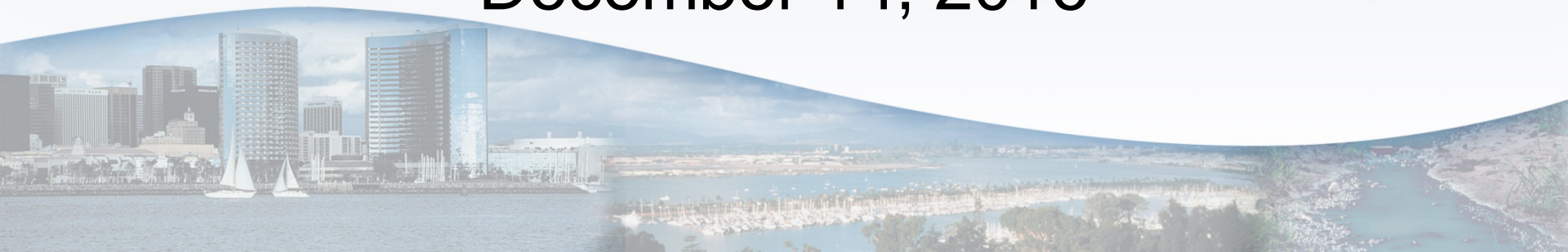


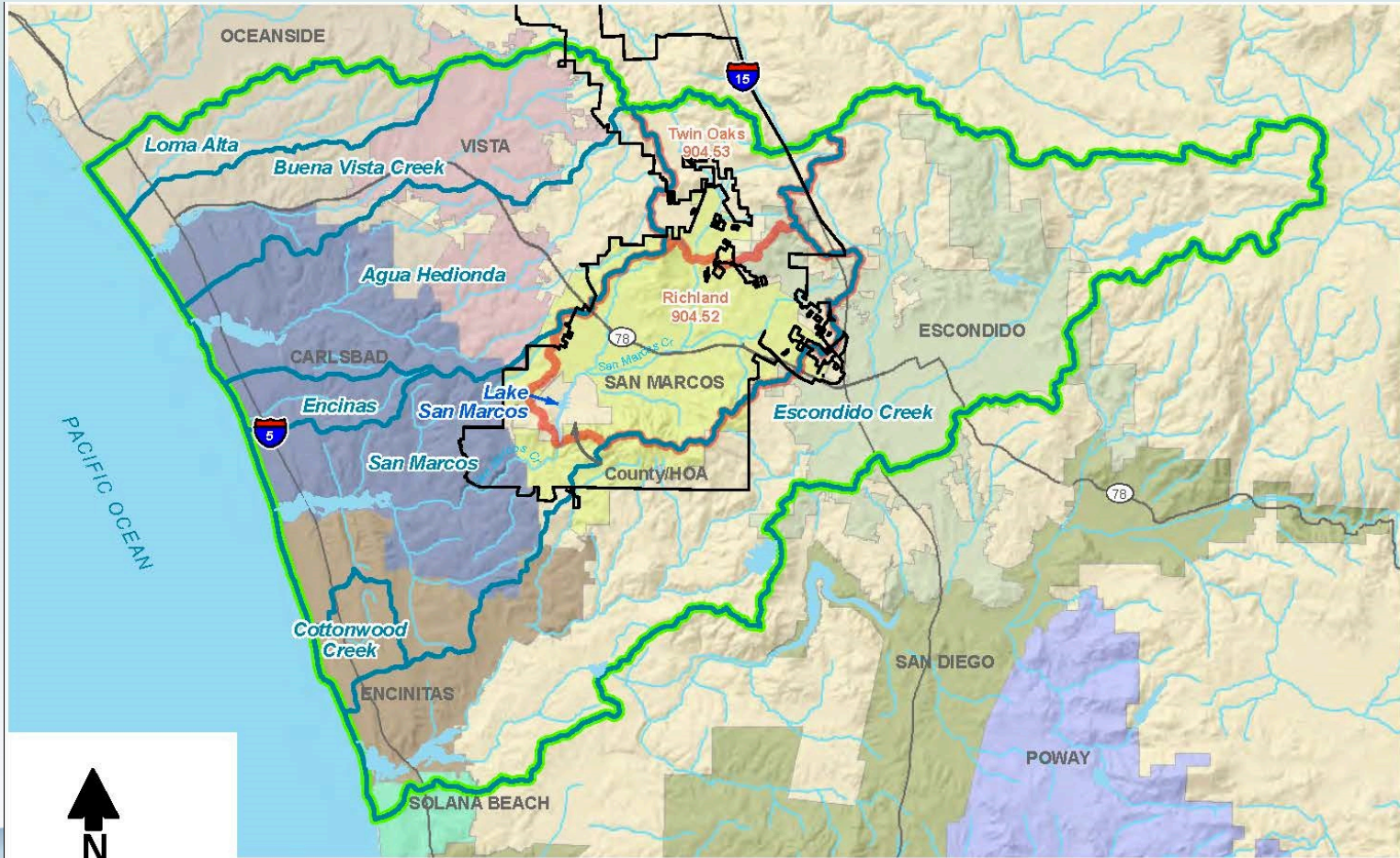
Update on Progress toward Remedy for Lake San Marcos and Upper San Marcos Creek Watershed

