

Tumblin Creek Watershed Management Plan

Balancing Redevelopment Goals, Water Quality Improvements, and Wetland Restoration

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Purposes

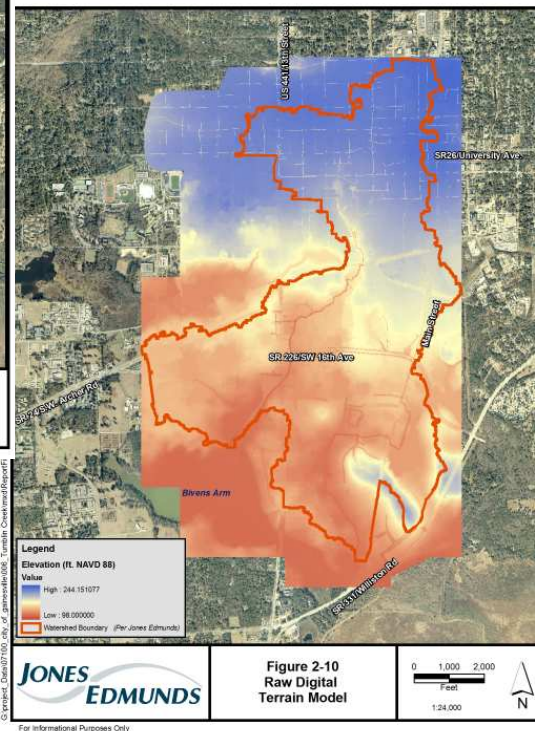
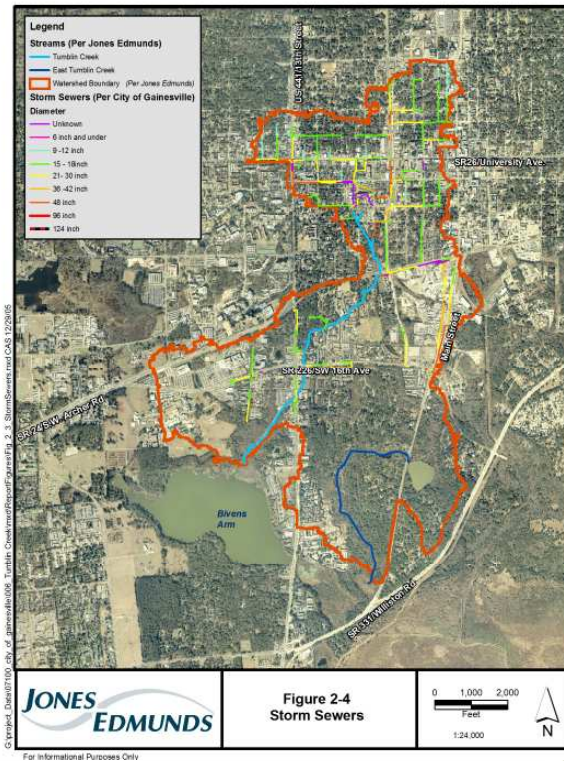
- Primary Goals:
 - Water quality improvements
 - Facilitate redevelopment while addressing water quantity and water quality

