



Presentation to the



**Northern California  
WaterReuse Association  
Chapter Meeting  
Friday, February 26, 2016**

**Diablo Country Club  
Recycled Water Project Update**



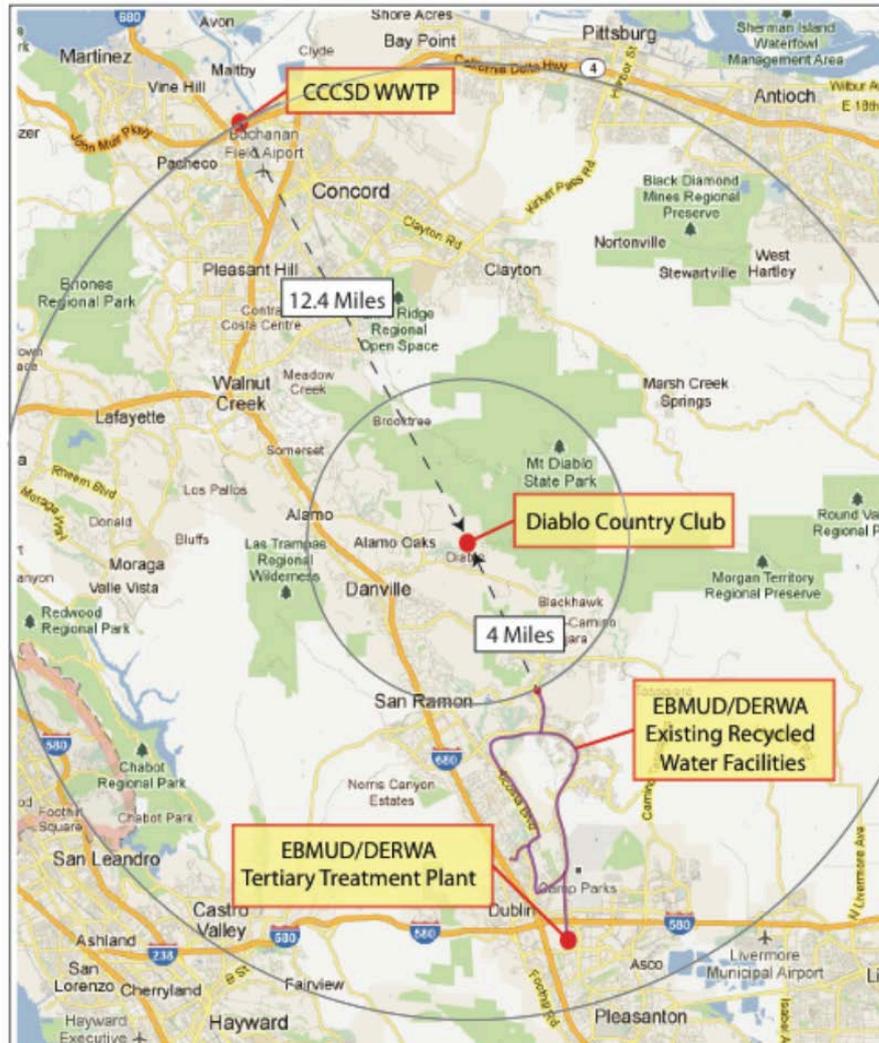
# Introduction



- **Diablo Country Club**
  - Central Contra Costa County
  - Established 1914
  - 18 hole golf course, tennis club, swimming pool, Clubhouse
  - EBMUD, Water Purveyor
  - CCCSD, Wastewater Collection & Treatment
- **Water & Energy Committee**
  - Implements a Program for Environmental Sustainability including Energy and Water



