

# 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

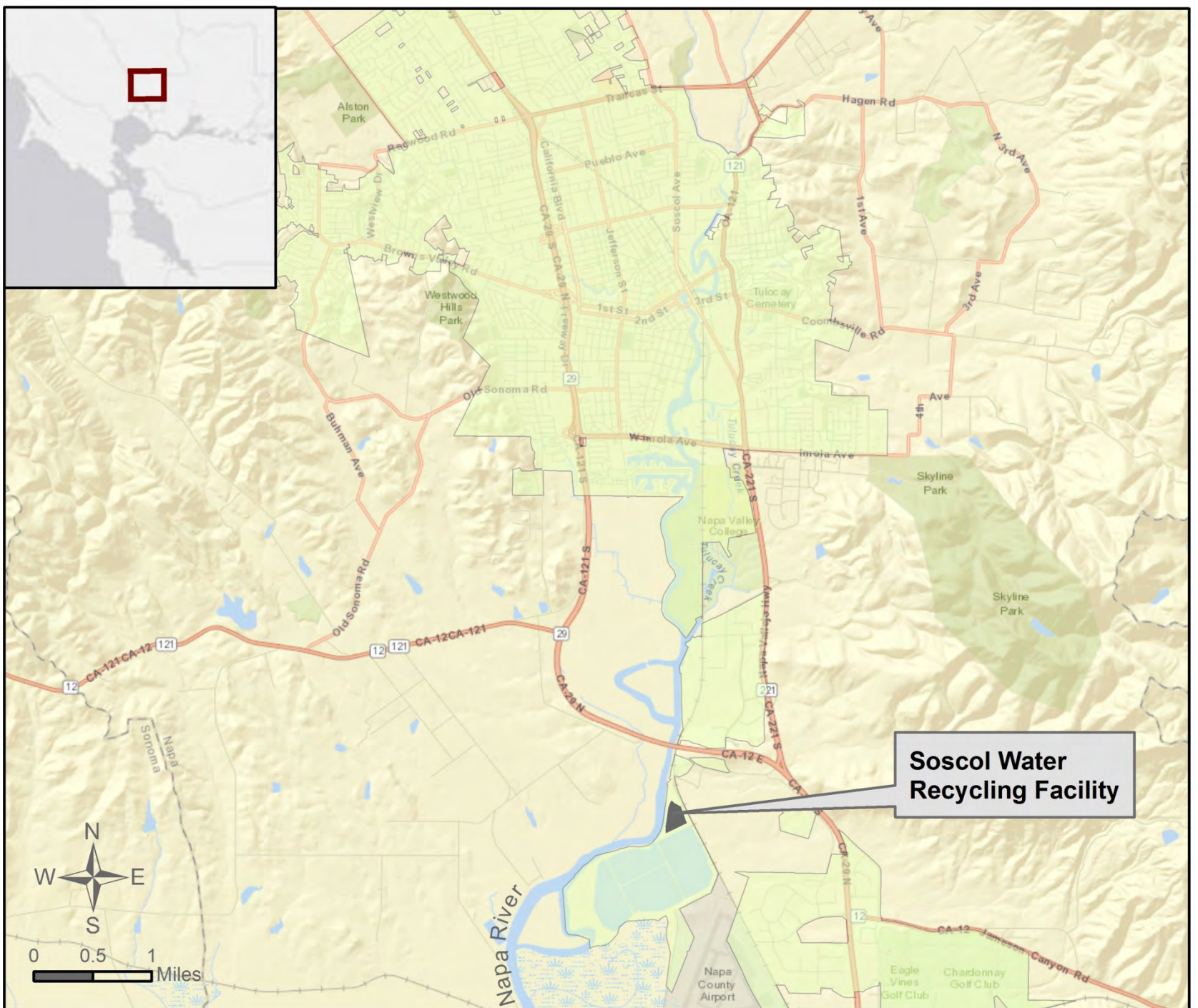
- Dry weather flow = 6.7 mgd
- Average treatment = 10 mgd
- Wet weather flow = 50+ mgd
- Physical, biological & chemical processes
- 340 acre pond system