Treatment Options

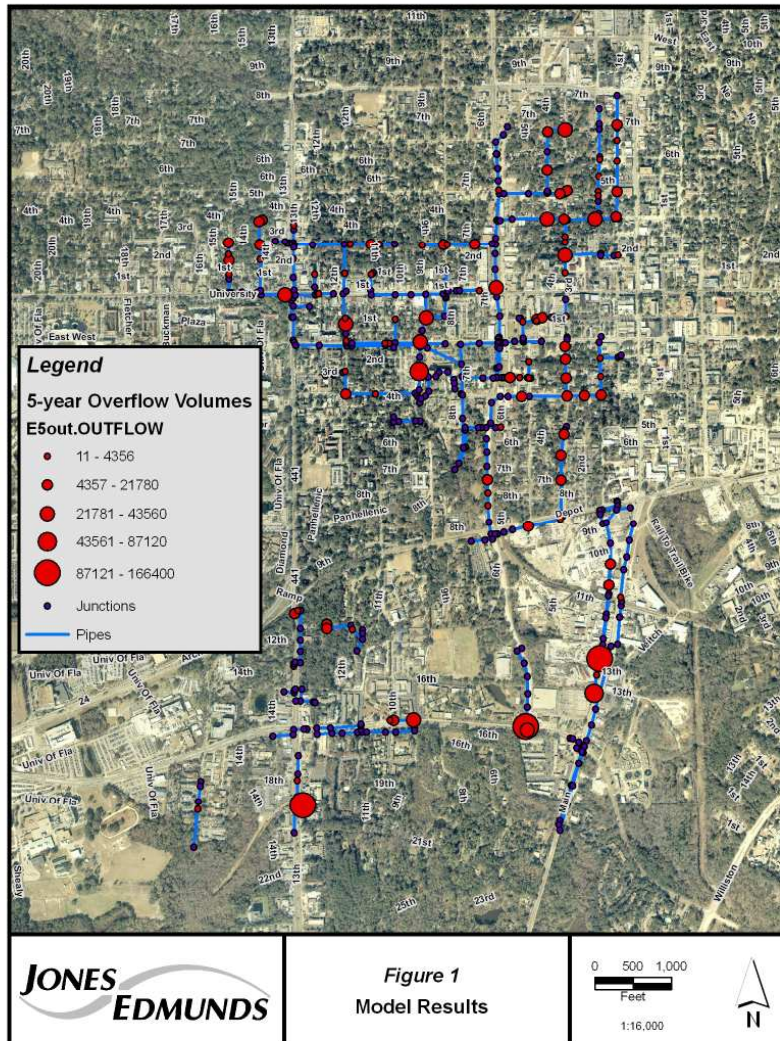
- Local Treatment
 - Low Impact Development
- Sub-regional Treatment
 - Stormwater ponds
 - Treatment wetlands/rehydration
 - Exfiltration
- Regional Treatment
 - Trash Trap
 - Treatment wetlands
- Stream Restoration

Literature Review and Data Collection (Section 1 and 2)

- Historical perspective
- Current status/trends
- LiDAR
- Storm sewers
- Channel survey



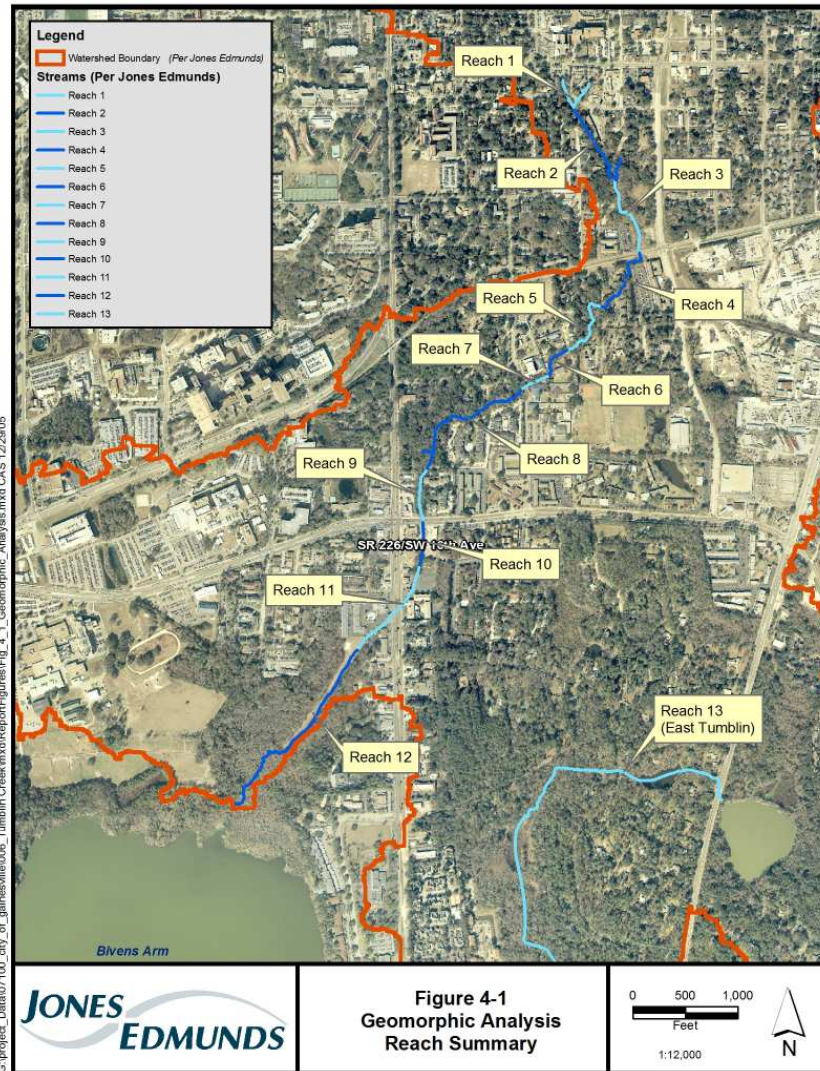
Water Quantity (Section 3)



