Questions?