

# Otay Water District Board of Directors Meeting

February 4, 2009



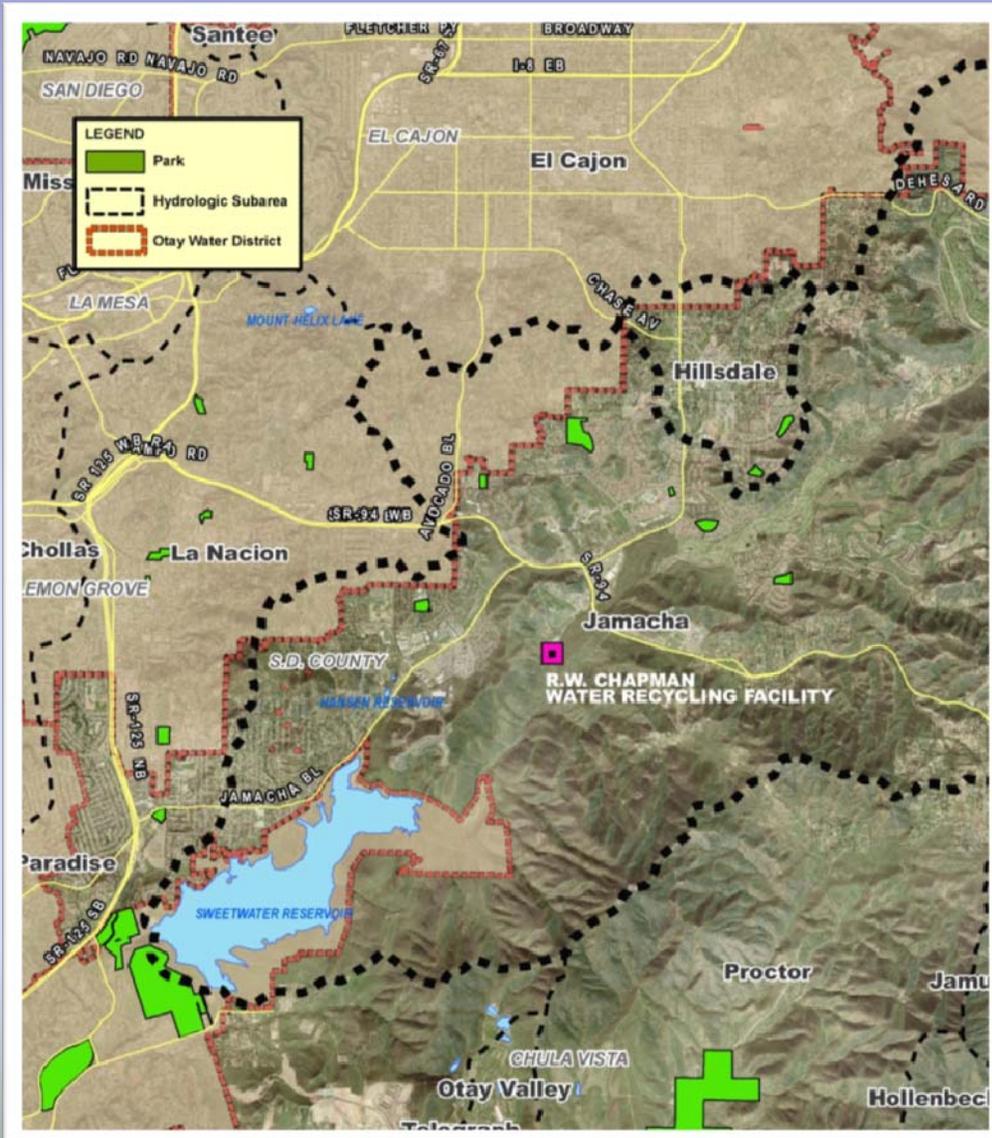
## North District Recycled Water System Development Project Phase I Concept Study Final Report

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# OVERVIEW

- Project Definition
- Regulatory Process
- Watershed Protection
- Public Outreach
- Implementation Plan