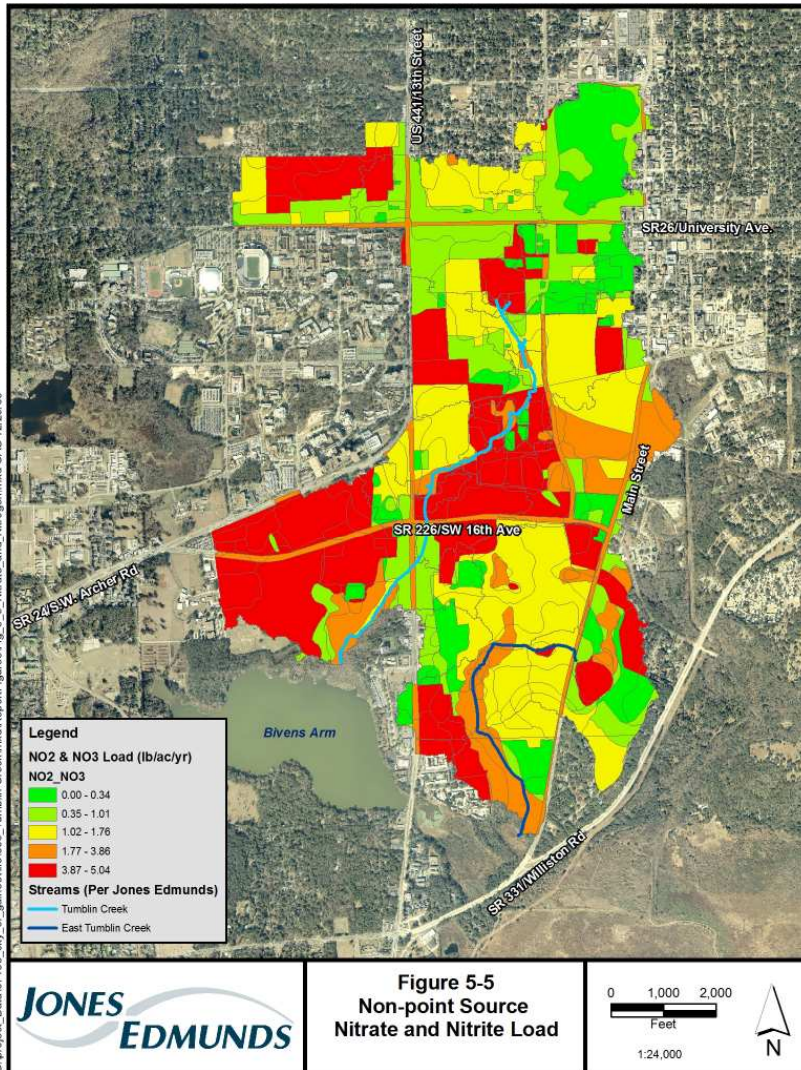
- Stream modeling
 - FEMA update
- Storm sewer modeling
 - Localized flooding
 - Capacity problems
- Widespread capacity issues
- Leads to local and subregional solutions
- Exfiltration opportunities

Erosion Control and Stream Restoration (Section 4)

- Geomorphic analysis
- Channel modifications and protection on Tumblin
- No recommendations for East Tumblin
- Less relevance to CRA



