After 25 Years, Pure Water San Diego is Moving Towards Construction

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WateReuse Arizona
Flagstaff, AZ
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Agenda

• The Pure Water Program Journey
• Regulatory Structure
• Facility Development
• Lessons Learned
85% of San Diego’s water is imported...
Multi-faceted Approach

- Conservation
- Desalination
- Groundwater Development
- Recycled Water
- Pure Water Program
The Pure Water Program Journey

- AWTP design begins
- City Council suspends “toilet to tap” project
- Repurification “roll-out” begins
San Diego Union-Tribune

26% of San Diegans supportive of potable reuse in 2004.
Pure Water will produce 1/3 of San Diego’s water locally

Phases 2 & 3
- 2035 Completion
- 53 mgd
- Central Area PWF to San Vicente or Lake Murray
- South Bay PWF to Lower Otay Reservoir (if needed)
Pure Water Runs a Successful Demonstration Facility

- 30,000 lab tests: **Met all standards**
- Water quality: **Exceptional**
- Energy use: **Renewable**
Outreach Efforts

581 Community Presentations

208 Community Events

336 Stakeholder Interviews

More than 15,500 people have toured the Pure Water Facility.

4,196 Support Pledges from San Diegans
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Surface Water Augmentation (SWA) Regulations
- A form of Indirect Potable Reuse regulations
- Adopted by SWRCB in March 2018

How San Diego Fits
- First Program under the new SWA regulations
- 2-Month retention time in Miramar Reservoir
  - Dilution 10:1
- Additional incremental treatment to offset shorter retention time
Point Loma Wastewater Treatment Plant currently treats wastewater to advanced primary levels under a modified permit.

- EPA approval received in June 2017
  - Includes commitment to Pure Water and seeks secondary equivalency
- Effective October 1, 2017
Seeking Secondary Equivalency

- Modified permit conditions:
  - No negative impacts on ocean environment
  - Environmental community support
  - Reduced TSS limits
  - Pt. Loma remains advanced primary plant
  - Creates locally-controlled, sustainable source of water
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### Phase 1 - North City Projects

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*North City Purification Facility and Water Reclamation Plant Early Site Work to advertise August 2018
Two 10.5 mile Pipelines

Pump Station

North City WRP

- Conveys wastewater to North City Water Reclamation Plant (WRP)
- Supports Phase I Pure Water and recycled water production
- Trenchless construction will be used to avoid:
  - environmentally sensitive areas
  - freeway crossings
- Design completion: fall 2018
North City WRP Expansion

- Treats wastewater to recycled water standards
- Expansion nearly doubles the amount of recycled water produced to meet needs of:
  - Pure Water Facility
  - Recycled Water System
- Design Completion: fall 2018
- Plant capacity increased from 30 mgd to 52 mgd
- New pump station to convey flows to Pure Water Facility
- Design completion: fall 2018
Treats recycled water to produce 30 mgd of purified water
Includes a proven 5-step advanced water purification treatment process
North City Pure Water Facility

Design completion in fall 2018

- Ozonation
- Biological Activated Carbon Filters
- Membrane Filtration
- Reverse Osmosis
- Ultraviolet Disinfection/Advanced Oxidation
North City Pure Water Pump Station and Pipeline

Pure Water to Miramar Reservoir via:
- Pump Station
- Pipeline

~8-miles of Pipeline
The purified water:
- Is released via underwater pipeline in the reservoir
- Will blend with imported and local water supplies
- Design Completion: fall 2018
North City Renewable Energy

Produces Renewable Energy
- Supports GHG reduction
- ~16 MW
- RFP for DBFOM delivery in Sep/Oct 2018
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Communicating about Potable Reuse

- Start with research
- Get the language right
- Talk tech – briefly and simply!
- Build alliances
- Promote two-way communication
- Manage expectations
Public Acceptance: Then and Now

Public Support
73% of San Diegans supportive of potable reuse as of 2015.

Public Opposition
26% of San Diegans supportive of potable reuse in 2004.

UNION-TRIBUNE EDITORIAL

Yuck!

San Diego should flush “toilet to tap” plan

Your golden retriever may drink out of the toilet with no ill effects. But that doesn’t mean humans should do the same.

San Diego’s infamous “toilet to tap” plan is back once again, courtesy of Water Department bureaucrats who are prodding the City Council to adopt this very costly boondoggle. The project was rightly shelved seven years ago amid a public outcry over potential health hazards and the fact that some of San Diego’s least affluent neighborhoods were to be the recipients of the treated wastewater.

THE SAN DIEGO UNION-TRIBUNE

THE YUCK FACTOR: GET OVER IT

As San Diego sprawls above 3.5 million people countywide in just 10 more years, and a projected 4.4 million by 2050, the greatest threat to our economic health and quality of life is an uncertain supply of water. This urban cul-de-sac at the bottom of California is at the tail end of the pipeline that deliver 80 percent or more of our water. That means we are heavily dependent on the mercy of scraping and industrial processes, then purify and scrub it some more to nearly drinking water standards. The demonstration project in to produce 1 million gallons a day for a year, during which it will be continually monitored and studied, but not distributed for public consumption. Will process, safe and affordable, the city could then consider its expansion to a permanent plant that would be...
Who Supports Pure Water?
Next Steps

- Approval of North City Pure Water EIS (NEPA - Record of Decision)
- Construction Contractor Forum Fall 2018
- Approval of North City Phase 1 Pure Water Construction Contracts
- Final Regulatory Approvals
  - Division of Drinking Water Title 22 Engineering Report
  - RWQCB Issuance of the NPDES Permit for discharge to Miramar Reservoir
- Advertise and Award - Pure Water Construction Projects
Q & A

Stone Full Circle Pale Ale

- Brewed with San Diego’s “Pure Water”
- Brewed to be refreshingly clean
- 5.5% ABV, 51 IBUs, Color 21
- Brewed with very generous additions of New Zealand and British hops; pale 2-row malt, malty rye, and wheat malt
- Tropical fruit notes from the New Zealand hops and some subtle caramel flavors
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