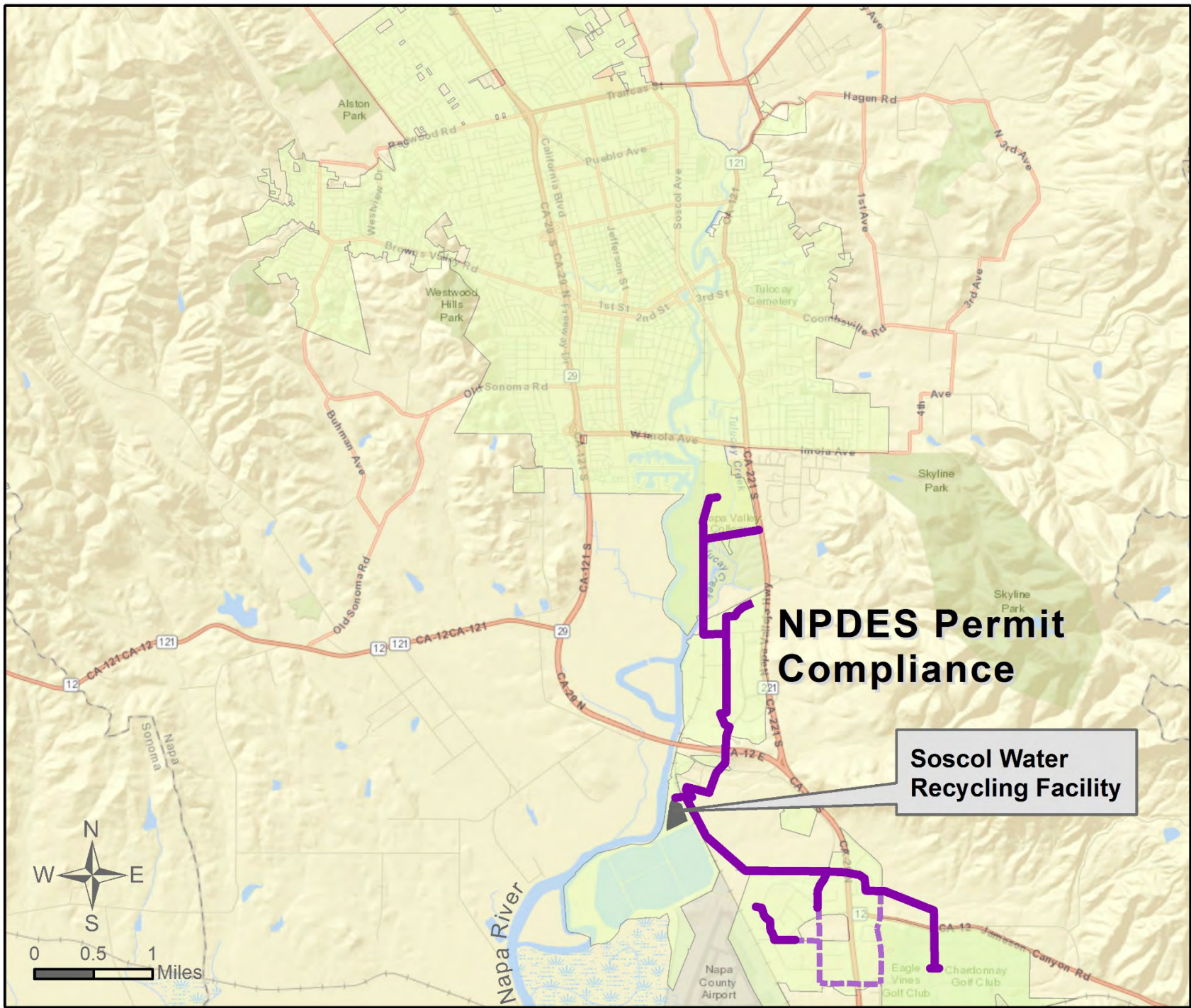


# History of Recycled Water - NSD

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







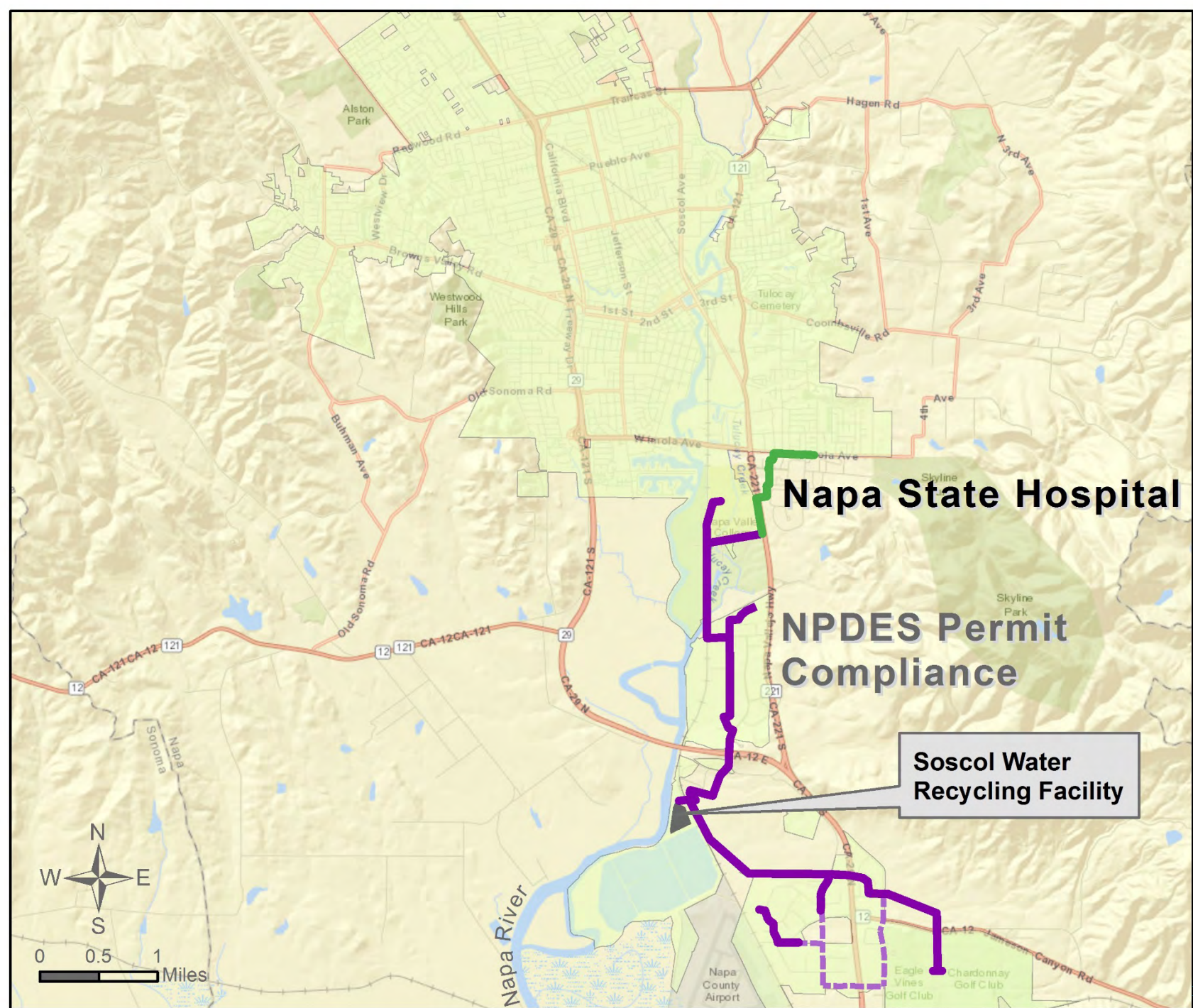