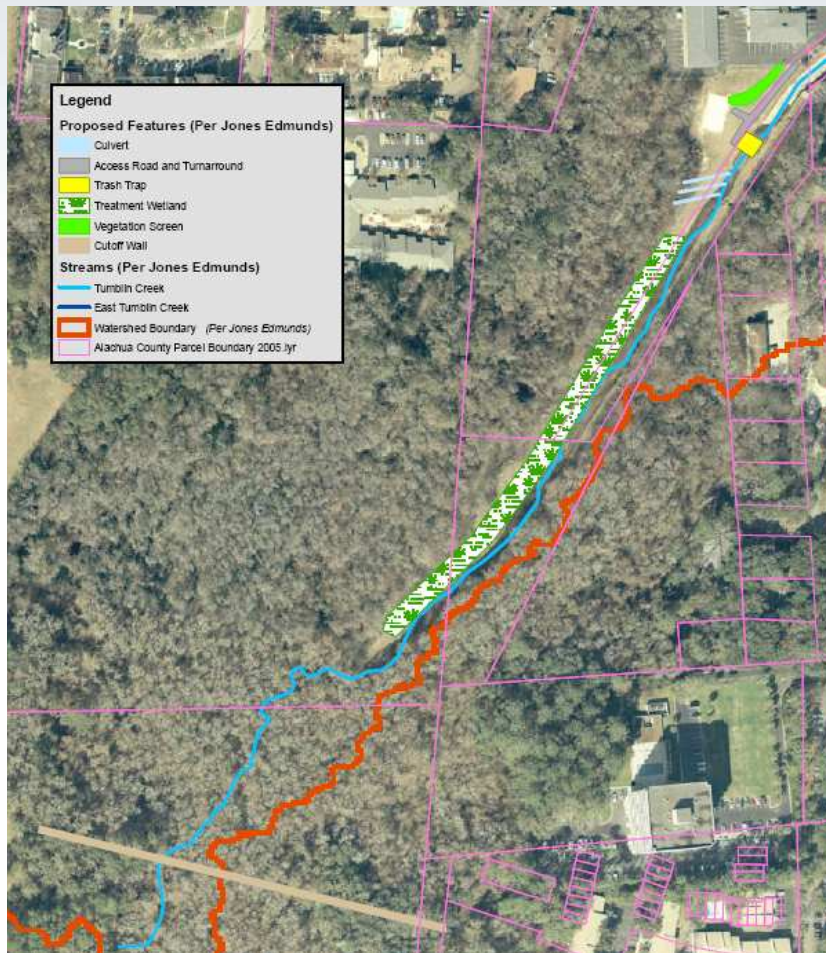
Pollutant Loading Assessment and Treatment Options (Section 5)



- Pollutant loading model
 - UMU Analysis
- Regional and subregional treatment options
- Retrofit sites
- Exfiltration sites



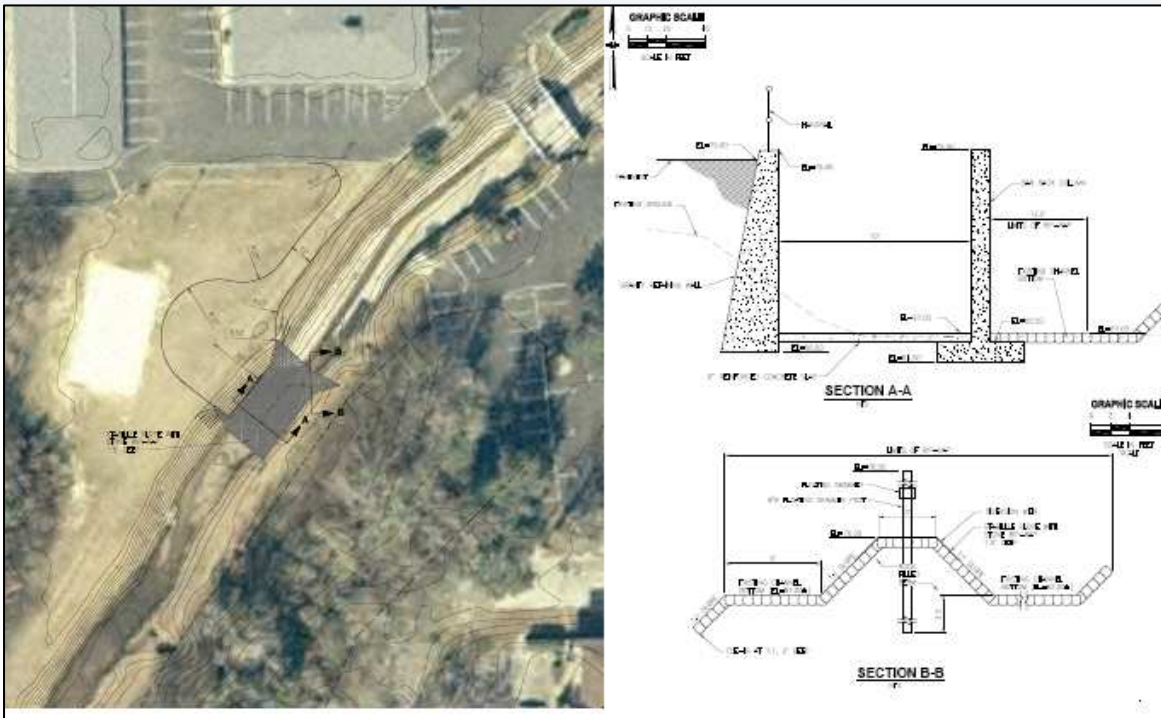
Regional Treatment (Section 9)