# PROJECT DEFINITION



## North District Study Area Map, Jamacha Basin

# POTENTIAL CUSTOMERS

- Golf Courses
- Regional Parks & Schools
- Churches
- Homeowner Association Common Areas
- Commercial Developments
- Cuyamaca College
- Water Conservation Garden

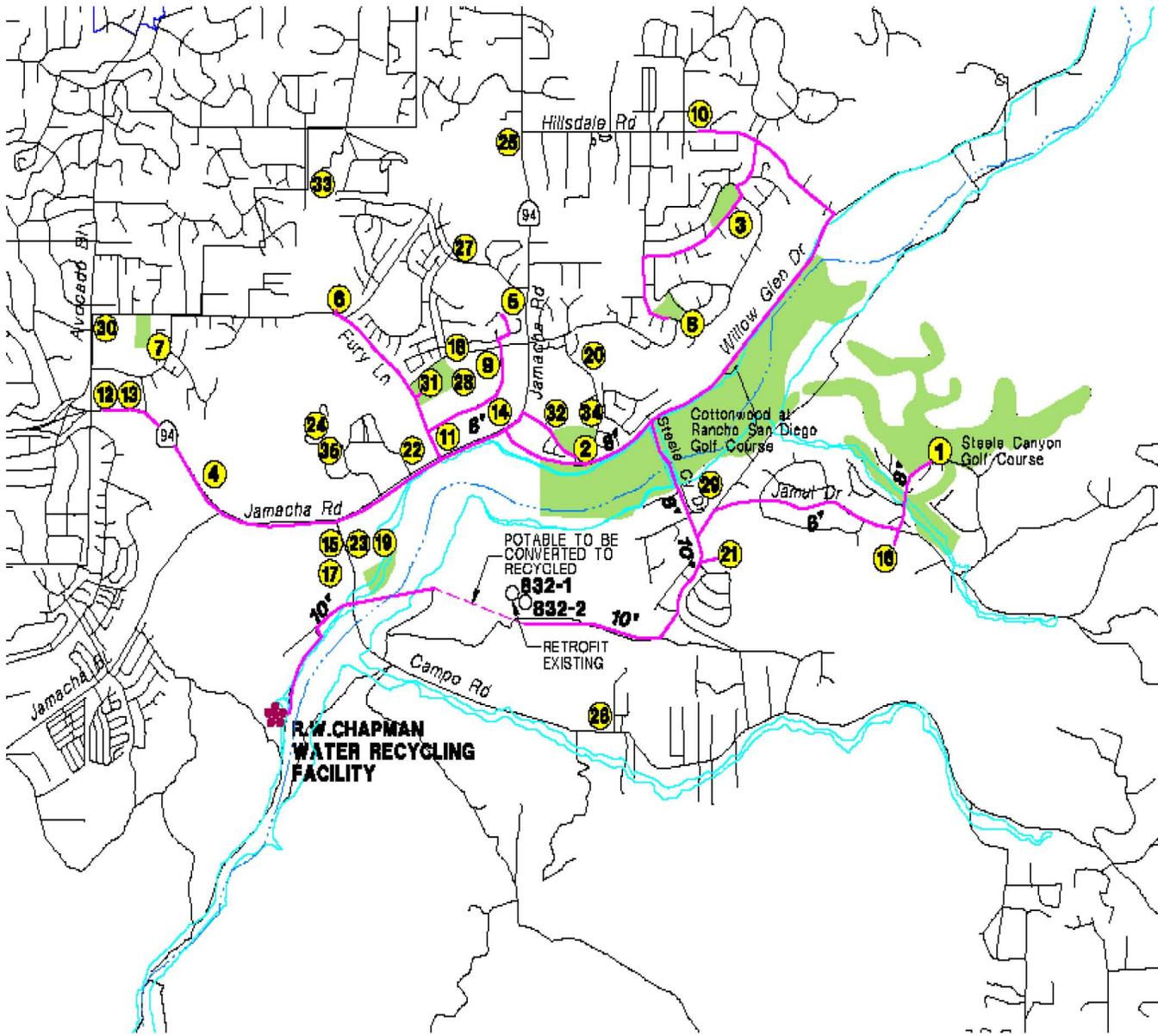
Estimated recycled water use: 0.7 MGD average day / 1.4 MGD max day

