



SAN ANTONIO  
**RIVER**  
**AUTHORITY**

## Low Impact Development and Nature-based Solutions for Watershed Protection

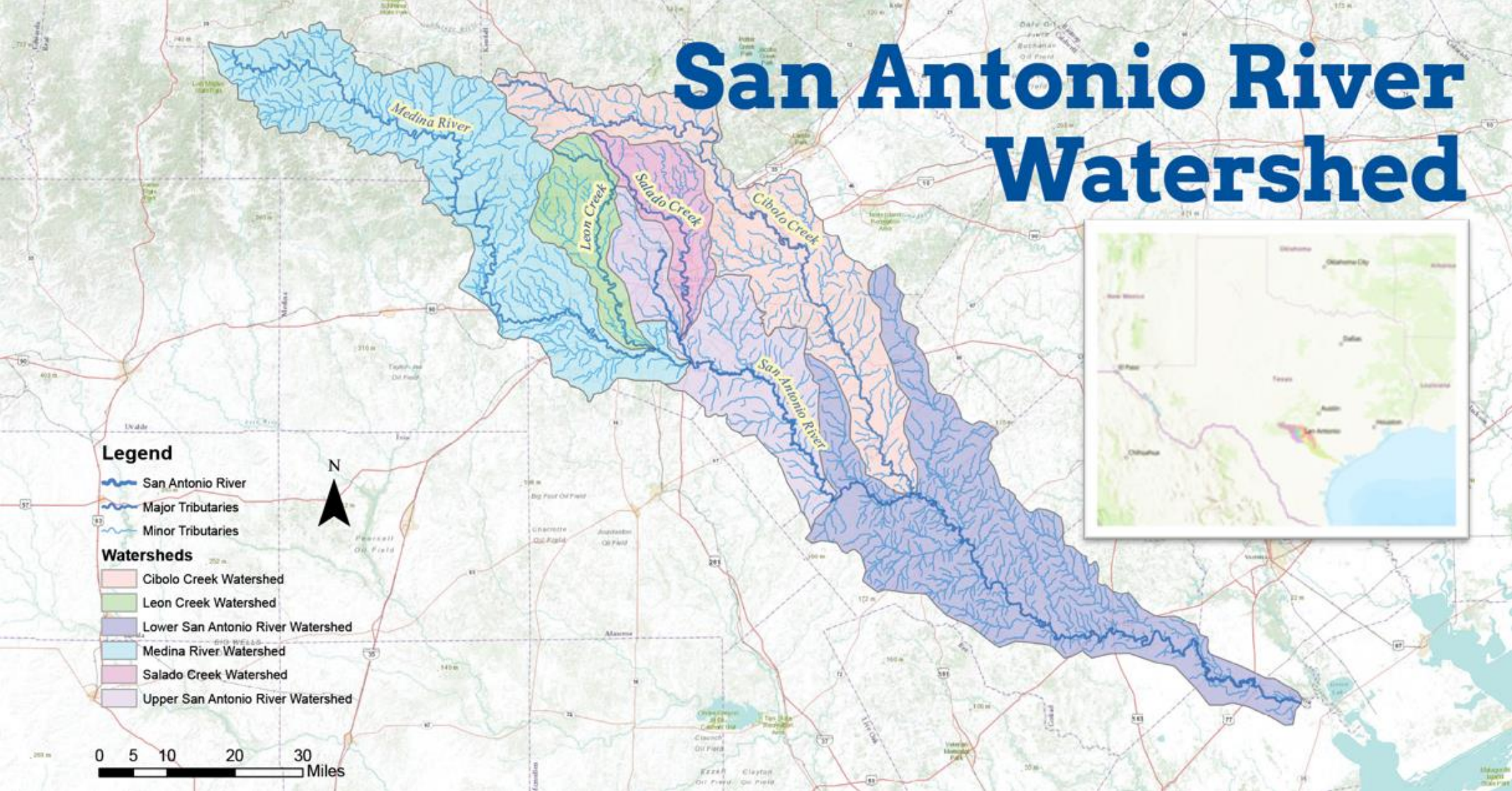
Active Transportation Advisory Committee– February 11, 2026

