



# Edwards Aquifer Protection Program Update

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## B-Session Presentation

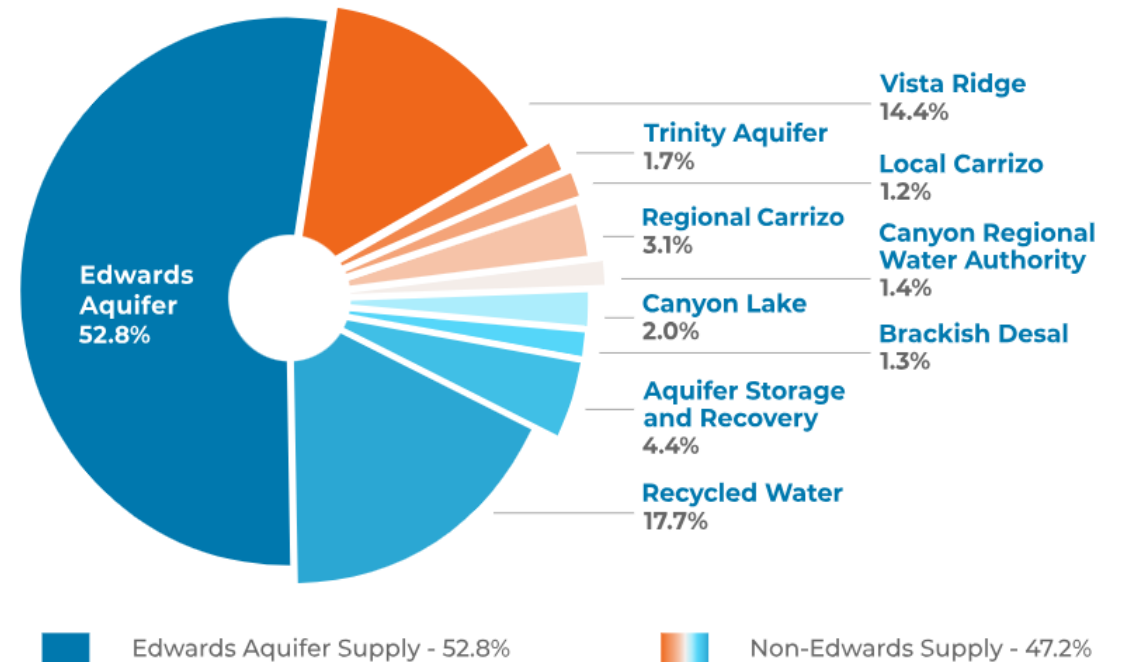
### January 15, 2025

*Presented by:*

*Grant Ellis, Natural Resources Manager  
Parks and Recreation Department*

# Program Background

- In the 1970s, interested stakeholders began campaigning to protect the Edwards Aquifer
  - City's primary source of drinking water
- Purpose of the Edwards Aquifer Protection Program (EAPP) is to protect the quality & quantity of water recharging into the Edwards Aquifer
  - Land acquisition
  - Conservation easements
- EAPP activities are overseen by Conservation Advisory Board (CAB)