## NPDES Permit Compliance

Soscol Water Recycling Facility

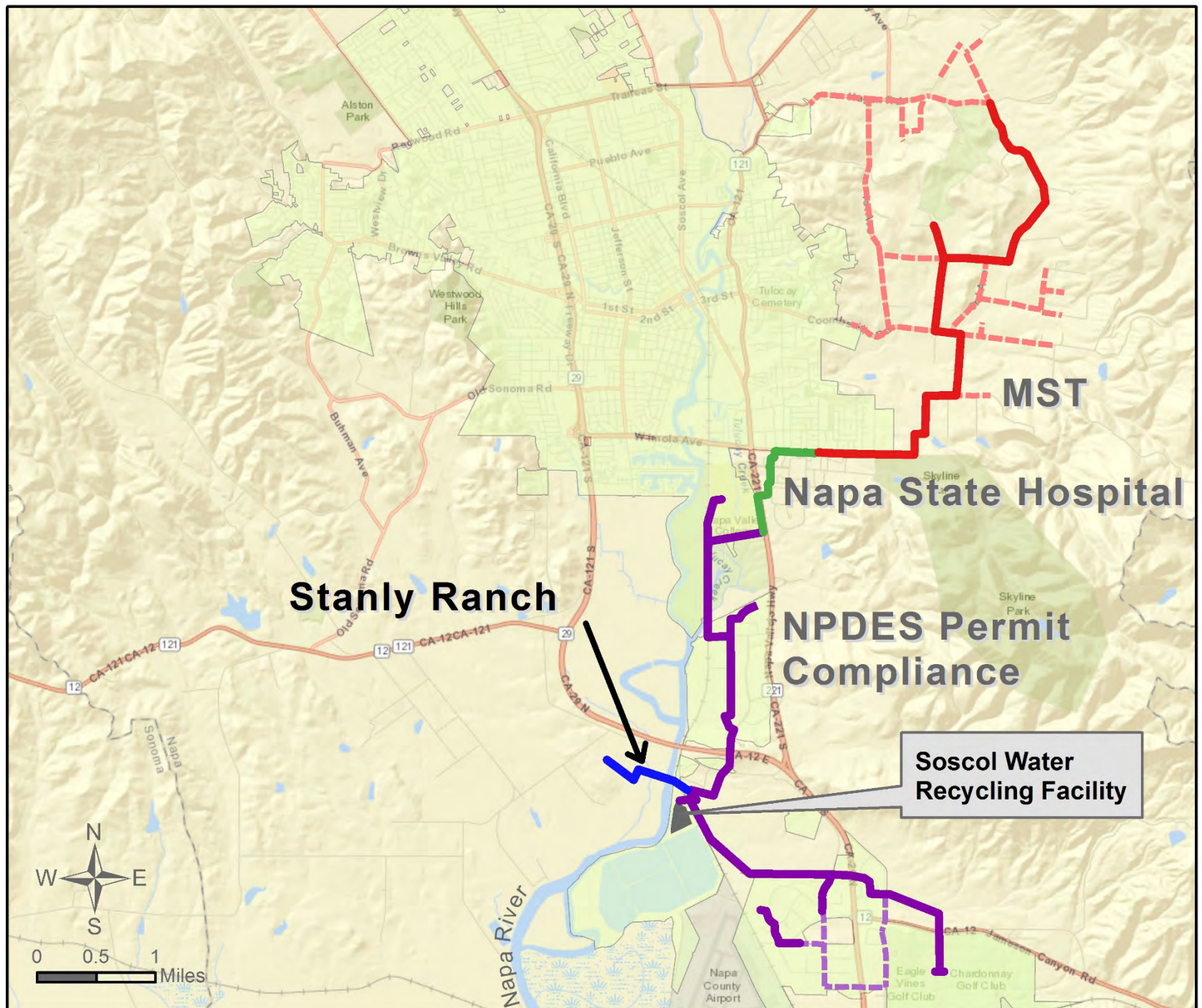
# Federal and State Funding

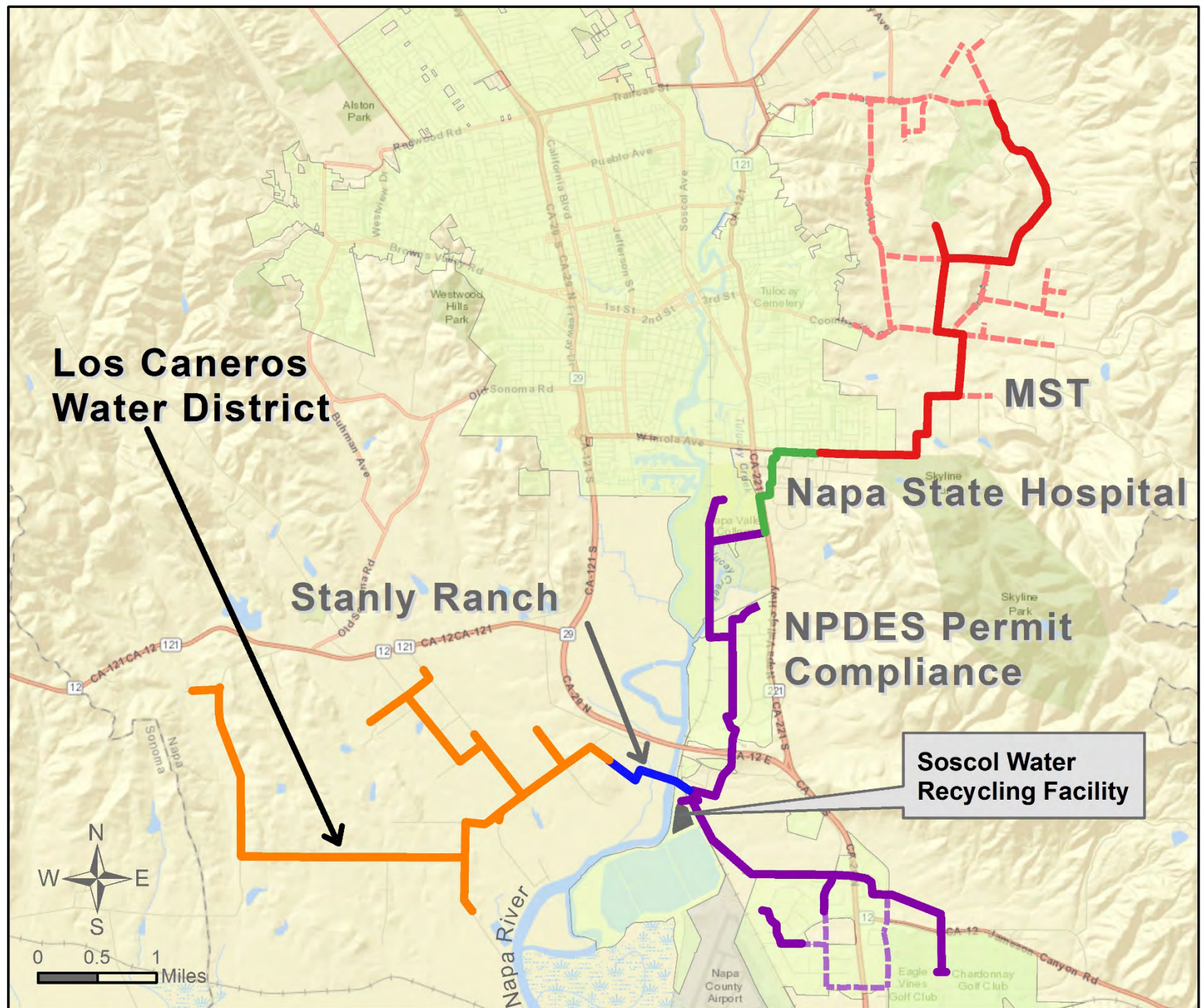
- North Bay Water Reuse Authority (NBWRA)