RWCWRF produces 1.3 MGD

# INFRASTRUCTURE CONCEPTS

## Upgrades Needed to Provide Recycled Water Service

- Modification to RWCWRF Chlorine contact basin to ensure proper chlorine contact time
- Replacement of pumps, motors & appurtenances at RWCWRF effluent pump station
- Construction of a transmission main pipeline
- Retrofit existing 832-1 Potable Reservoir to be used for recycled water
- Construct distribution system pipeline
- Upgrade data collection, logging, and regulatory compliance reporting systems



**LEGEND**

- OTAY WATER DISTRICT
- FLOODPLAIN 100 YEAR
- PROPOSED RW PIPELINE
- PROPOSED RW USER
- PIPELINE DIAMETER

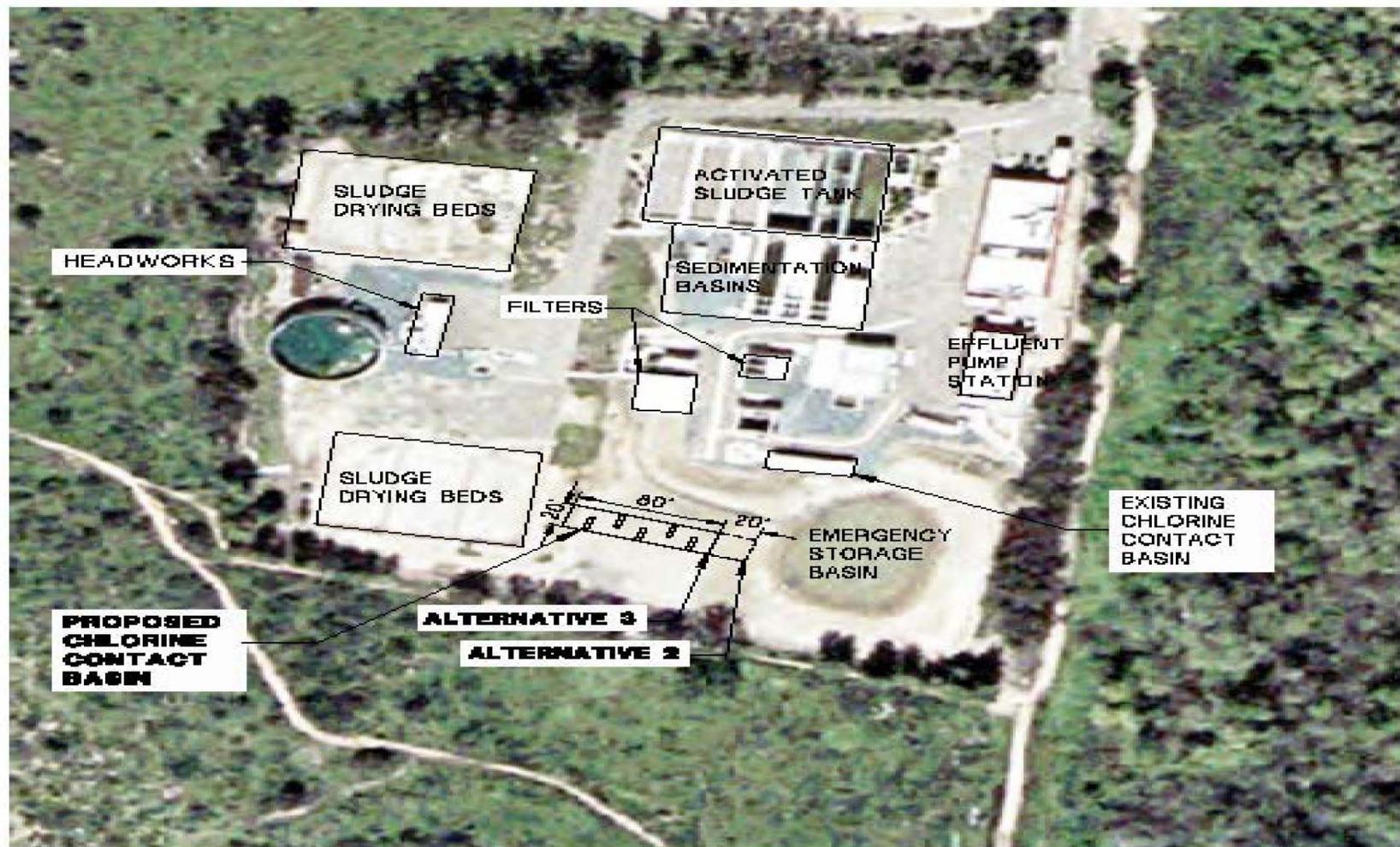
NOTE:  
 SEE TABLE 2-1 FOR RECYCLED WATER USERS.  
 ALL PIPELINES ARE 8 INCH UNLESS OTHERWISE NOTED.