Mikel Wilkins, PE - Senior Engineer, Margarita Saldaña - Planner



**Committed to Safe, Clean, Enjoyable Creeks and Rivers.**

# San Antonio River Watershed





**Committed to Safe, Clean, Enjoyable Creeks and Rivers.**



# Nature-based Solutions

- NbS, an "umbrella concept"
  - Green Infrastructure, Low Impact Development, Natural, and Nature-based features, Stormwater BMPs
  - Imitate or preserve natural features and/or processes to increase environmental sustainability & resilience
  - Hybrid engineered systems or preserved natural systems
  - Provides co-benefits



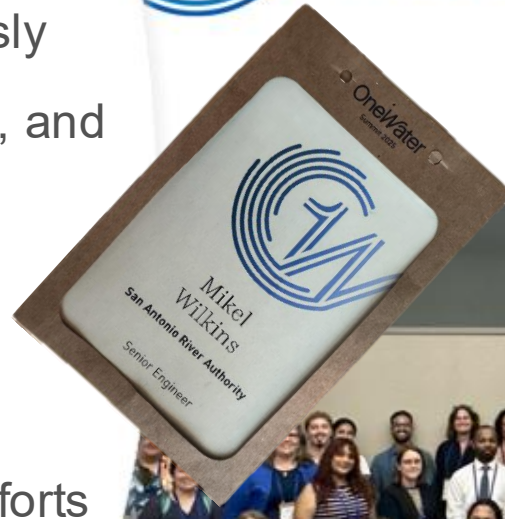
# Nature-based Solutions

- **Co-benefits**
  - Water Quality improvements
    - Bacteria, TSS, Oil/Grease, Metals, Nutrients, and Heat
    - Infiltration & Peak Runoff reduction
    - Habitat & Biodiversity
    - Reduced Heat Island Effect
    - Beautification, Recreation





# Nature-based Solutions

- **Technical Leadership:** Continuously improve planning, design, construction, and O&M guidance
  - NBS Master Planning
  - NBS for Flood Mitigation Projects
  - Support for Community Planning Efforts
  - Innovation and National Collaboration





