Napa Sanitation District

Clean water, healthy community.

Andrew Damron, PE
Recycled Water at NSD

- NSD Overview
- NSD history of recycled water
- Last 5 years
- Current work
- Future plans
NSD by the Numbers

- Founded in 1945
- NSD serves a population of 82,000 in Napa area
- 280 miles of sewer mains; 36,000 service connections
- 11 miles of recycled water mains
NSD Operations

- Sewer Collection System
- Wastewater Treatment
- Recycled Water
- Engineering
- Pollution Prevention
Soscol Water Recycling Facility

- Dry weather flow = 6.7 mgd
- Average treatment = 10 mgd
- Wet weather flow = 50+ mgd
- Physical, biological & chemical processes
- 340 acre pond system
History of Recycled Water - NSD

- Discharge permit dry-season discharge prohibition
- 1985 Kirkland pipeline - secondary disinfected
- 1997 WWTP expansion Title 22 water
- 2004 Kennedy pipeline
Federal and State Funding

- North Bay Water Reuse Authority (NBWRA)
- Bureau of Reclamation
- Prop 84

Funding for recycled water expansion
RW Production Expansion

- New sand filters
- New Dissolved Air Flotation (DAF) clarifier
- New secondary effluent EQ basin and associated controls
- Modification to chlorine contact basin
- Rehabilitation of Pond 4 pump station
RW Pump Station Upgrades

- Increase pumping capacity to serve new pipelines
- Hydraulic separation of north and south lines
Supply vs Demand

- 6.7 mgd dry weather flow
- 3,700 acre feet of capacity

<table>
<thead>
<tr>
<th>Use Site</th>
<th>Acre Feet / Year</th>
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<tbody>
<tr>
<td>Existing Customers</td>
<td>1,400</td>
</tr>
<tr>
<td>Napa State Hospital</td>
<td>200</td>
</tr>
<tr>
<td>Future golf course resort</td>
<td>300</td>
</tr>
<tr>
<td>Vineyard irrigation</td>
<td>300</td>
</tr>
<tr>
<td>Additional infill irrigation</td>
<td>250</td>
</tr>
<tr>
<td>District use (biosolids)</td>
<td>100</td>
</tr>
<tr>
<td>MST Pipeline (Coombsville region)</td>
<td>700</td>
</tr>
<tr>
<td>LCWD Pipeline (Carneros region)</td>
<td>* 450</td>
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<tr>
<td>TOTAL</td>
<td>3,700</td>
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Need Additional Supply

- Wait for development in service area
- Encourage winter demand (private storage)
- Build additional storage
- Modify pond operation strategy
  - May 1 – Ponds empty (conservative approach)
  - May 1 – Ponds full
Future Plans

- MST Expansion
- Truck fill station
- Additional storage
  - NBWRA Phase II
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