# Project Location





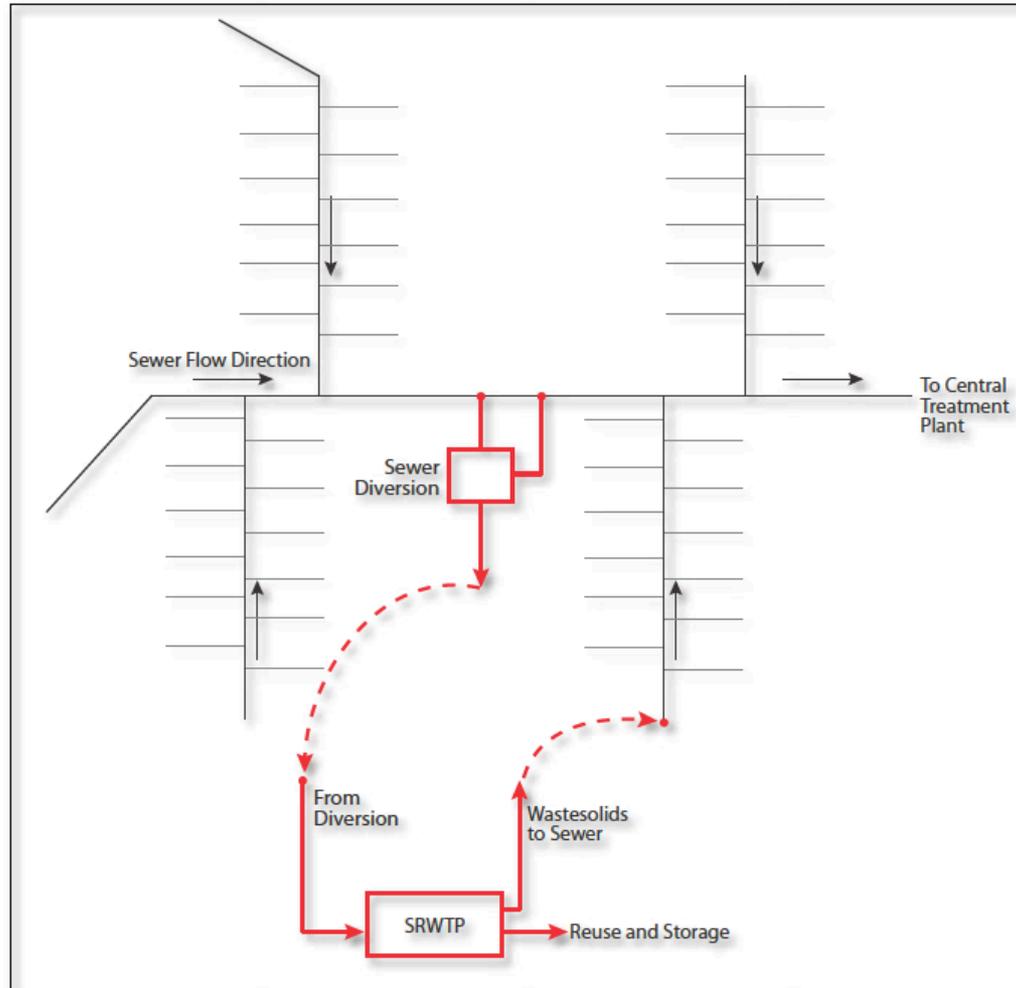
# Project Need



- Sustainable Water Supply
  - No Existing Recycled Water Available
  - Investigate Potential for Satellite Water Recycling Facility located at Diablo Country Club



# Satellite Water Recycling Facility Concept





# Why The Club Is Proposing This Project Now



- Conservation is the right thing to do
- Current multi-year drought punctuates the need for conservation & reclamation
- Development of a long-term, sustainable water supply for the Club Operations
- Rising water costs & drought restrictions are detrimental
- Both CCCSD & EBMUD have been encouraging & supportive



# Project Process



- Irrigation Demand Review
  - Irrigation Records
  - Metered Records
  - ET Records
- Source Water Review:
  - CCCSD Coordination
  - Sewer Hydraulic Model Review
  - Sewer Flow Monitoring and Analysis



# Initial Feasibility Study



- Treatment Analysis
- Site Survey Analysis
- Cost Review
- Permit Requirements



# Design Parameters



- Capacity to Meet 100% Peak Irrigation Demand
- Operational Strategy
  - Blended Supply
  - Recycled Water + Potable Water On Greens (EBMUD)
  - Capture & Return of Runoff & Drainage Water



# Major Project Components



- Sewage diversion station & pipeline in Diablo Road
- Satellite Water Recycling Facility
  - Membrane Bio Reactor (MBR) on Diablo CC property
- Waste discharge back to sewer
- Recycled water storage



# Expanded Storage



- Provides Assurance for Continued Golf Play in Case of:
  - SRWF Maintenance,
  - Disruption of Diversion,
  - Emergencies, Power Failures and
  - SRWF Shut-Down
- Minimizes Aesthetic Impacts



# What The Project Could Look Like





# Irrigation Demand Update



- Demand at Project Start
  - Average Annual = 248 AFY (0.22 MGD)
  - Peak = 0.51 mgd
- “New Normal ”Demand
  - After Turf Reduction and Drought Conservation Measures
  - Average Annual Approx. 200 AFY (0.18 MGD)



# Sewage Availability Update



- 60% reduced sewage flow over the past 2 years
- Result of drought-response
- Flow Monitoring Results:
  - 4/2014 = 0.6 mgd [672AFY]
  - 12/2015 = 0.27mgd [302AFY]



# EBMUD & CCCSD Coordination



- **EBMUD & CCCSD MOUs:**
  - Outlined Requirements
  - Open communication
- **Further CCCSD Coordination**
  - Potential Ownership/Operations Agreement
- **Private Non-profit/Public Agency Partnership is key**



# Next Steps



- **Next Steps**
  - Facilities Plan Report
  - CEQA
  - Design-Build
  - Operations 2018?



QUESTIONS?