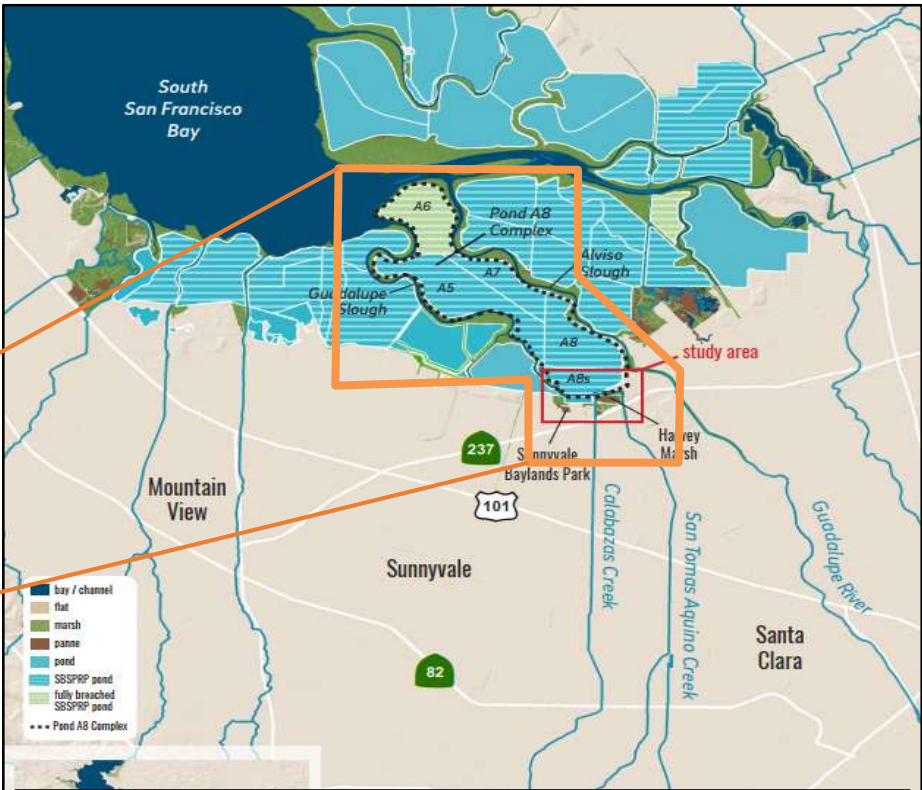




Calabazas and San Tomas Aquino Creek-Marsh Connection Project

Presented by: Judy Nam, Senior Water Resources Specialist

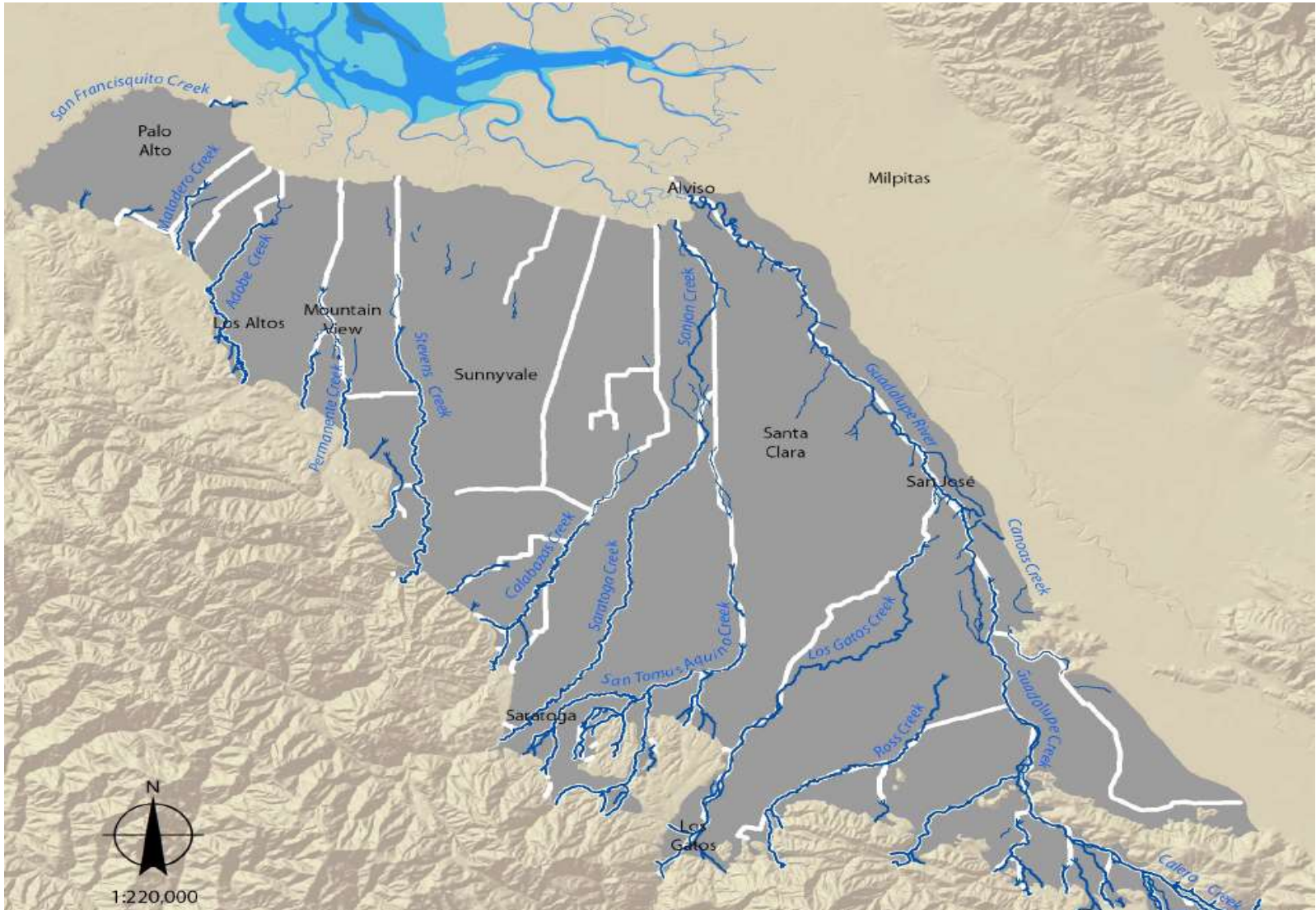
Calabazas and San Tomas Aquino Creek-Marsh Connection Project



Calabazas-San Tomas Aquino Creek-Marsh Connection Project (orange polygon); Study Area for Creek Realignment Portion (red box)

Calabazas and San Tomas Aquino Creek-Marsh Connection Project

Historic Creek Patterns



1951: Before Landfill & Levee Construction



1900s – 1950s

Pre-Landfill & Levee Construction + Sinuous Channel Marsh Converted to Diked Salt Ponds

1850s – 1900s

Large-scale Clearing and Agricultural Development Began in the Early 1860s

1963: After San Tomas Aquino Realignment



1950s – 2000s

● Increased Need for Flood Management and Channel Dredging due to Widespread Development & Channel Straightening

1900s – 1950s

● Pre-Landfill & Levee Construction + Sinuous Channel Marsh Converted to Diked Salt Ponds

1850s – 1900s

● Large-scale Clearing and Agricultural Development Began in the Early 1860s

2006: Drainage of Pond A8 Revealed Remnant Channels



2000s to present

Restoration Efforts and Shift to Multi-Benefit Management Approach

1950s – 2000s

Increased Need for Flood Management and Channel Dredging due to Widespread Development & Channel Straightening