Graphic: saws.org

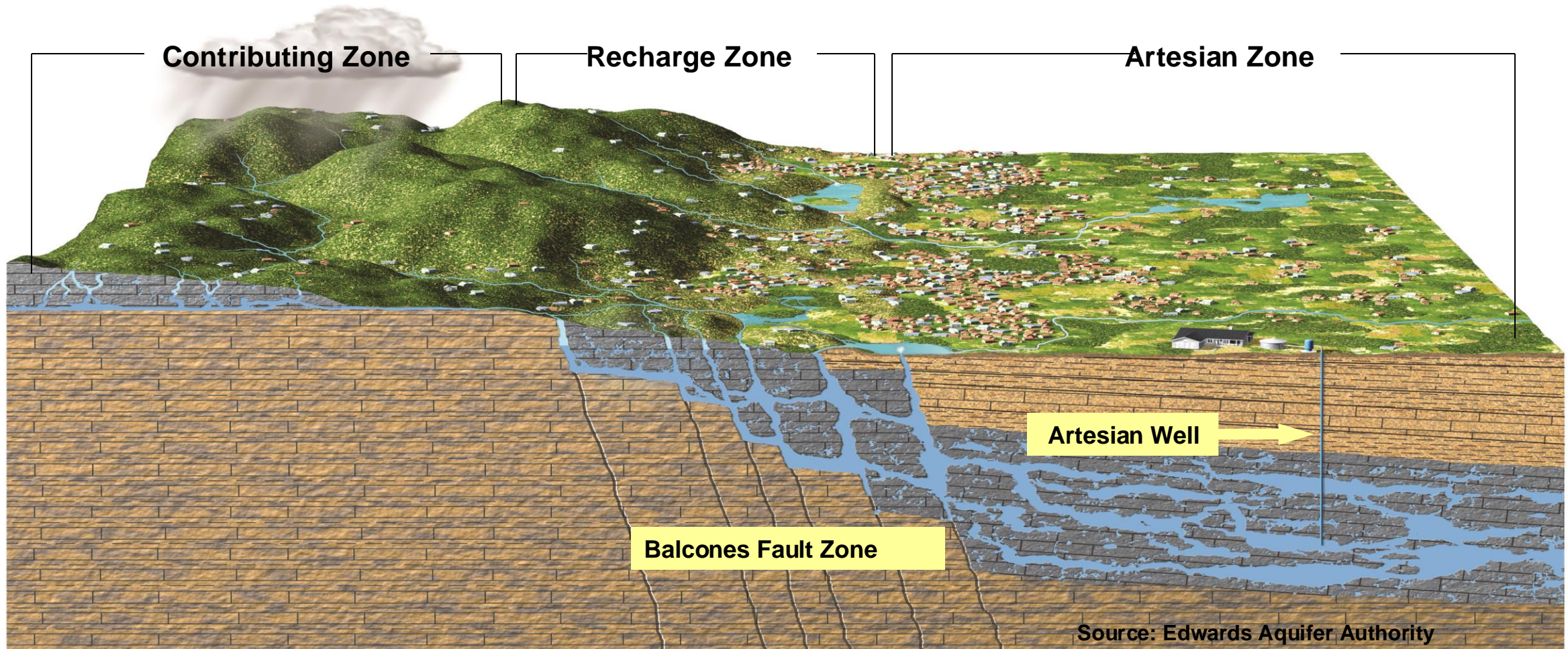
# About the Edwards Aquifer

- The Edwards is a *karst* aquifer – meaning it is made up of porous, soluble limestone rock which allows water to flow through it like a system of underground streams and channels
- The aquifer naturally regenerates when water flows through specific zones via an elaborate network of recharge features such as fractures, fissures and sinkholes



