Presentation to the

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

- Facilities Plan Report
- CEQA
- Design-Build
- Operations 2018?
QUESTIONS?