Item No. 9

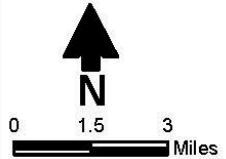
December 14, 2016



Site Location



Source: San Diego Geographic Information Source (SanGIS)



Explanation

- █ Carlsbad Hydrologic Unit
- █ Encinas Hydrologic Area
- █ Richland Hydrologic Subarea

- USGS-mapped stream
- Vallecitos Water District boundary
- Municipality
- San Diego County

Note: HOA = Homeowners association property

LAKE SAN MARCOS/
UPPER SAN MARCOS CREEK WATERSHED
Regional Site Location

Area Development



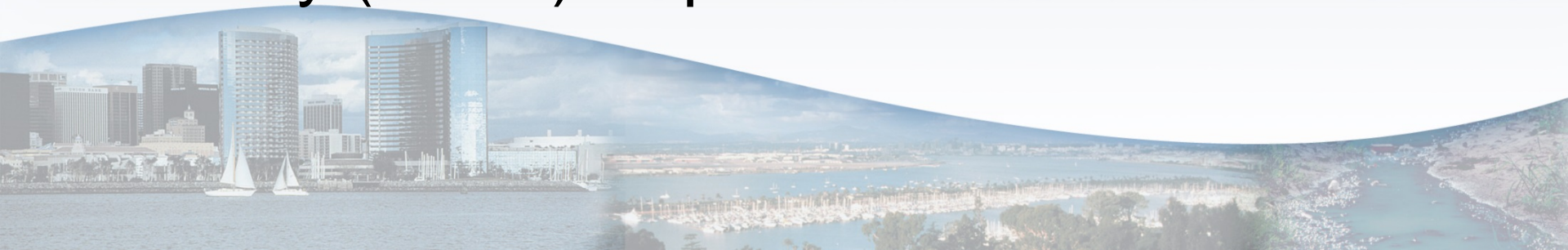
Environmental Concerns

- Water Quality Impairment:
 - High nutrients
 - Low dissolved O₂
 - High algal growth
- Odors/nuisance
- Reservoir releases
- Beneficial Use Impairment:
 - Recreation
 - Agricultural supply
 - Warm freshwater habitat
 - Wildlife habitat



Case History

- 2000s: Citizens' complaints; investigations
- 2011: Investigative Order issued to CDC
- 2011: Participation Agreement with six public entities
- 2012: Investigation Work Plan submitted
- 2016: Remedial Investigation/Feasibility Study (RI/FS) Report submitted



Next Steps

- Project schedule
- Work plans for pilot tests, lake treatment
- Pilot test for stream restoration
- Initial lake treatment
- Remedial Action Plan



Additional Factors

- Schedule details
- Downstream impacts from dam releases
- Water rights license modification
- Need for Lake Management Plan



Water Board Expectations

- Implement Remedial Action Plan
- Restore and protect beneficial uses
- Restore water quality (e.g., decreased nutrients, higher DO)
- Reasonable timeframe



Speakers

- Nick Buhbe (CDC)
- Steve Figgins (County of San Diego)