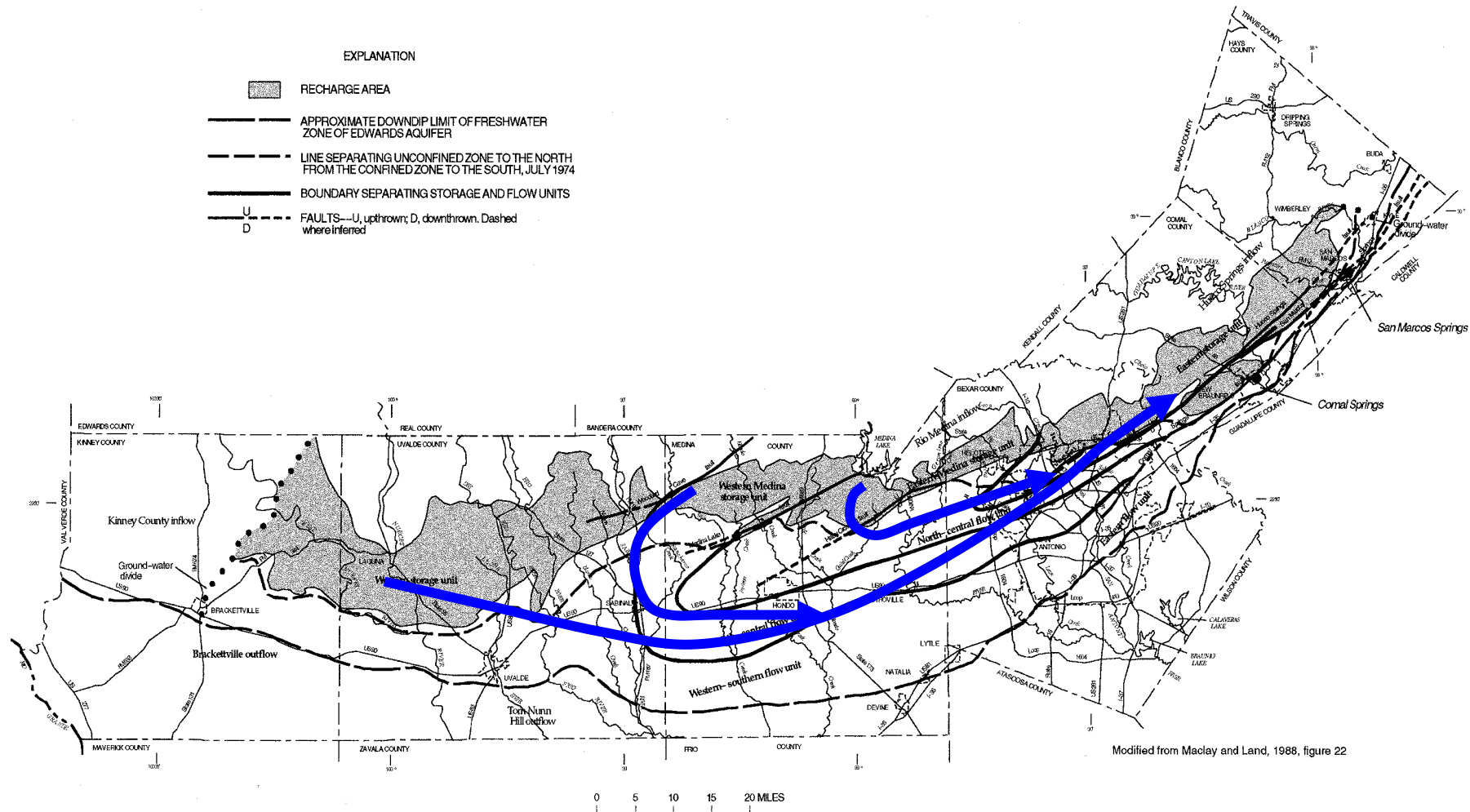


# Generalized Cross Section of the Aquifer



# Aquifer Flow Patterns

## General Flow is West to East



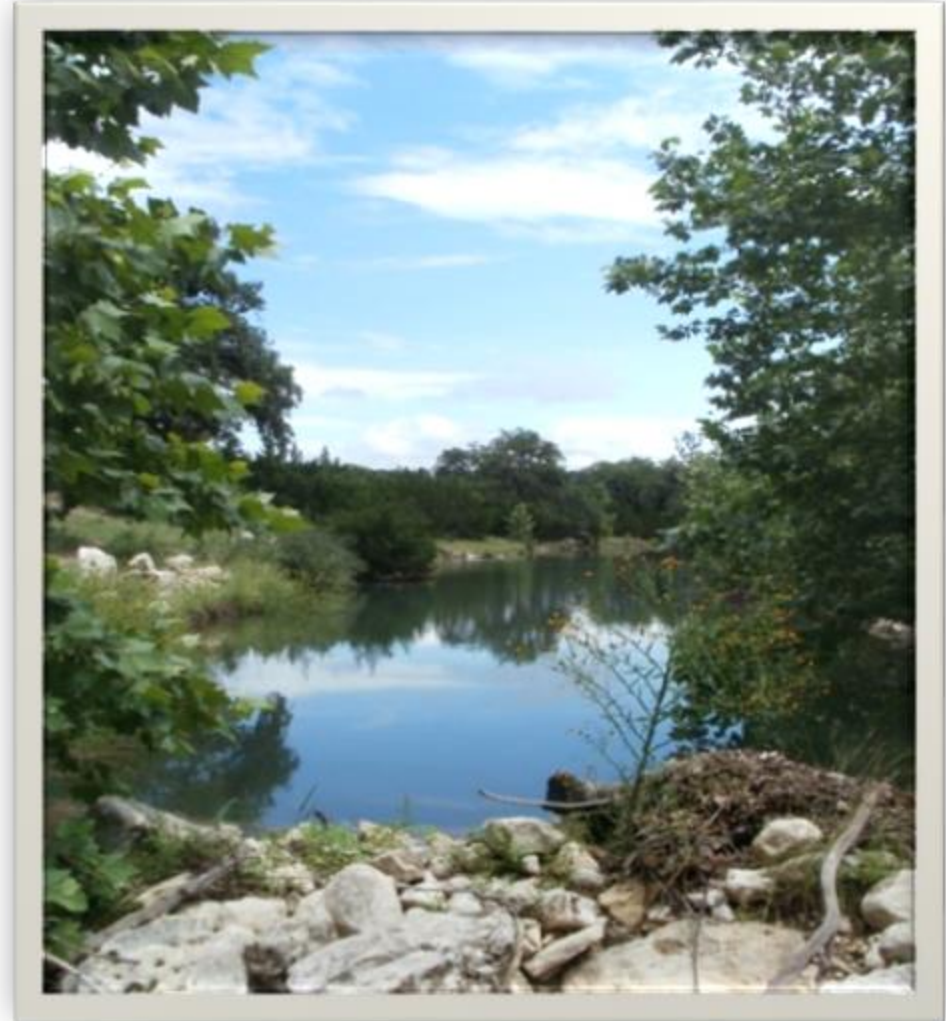


# Land Identification & Acquisition



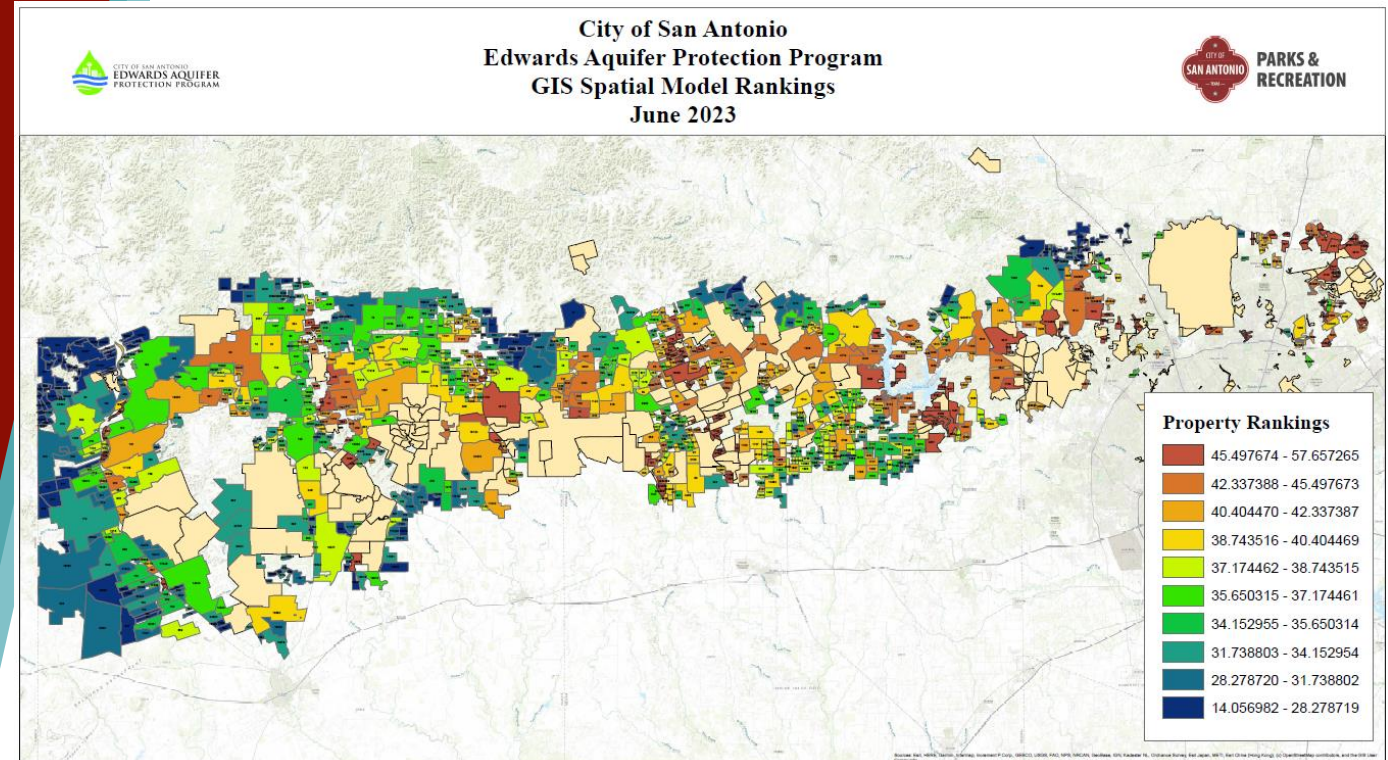
To assist the EAPP with land identification and acquisition, two groups were established:

- Scientific Evaluation Team (SET)
  - SET is a science-based advisory group responsible for determining the weighting matrix for the GIS spatial model used to rank properties
- Land Acquisition Team (LAT)
  - LAT members assist with the negotiation of acquisitions and help coordinate necessary due diligence
  - Report to the CAB on the availability of property
  - Comprised of EAPP staff and two non-profit conservation organizations
    - Green Spaces Alliance of South Texas
    - The Nature Conservancy



# Scientific Evaluation Team (SET)

- SET is a science-based advisory group responsible for determining the weighting matrix for the GIS spatial model used to rank properties based on:
  - *Water Resources*
  - *Biology*
  - *Property Size*
  - *Location*
- Members include:
  - *COSA Parks & Recreation Department*
  - *Edwards Aquifer Authority*
  - *US Department of Agriculture*
  - *San Antonio River Authority*
  - *San Antonio Water System*
  - *Texas Parks & Wildlife Department*
  - *US Fish & Wildlife Service*
  - *US Geological Survey*
  - *Southwest Research Institute*



# EAPP Property Evaluation Process



## PROPERTY MODELING & RANKING

GIS model ranks properties based on geological features, such as size and location



## BOARD REVIEW

Conservation Advisory Board (CAB) considers properties



## STAGE (1) DUE DILIGENCE

Geological assessment and property appraisal



## STAGE (2) DUE DILIGENCE

Phase 1  
Environmental Site Assessment completed and property negotiations



## FINAL APPROVAL

Final CAB approval & City Council consideration



# Acquisition Strategies



- Conservation Easements vs. Fee Simple Ownership
- 95% of property interests acquired by EAPP are conservation easements; 5% Fee Simple acquisitions
- Landowners retain ownership and certain land use rights, **but give up future development rights**
  - Limited to ½ of 1% of total square footage for future development
  - Landowner is compensated 30 – 50% of fair market value as established by appraisal
- All acquired properties are monitored on an annual basis by City and Edwards Aquifer Authority (EAA) staff under an Interlocal Agreement