**Features**

-  NbS Priority Areas
-  Bexar County



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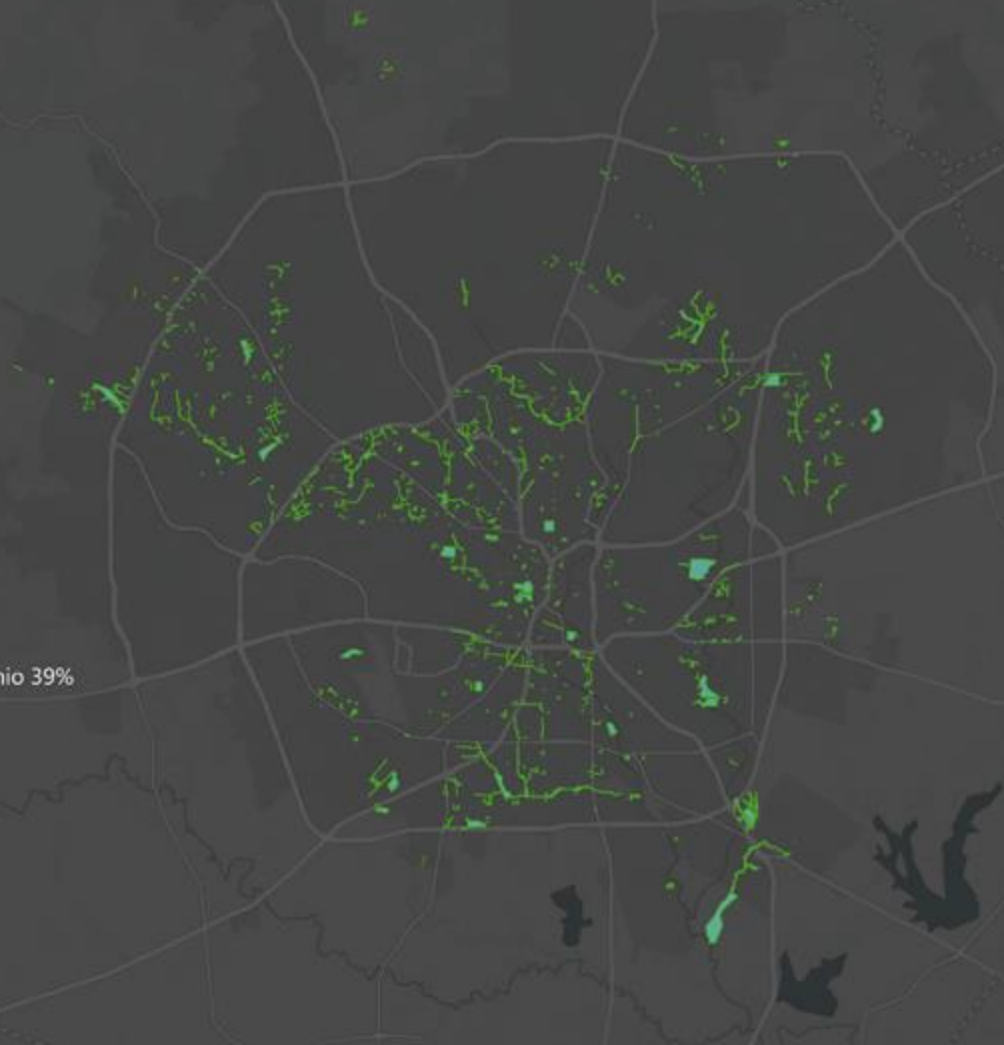


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# Phase 1



- Upper San Antonio 39%
- Leon 31%
- Salado 31%
- Cibolo 0%
- Medina 0%



# Phase 2



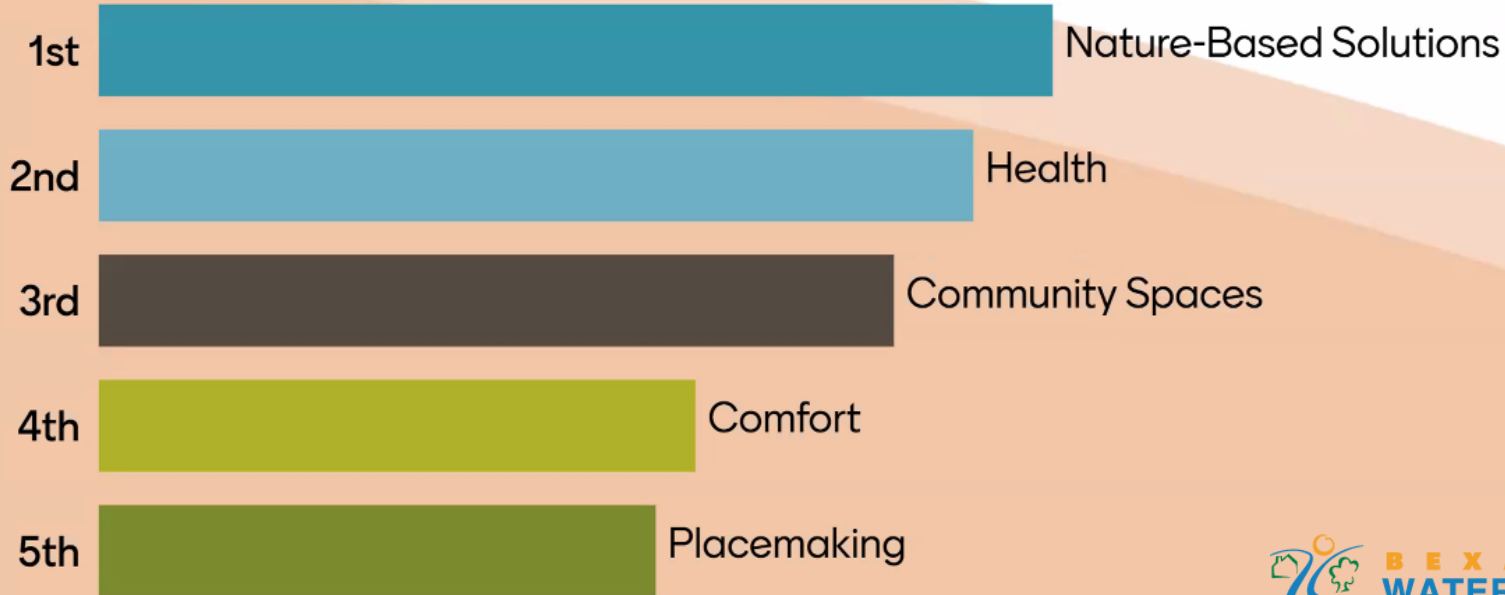
- Upper San Antonio River 73%
- Leon 17%
- Salado 10%