- Bureau of Reclamation
- Prop 84
- Funding for recycled water expansion





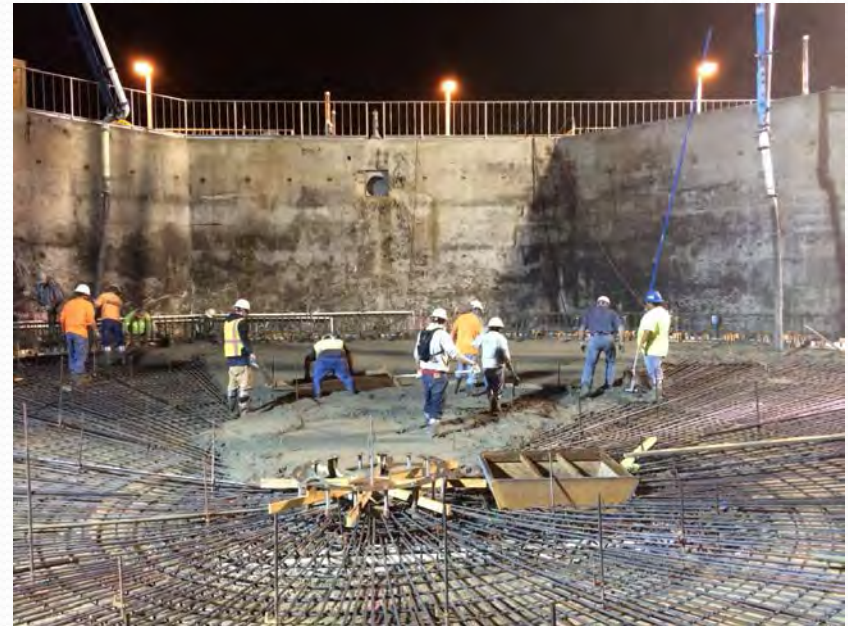






# RW Production Expansion

- 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

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

# 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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