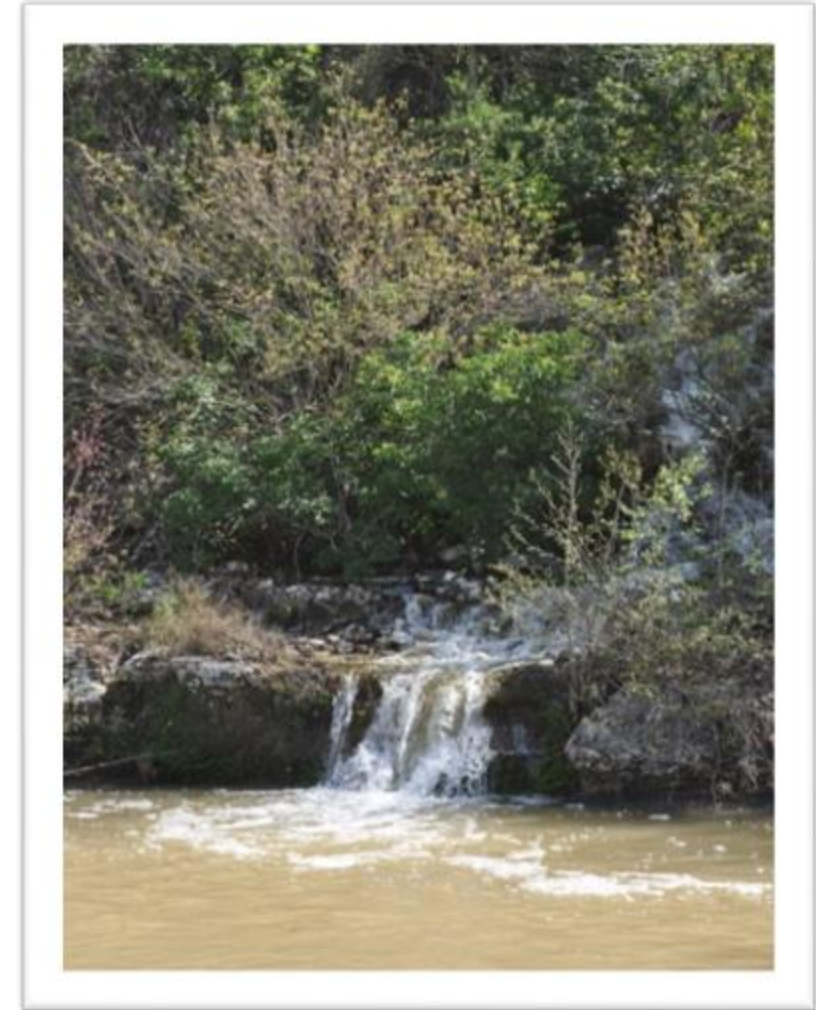


# Conservation Advisory Board (CAB)



CAB consists of representatives from the following:

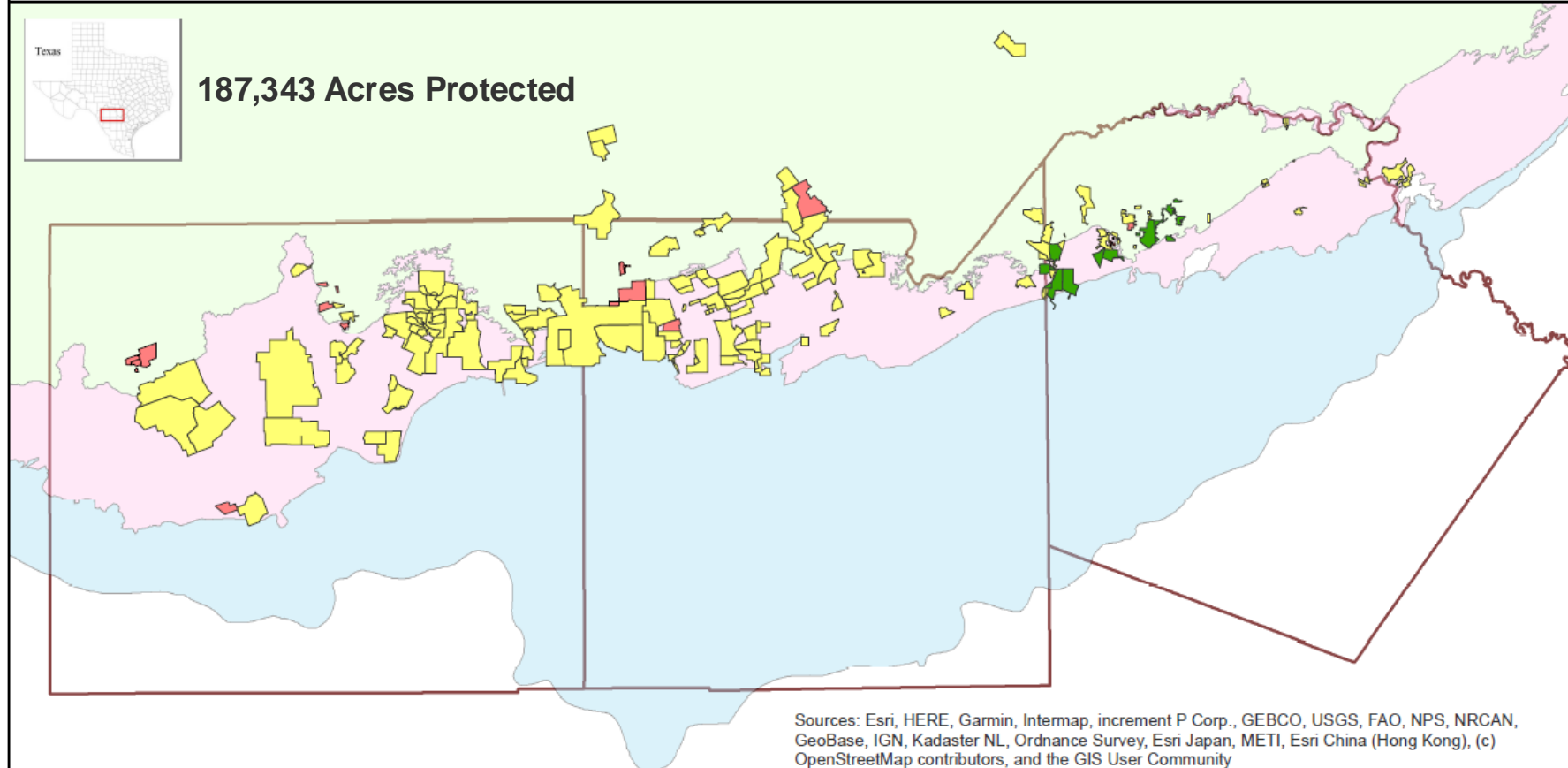
- COSA Parks and Recreation Director
- COSA Parks Advisory Board
- Edwards Aquifer Authority (EAA)
- Greater SATX
- San Antonio River Authority (SARA)
- San Antonio Water System (SAWS)
- Texas Parks and Wildlife Department
- Medina County
- Uvalde County