- Five options evaluated
- Nitrogen reduction estimated to be 6 to 15 percent

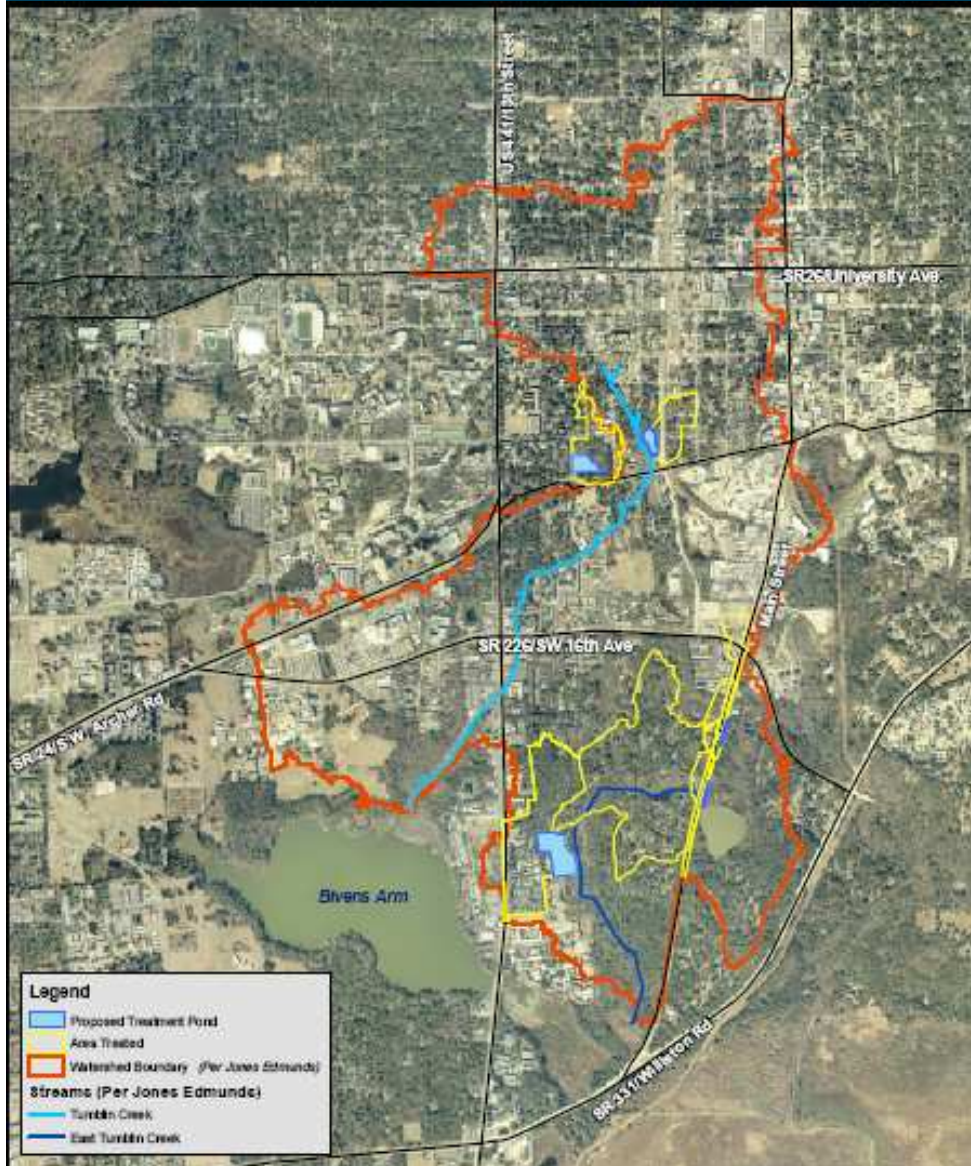
Regional Treatment (Section 8)