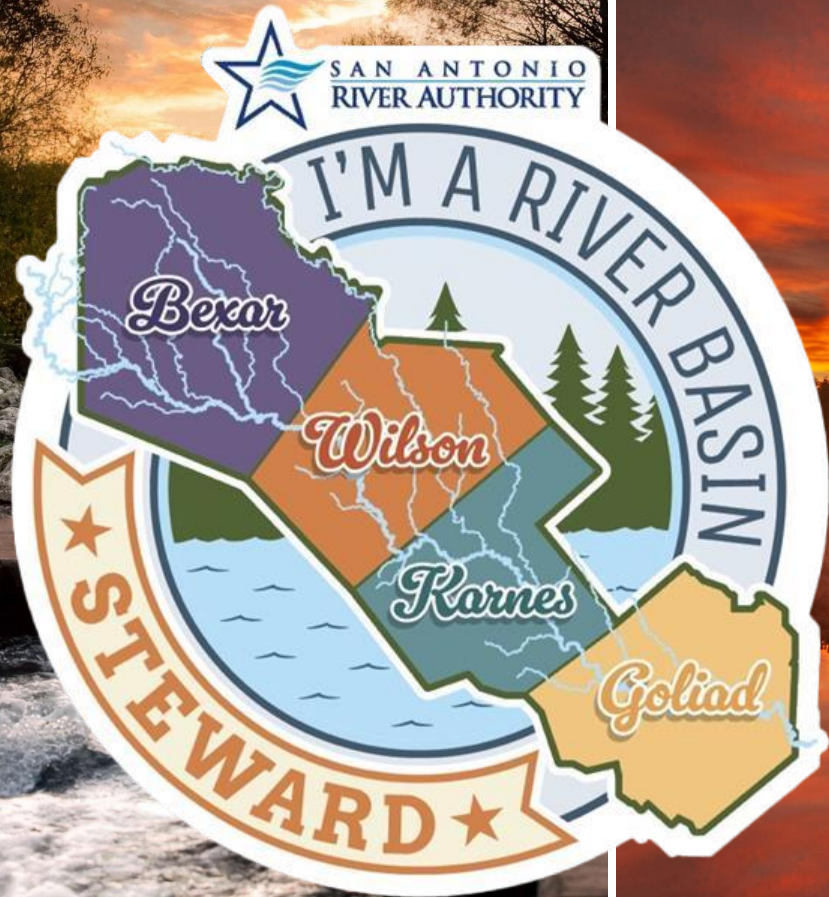
# Phase 3



- Leon 39%
- Upper San Antonio River 39%
- Salado 22%

Rank the **community amenity and public space elements** that you want to see in your community?





