US Coast Guard TRACEN Wastewater Facilities
Little Utility with a Big Vision: Wastewater Problems to Water Supply Solutions

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Wastewater Facilities

Project Team
USCG Facilities Design and Construction Center
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GHD
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Petaluma Location

Training Center
- Cooks
- Electronics
- Business Services
- 1250 personnel on site
Project Drivers

- Natural Resource Protection - Zero discharge requirements and problems with lack of storage and insufficient treatment
- Increased Wastewater Treatment Capabilities – WWF needed to meet North Coast Basin Plan Water Quality Standards and address Cease and Desist Order
- Potable Water Offset - Tertiary filtration for landscape irrigation
TRACEN Petaluma Vision

• To be the best place to live, work and train
• To become the most environmentally friendly Coast Guard base in the world

Petaluma Green Program
• Solar Photovoltaic
• Energy Conservation
• Water Conservation
• Wind Power
• Waste Diversion
• Natural Resource Protection
Getting the Project Approved and Funded

• TRACEN Petaluma identified need for new plant

• Regional review, approval, and prioritization

• Analysis of Alternatives completed, outline of budget request sent to HQ

• Project Proposal Report with preliminary design, revised budget

• Design and Request for Proposal completed

• Congressional budget approval, Construction RFP put out for bid
Original Wastewater Facilities

- Course Screening
- Five Facultative Pond in Series
- Chlorine Disinfection
- Agricultural Irrigation Disposal
New Wastewater Facilities

- New WWTP Design Criteria
  - 0.225 MGD ADF
  - 0.9 MGD PWWF
  - BOD5 - 250 mg/l

- Effluent Quality
  - BOD5 ≤ 10 mg/l
  - TSS ≤ 15 mg/l
  - TN ≤ 10 mg/l
  - NH3-N ≤ 1 mg/l

- New Storage Ponds (215 AF)
- New EQ Basin (3 MG)
Wastewater Disposal

- TRACEN acreage is used for disposal of secondary treated wastewater by spray irrigation

- Partnership with local farmer to crop the land with a grass blend for dairy cattle

- Tertiary Disposal – landscape irrigation is used to offset up to 50,000 gpd
Agricultural Irrigation – 73 Acres
Landscape Irrigation – 25 Acres
Recycled Water MYTHS AND FACTS

Does Recycled Water Affect CTS?
Do CTS Respect the Critical Habitat Boundary that we prescribe?
No and No!
WWTP Site Plan
Tertiary Treatment System

Plan View
Secondary Effluent Pump Station

Section View
Secondary Effluent Pump Station
Control Building, Generator, WWTP
The Benefit of Architectural Input
Project Success and Benefits

• Compliance with State Agency Waste Discharge Requirements
• Flexibility to Meet Future Growth and Regulations
• Meet TRACEN Mission of Potable Water Offsets
Questions?