County of Nevada
Nevada County Sanitation
District No. 1

Cascade Shores Community
Wastewater Project

November 22, 2019
Nevada County Sanitation District #1 (District) wastewater treatment plant (WWTP) built to address failing septic systems

Serves 87 customers (homes and store)

Tertiary level treatment to Gas Canyon Creek

High sewer rates – about $200/mo, operating at a deficit 130% over revenues

Rates among the highest in State & running a deficit
New State regs on effluent copper & zinc limits which became effective in 2010 & 2015.

- Time Schedule Order (TSO) issued by State
- Fines for non-compliance

New regs will increase costs on already expensive operation
District options included:

- Upgrade existing plant
- Pipe sewage to Nevada City
- Leachfield

Leachfield best long term option:

- Achieves regulatory compliance
- Reduce maintenance and operational cost
- Revaluation of rates

A leach field system is best long term option
Proposed Leach Field

✓ Leachfield System
  • Requires open land ideally near the lower end of collection system.
  • Acreage depends on site conditions, geology & topography
  • January 2015 County purchased 40-acre lot
✓ District obtained $2.2M in State funding

District moves forward on leach field solution
Proposed Leach Field

Progress:

- Entered into contract for design
- Soil evaluation for system (permeability and suitability)
- Environmental
- Arborist report
- Preliminary Design Report
- Construction documents (plans) 50%
Proposed Leach Field

✓ Surveys, Reconnaissance & Reports
  ▪ Field meeting w/District Staff
  ▪ Arborist Survey
  ▪ Environmentally Sensitive Areas (ESA) Identification
  ▪ Site Survey
  ▪ Preliminary Geotechnical Investigation
  ▪ Draft Project Surveys Tech Memo
  ▪ Final Project Surveys Tech Memo

✓ Additional Geotechnical Investigation
  ▪ Deep Subsurface Investigation, Lab Testing, Slope Stability Analysis
  ▪ Findings Report
Proposed Leach Field

- Deep borings to evaluate global site stability
  - Two 100-ft borings
  - Laboratory Tests
  - Stability analysis
  - Supplemental topographic survey
  - Site Cross Sections
  - Inclinometers

- Results – leach field not feasible
Next Steps

☑ Continue to Evaluate Leach Field Alternatives
  ☑ No other suitable sites

☑ Extend Sewer to Nevada City Wastewater Treatment Plant
  ☑ Cost too high, at least $1M / mile
  ☑ Unknown cost to expand Nevada City plant
Next Steps

- Continue to operate Existing Plant
  - Perform Water Effect Ratio for copper & zinc to modify effluent limitations
  - May result in plant modification
- Seek funding sources (i.e. USDA grant)
  - Difficulty is that Cascade Shores does not appear to be a disadvantaged community for grant funds (based on US Census data)
- Work with State to address Time Schedule Order
Next Steps

✓ Rate Study beginning soon
✓ Join the Sanitation District Advisory Committee
✓ Tour Cascade Shores Wastewater Treatment Plant on December 11, 2019, 1 to 5 pm
✓ Future updates, visit:

https://www.mynevadacounty.com/1590/Wastewater
Questions