# City of San Antonio Edwards Aquifer Protection Program



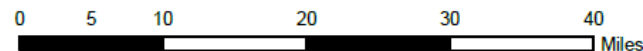
187,343 Acres Protected



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



\*San Antonio Municipal Facilities Corporation

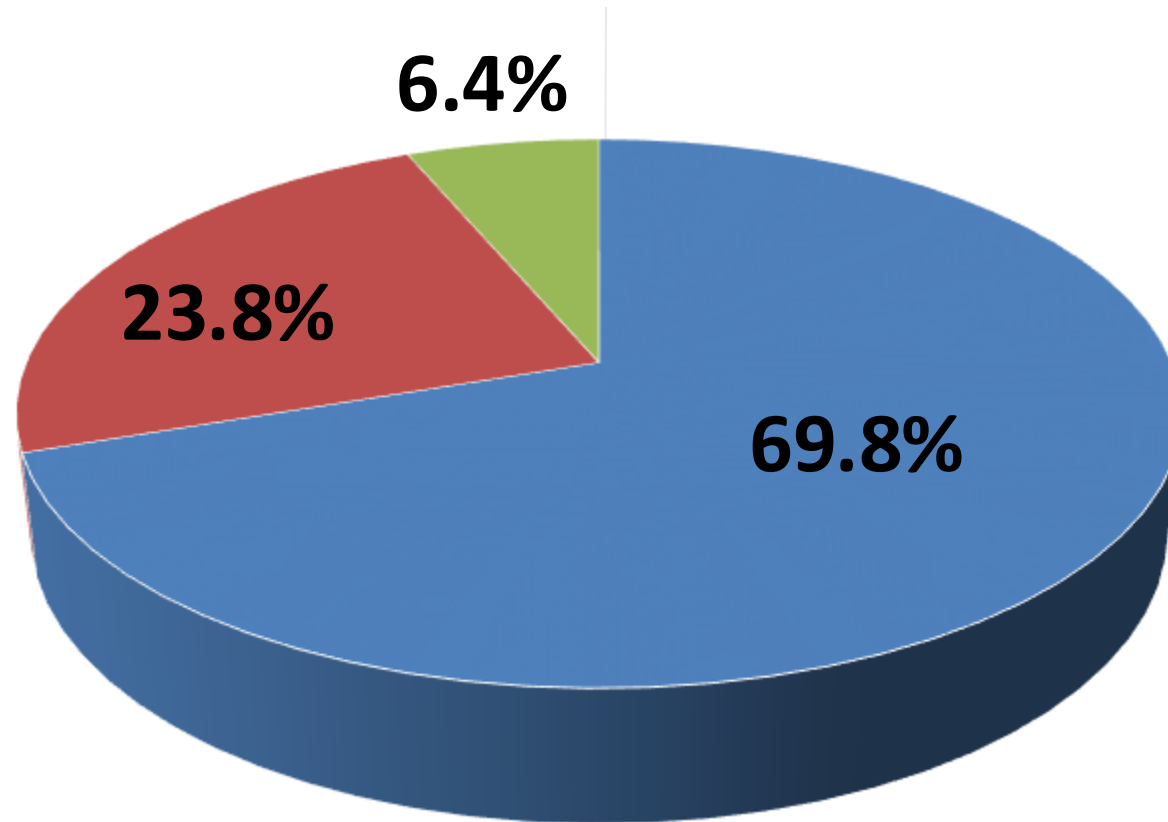


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# 2000 – 2024 EAPP Acquisitions by Aquifer Zone