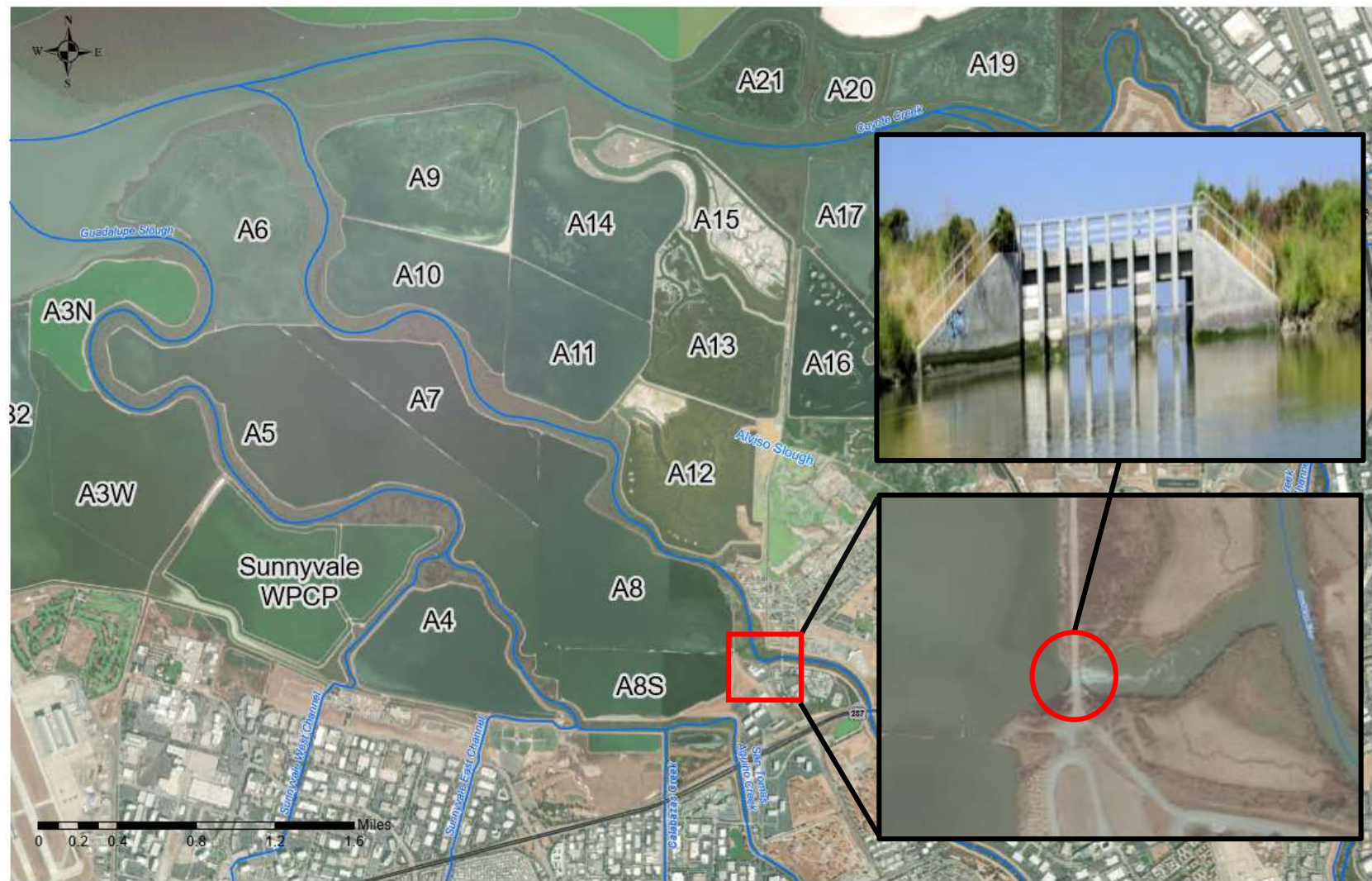
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Calabazas and San Tomas Aquino Creek-Marsh Connection Project Valley Water Pond A8 Notch Construction in Support of SBSRP



Calabazas and San Tomas Aquino Creek-Marsh Connection Project

SFEI VISIONING EFFORT

- **Pre-Vision Workshop**

 - Reviewed Historical Map and Ecology Studies

 - Reconstructed Historical Landscape

 - Identified Major Changes to Landscape Processes

- **Vision Workshop** - Design Advisory Team(DAT) recommended management strategies and identified process improvements