**OTAY WATER DISTRICT  
 CONCEPTUAL NORTH DISTRICT  
 RECYCLED WATER SYSTEM**

FIGURE 2-1





**R. W. CHAPMAN  
WATER RECYCLING FACILITY  
(RWCWRF) SITE PLAN**

FIGURE 2-2

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# PROJECT COSTS

- **Distribution & Transmission System Costs:**  
\$14-15 million
- **On-site Retrofit Costs:**  
Depends on irrigation system, cost borne by customer
- **Operational Costs:**  
May be reduced due to energy savings
- **Watershed Monitoring Costs:**  
May be additional testing required,  
\$ unknown

# REGULATORY PROCESS

## Agencies Involved

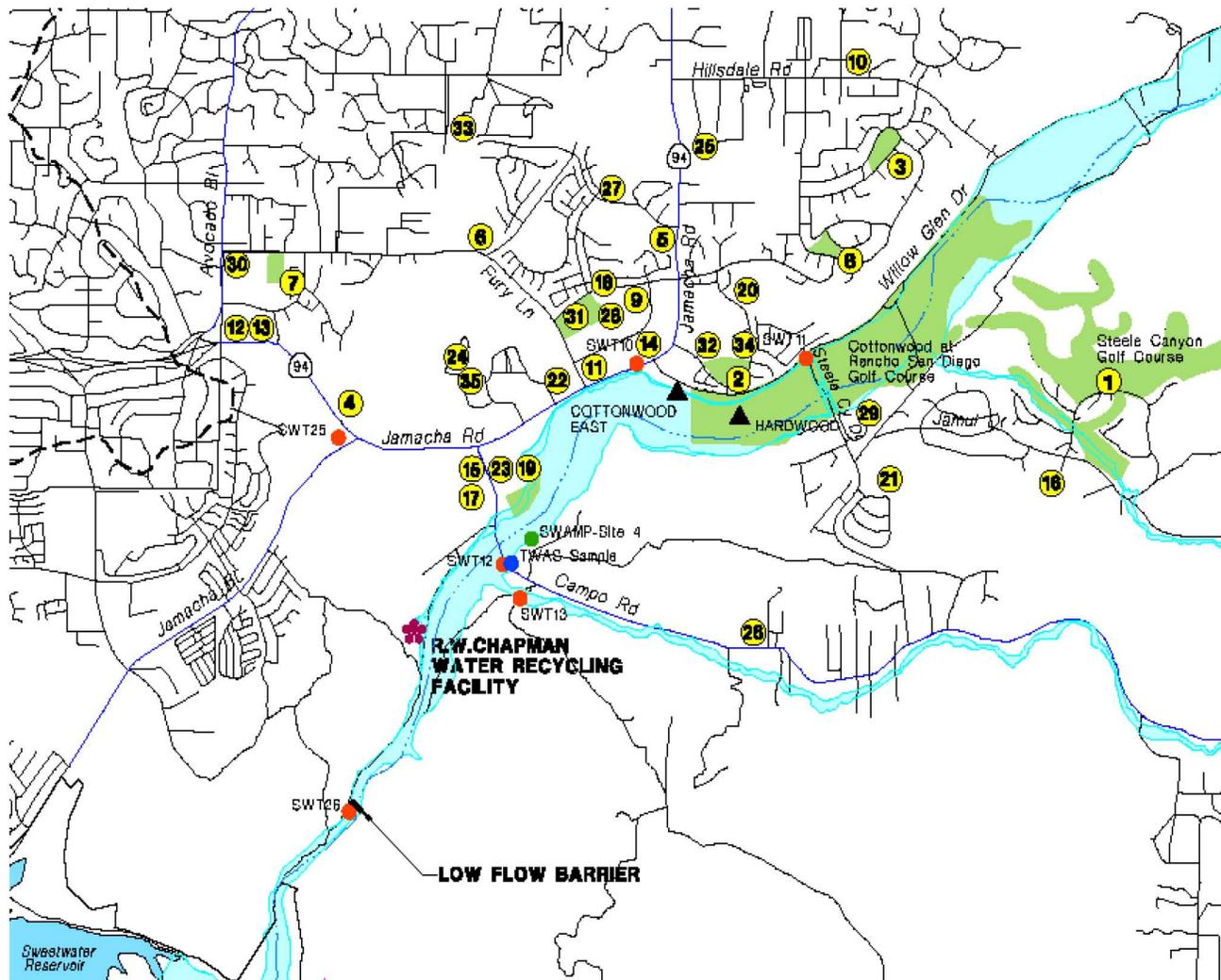
Regional Water Quality Control Board, California Dept. of Public Health