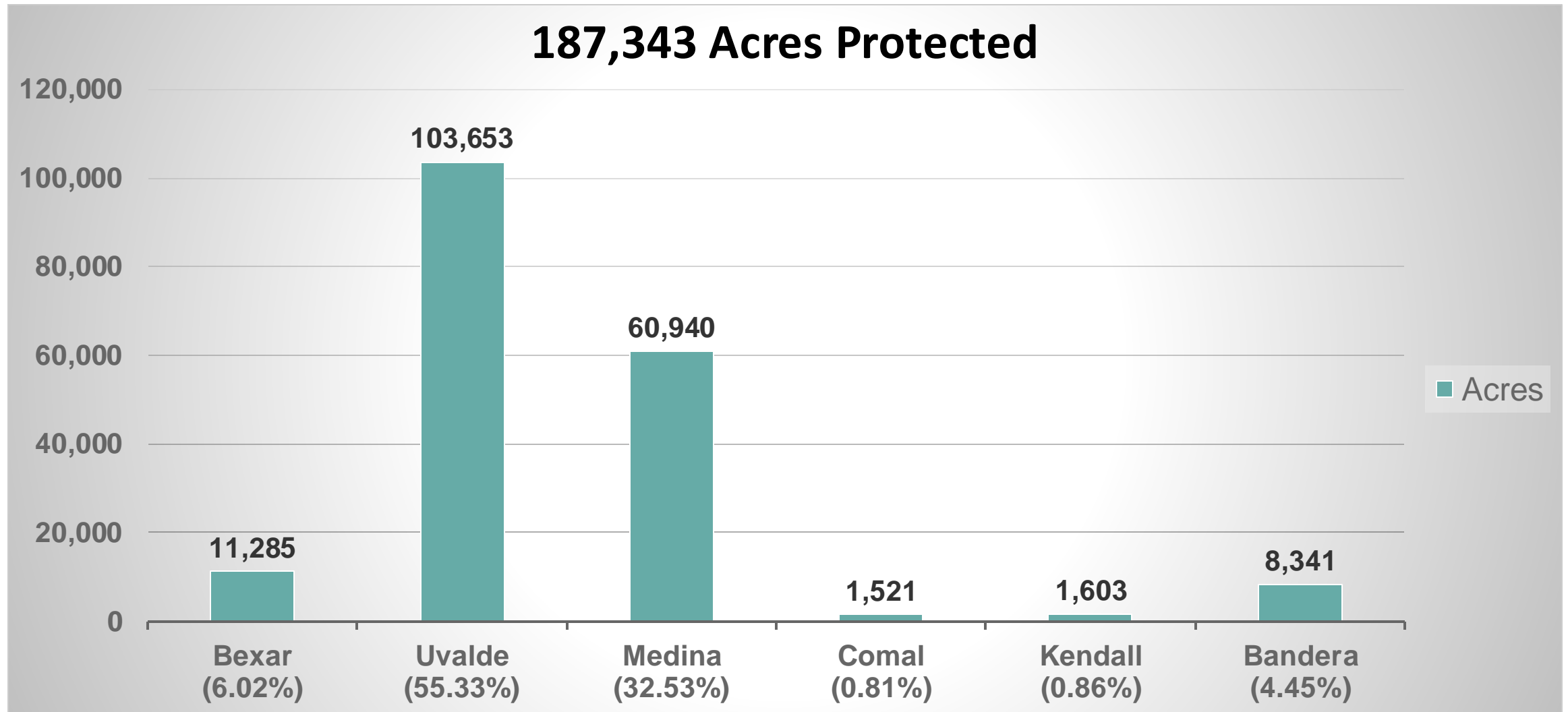


■ Recharge Zone: 130,825 ac

■ Contributing Zone: 44,553 ac

■ Artesian Zone: 11,965 ac

# FY 2000 – 2025 EAPP Acquisitions by County





# Approved Funding Programs

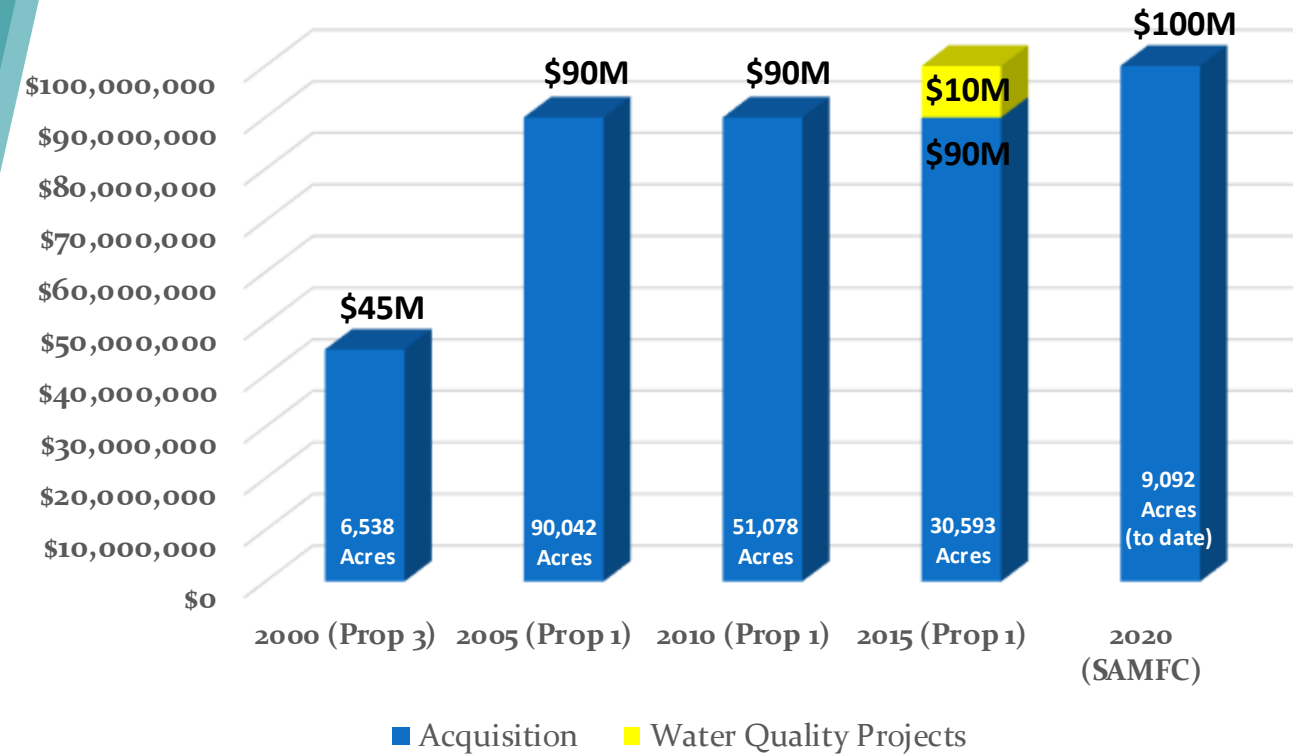
## Sales Tax Propositions- \$325M

- Proposition 3 (2000)
- Proposition 1 (2005-2015)
- Fully Committed in FY2023\*

\* Includes \$10 million for 11 water quality projects- anticipate fully expensed in FY2026

## SA Municipal Facilities Corporation- \$100M

- City Council Approved in September 2020
- 10-year plan; funds appropriated annually
- To date \$30M appropriated; \$6.5M uncommitted
  - FY23- \$798K expensed; 650 acres protected
  - FY24- \$13.4M expensed; 5,710 acres protected
  - FY25- \$9.3M expensed; 2,732 acre protected



Acquired: 138 conservation easements and 25 fee simple projects  
Protected: 187,343 acres



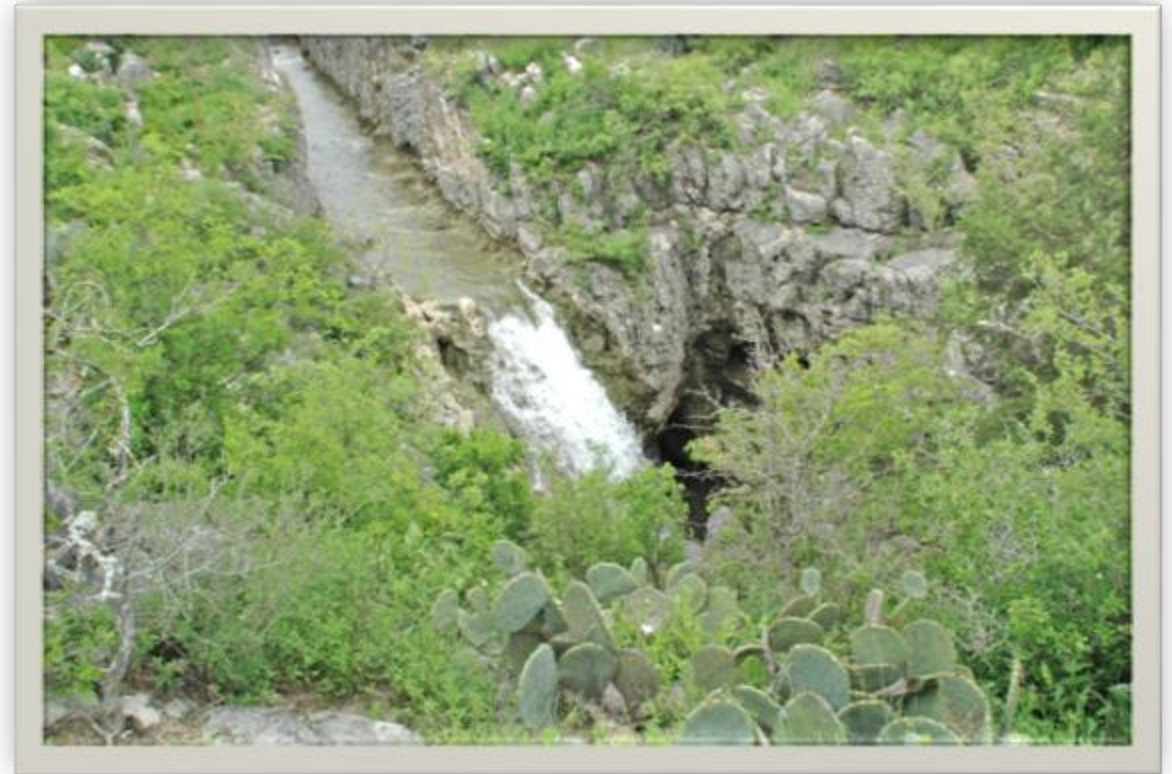
# Leveraging Funds - \$32.65M



# FY 2025 Plan and Strategies



- ✓ \$10 Million approved in adopted Annual Budget for FY 2025 acquisitions
- ✓ Continue to target properties over the sensitive Recharge and Contributing Zones in accordance with program funding
- ✓ Emphasize important watersheds
- ✓ Work to connect existing protected lands – fill in the gaps





# Woot Cavern- Media Highlight



- “Woot Cavern” was discovered during EAPP’s evaluation process for 1,870-acre Seco Valley Ranch located in Medina County
- This newly discovered karst feature, which recharges the Edwards Aquifer, is 2,150 feet long and 213 feet deep making it the 69<sup>th</sup> longest cave and the 30<sup>th</sup> deepest cave in Texas!
- City Council approved the acquisition of the Seco Valley Ranch conservation easement in August 2024
- San Antonio Express-News highlighted the EAPP and this exciting acquisition in October 4th news article





**Thank You**