- Trash Trap
 - Similar to Sweetwater design



Subregional Treatment (Section 5)

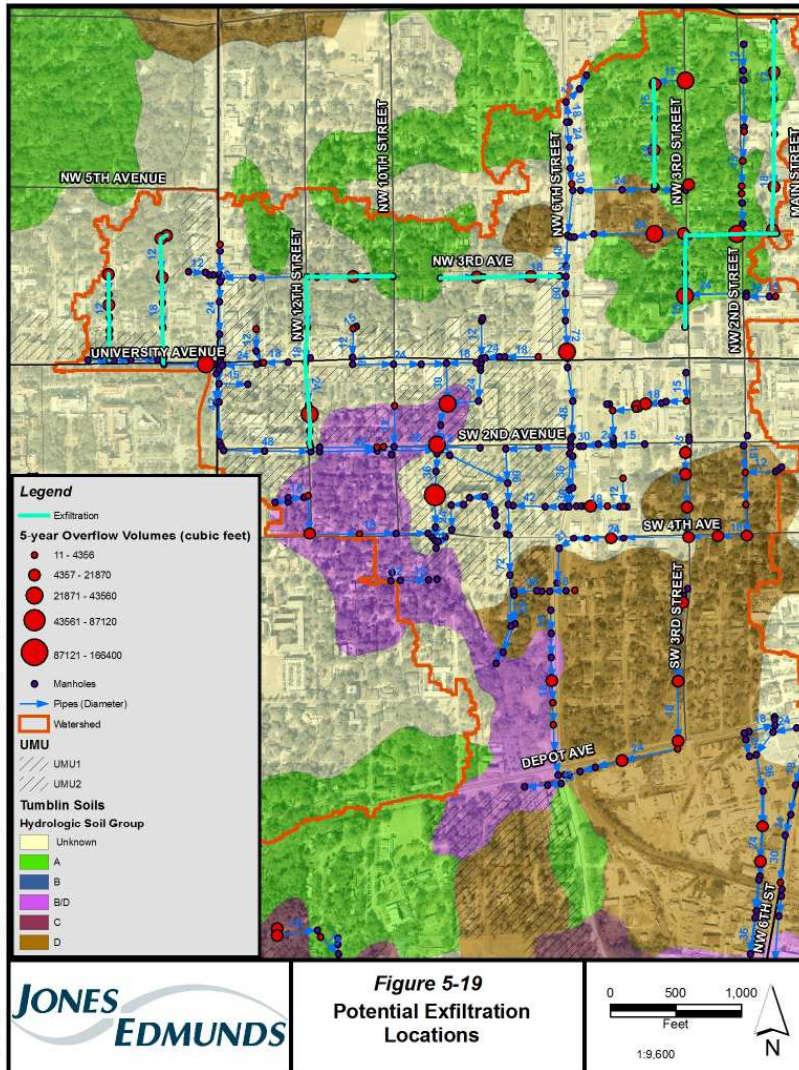
- Sorority Woods, Tumblin Creek Park, Colclough Pond, Kirkwood, Arbor Park, Bivens Arm Nature Park



**JONES
EDMUNDS**

Subregional/Local Treatment (Section 5)

- Potential Exfiltration Sites



Local Treatment (Section 5)



- Fifteen potential sites evaluated
- Could be used for redevelopment compensation

Onsite and Additional Treatment Options (Section 6)

- LID and opportunity sites
- Rooftop versus parking lot runoff
- Street sweeping and leaf collection
- Private property retrofit
- Hydrodynamic separators
- Regulatory acceptance

Watershed Management Strategy (Section 10)

- Comprehensive Plan Requirements
- CIP Prioritizing Criteria
- Recommended Stormwater Utility CIP Projects

Community Redevelopment Agency Strategy (Section 11)

- Administration of Treatment and Attenuation Banking
- Implementation Projects
- Policy Change and Research Recommendations