 - Jeremy Lowe (SFEI)

 - Maureen Downing-Kunz (USGS)

 - Andy Collison (ESA)

 - Steve Rottenborn (H.T. Harvey)

 - Peter Baye (Independent consultant)

 - Dan Schlenk (UC Riverside)

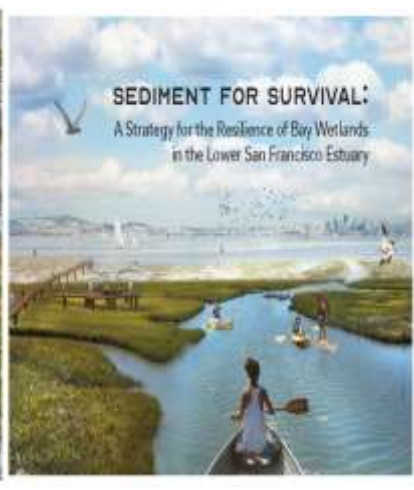
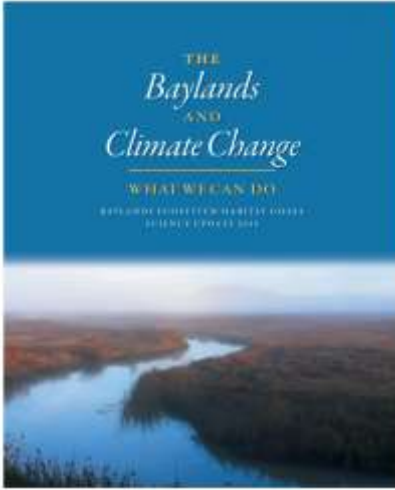


Source: SFEI



Source: SFEI

Calabazas and San Tomas Aquino Creek-Marsh Connection Project Connection to Regional Effort



Calabazas/San Tomas Aquino Creek-Marsh Connection Project

PROJECT OBJECTIVES

1. Ecological Restoration/ Enhancement

- 1,500 ac salt marsh
- 50 ac freshwater marsh
- 4 mi riverine habitat

2. Resilient Flood Protection

- Creek sediment input will help marsh keep up w/ SLR
- Tidal marsh with horizontal levee