# NBS for Active Transportation Planning – Streets to Creeks

# Streets to Creeks

- **Strategic Planning:** Evaluate existing and planned street, trail and transit improvements for NBS opportunities
  - Support community area planning
  - Greenway planning (Bexar County Creeks and Trails Program, Westside Creeks Restoration)
  - Thoroughfare planning (SARA Jurisdiction and Regional Connections)
  - Flood mitigation planning
  - Emphasis on multi-benefit outcomes and water quality uplift





# Streets to Creeks GIS Assessment

Identifying potential street access to and street runoff mitigation opportunities for San Antonio's creek-trail systems.

San Antonio River Authority

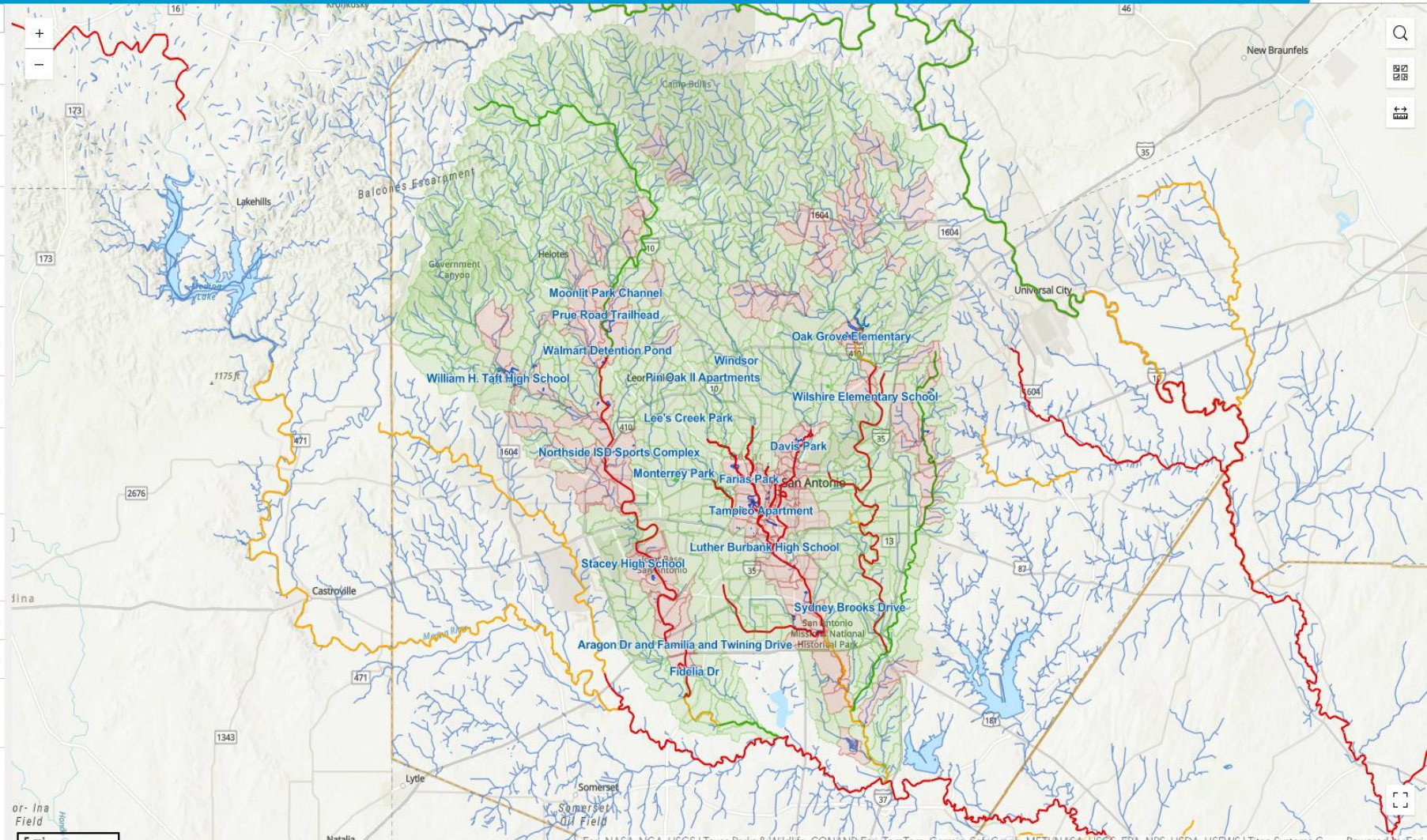


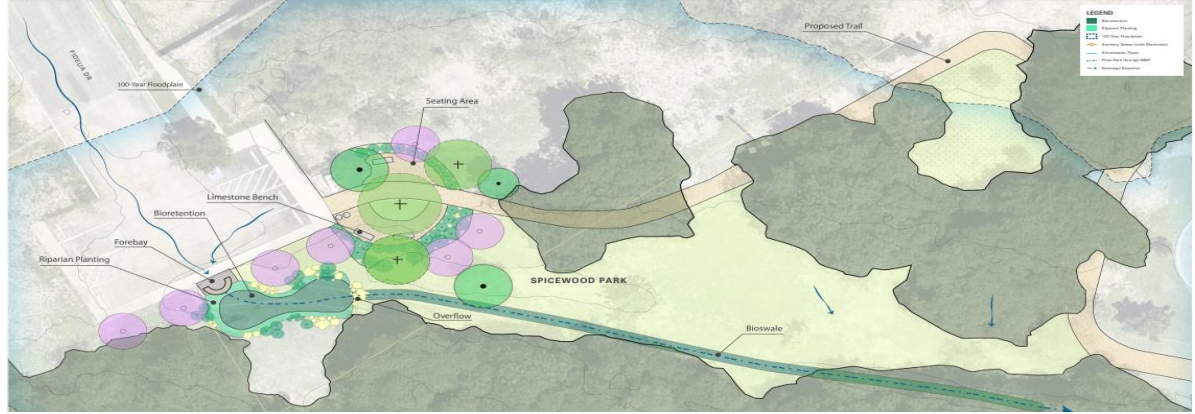
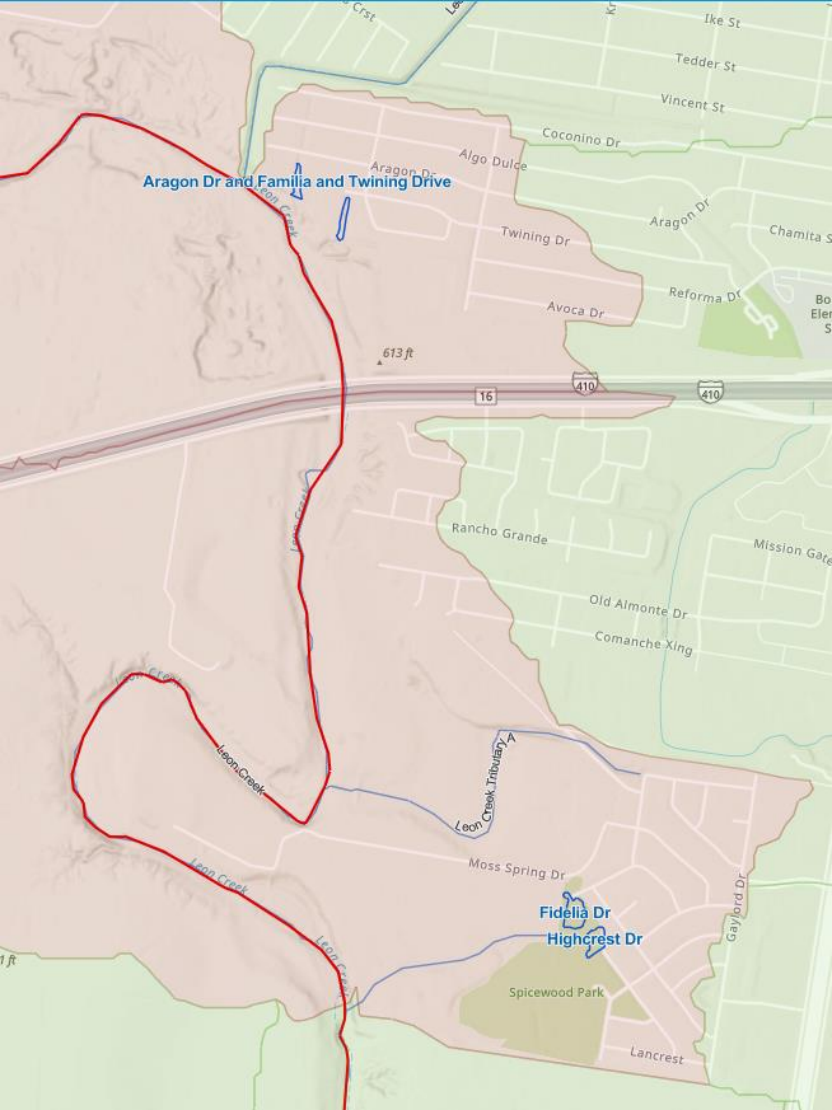
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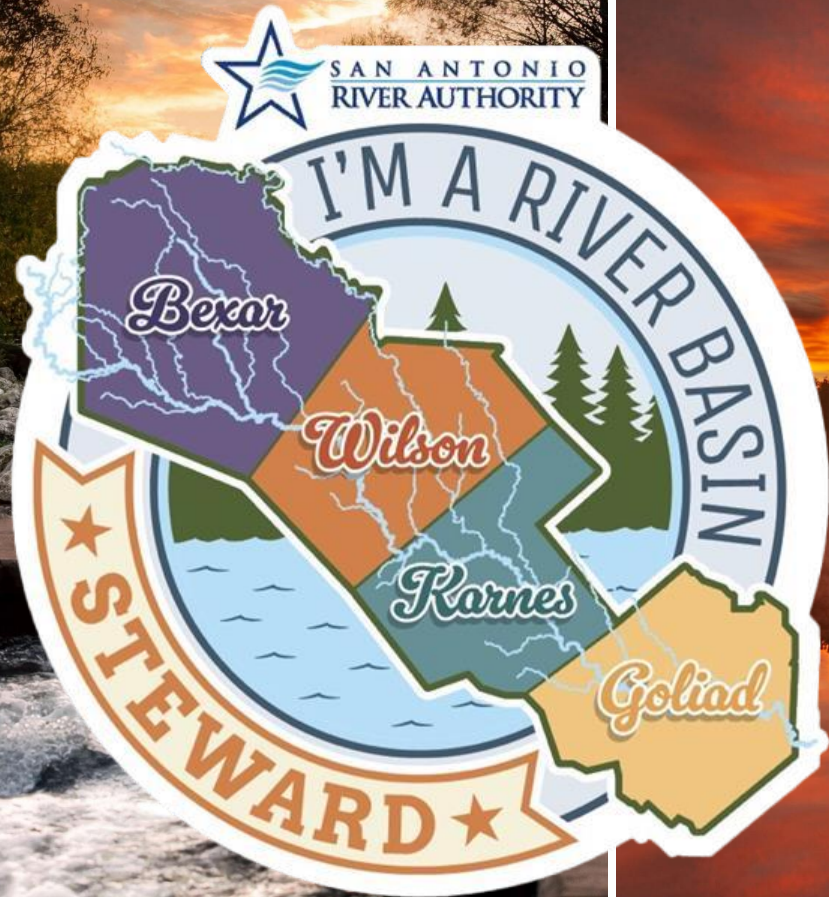




- Layers**
- Water Quality Improvement Areas
  - TCEQ Impairments (2024)
  - Stream Centerlines (NFHL)
  - Existing Green Stormwater Infrastructure
  - WQ Project Recommendations
    - GSI BMP Recommendations
    - Proposed Nature Based Projects
    - SARA/COSA Bond Recommendations
    - SARA/COSA Bond Park Recommendation
  - COSA
  - Bexar Projects
  - Other Community and Infrastructure Projects
  - Political Boundaries







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