## Concerns

- Current permit doesn't allow for recycled water use in Middle Sweetwater Basin – permit will have to be revised
- Total Nitrogen levels of RWCWRF effluent are too high, must be reduced (study underway)
- Plant modification necessary for Title 22 chlorine contact requirements

# WATERSHED PROTECTION

- TDS levels of the recycled water are in the range of natural water and should not impact ground or surface waters
- Nitrate levels are of concern and need to be lowered in the RWCWRF effluent
- Water quality monitoring stations are located throughout the watershed and will be used for continued analysis
- Permitting for the use of recycled water in the watershed appears to be feasible based on current and historical water quality data
- Mitigation and monitoring plan can be devised for a “safety factor”



- LEGEND**
- OTAY WATER DISTRICT
  - FLOODPLAIN 100 YEAR
  - 23 PROPOSED RW USER
  - ▲ JAMADHA VALLEY WELL SITE
  - SAMPLE SITE-TWAS
  - SAMPLE SITE-COUNTY OF SAN DIEGO

NOTE:  
SEE TABLE 2-1 FOR RECYCLED WATER USERS.



0 2400  
SCALE IN FEET

**SWEETWATER BASIN  
WELLS AND URBAN RUNOFF  
MONITORING LOCATIONS**

FIGURE 4-1

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# PUBLIC OUTREACH

## Identification of Stakeholders

- Regulatory Agencies: RWQCB / CA DPH / SD County DPH
- Local Agencies: Sweetwater Authority / Helix Water District / Padre Dam Water
- Potential Customers: Water Conservation Garden / Cuyamaca College / Golf Courses / Schools and Parks
- Public at Large: Community Planning Groups / Environmental Organizations / Local Clubs and Organizations

# IMPLEMENTATION PLAN

- Phase I – Study complete, Review and comments requested from Sweetwater Authority, RWQCB, and CA Dept. of Public Health
- Phase II – Further investigation of issues identified in Phase I as needing further study. These include:
  - Stakeholder Outreach
  - Regulatory Issues
  - Facility Planning
- Phase III – The tasks in this phase will pave the way for construction and implementation of the North District Recycled Water Project. These tasks include:
  - Design of improvement plans & specifications
  - Implementation of monitoring and mitigation measures
  - Environmental Documents
  - Application for amendment to OWD's Master Reclamation Permit

# Questions and Comments