3. Reduced Creek Maintenance

- Improve flow lines
- Reduce need for sediment removal and bank repair

4. Improved Access/Trail Opportunities



Calabazas and San Tomas Aquino Creek-Marsh Connection Project

Objective 1: Habitat Restoration



Calabazas and San Tomas Aquino Creek –Marsh Connection Project

Objective 2: Resilient Flood Protection



Calabazas and San Tomas Aquino Creek –Marsh Connection Project

Objective 3: Reduced Creek Maintenance



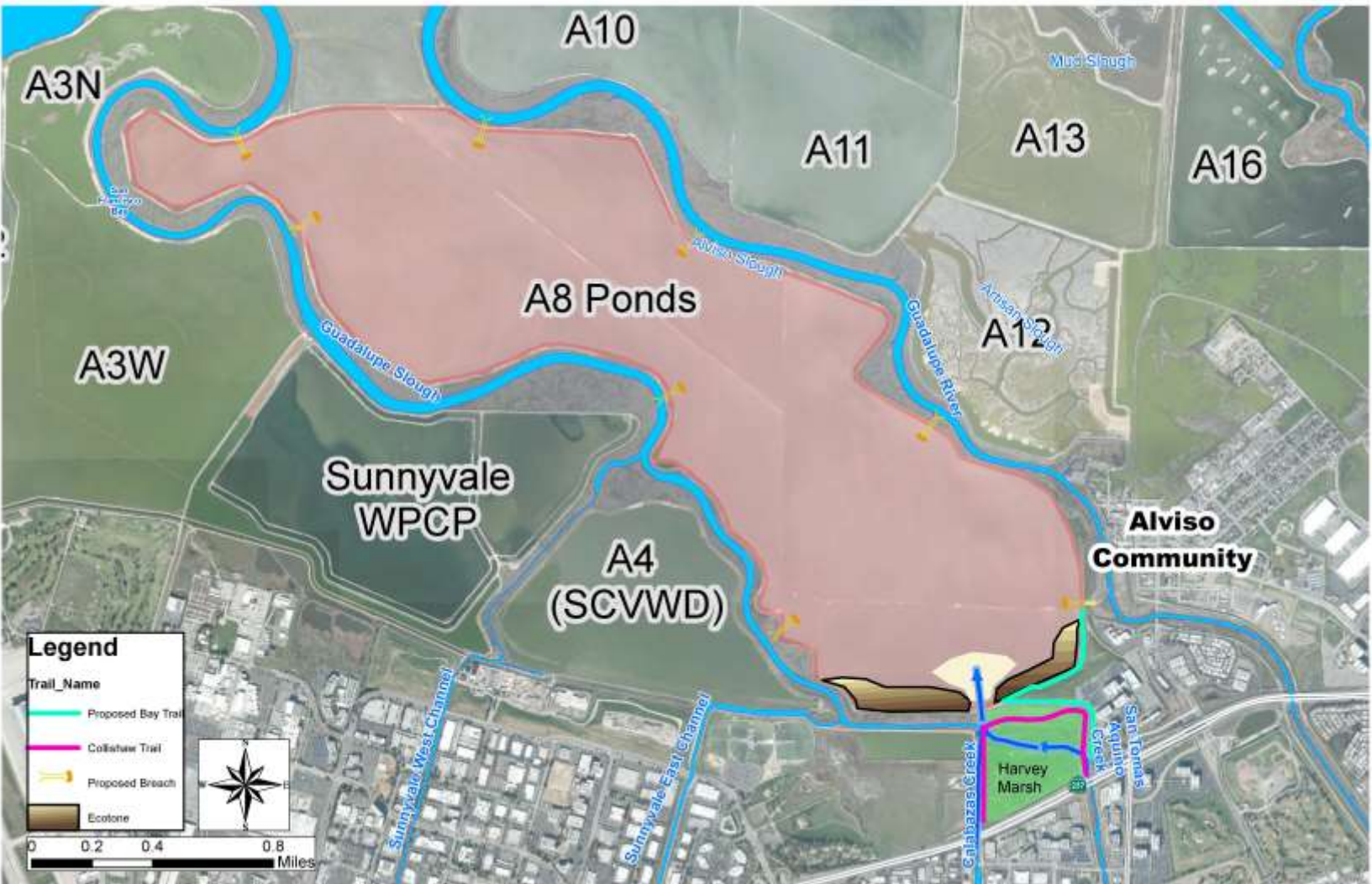
Calabazas and San Tomas Aquino Creek –Marsh Connection Project

Objective 3: Reduced Creek Maintenance



Calabazas and San Tomas Aquino Creek-Marsh Connection Project

Objective 4: Improved Public Access/Recreational Opportunities



Next Steps:

1. Award Planning and Monitoring and Modeling Consultant Services Contracts funded by Measure AA and Prop 1 Grants with SFBRA and CDFW
2. Proceed with **Planning** and Baseline Condition **Monitoring**
3. Develop Hydrodynamic/Sediment Transport **Models** to reduce uncertainties

Planning:

- Conceptual Alternatives
- Feasible Alternatives
- Staff Recommended Alternative Planning Study Report
- Extensive Stakeholder Engagement/Public Outreach

Monitoring:

- Monitoring Work Plan
- Monitoring to support Planning, CEQA/NEPA, Permitting and Design
- Adaptive Management Plan

Modeling:

- Marsh Accretion/Habitat Modeling: Assess Tidal Marsh Formation, Future Habitat Value, and Needs for Sediment Augmentation
- Hydrodynamic/Sediment Transport Modeling: Assess Uncertainties and Optimize Design for Rapid Accretion
- Hydraulic/Hydrodynamic Modeling: Assess Changes in Flood Risks due to Project and Inform Design of Mitigation Elements (if needed)

QUESTIONS





Valley Water

Clean Water • Healthy Environment • Flood Protection