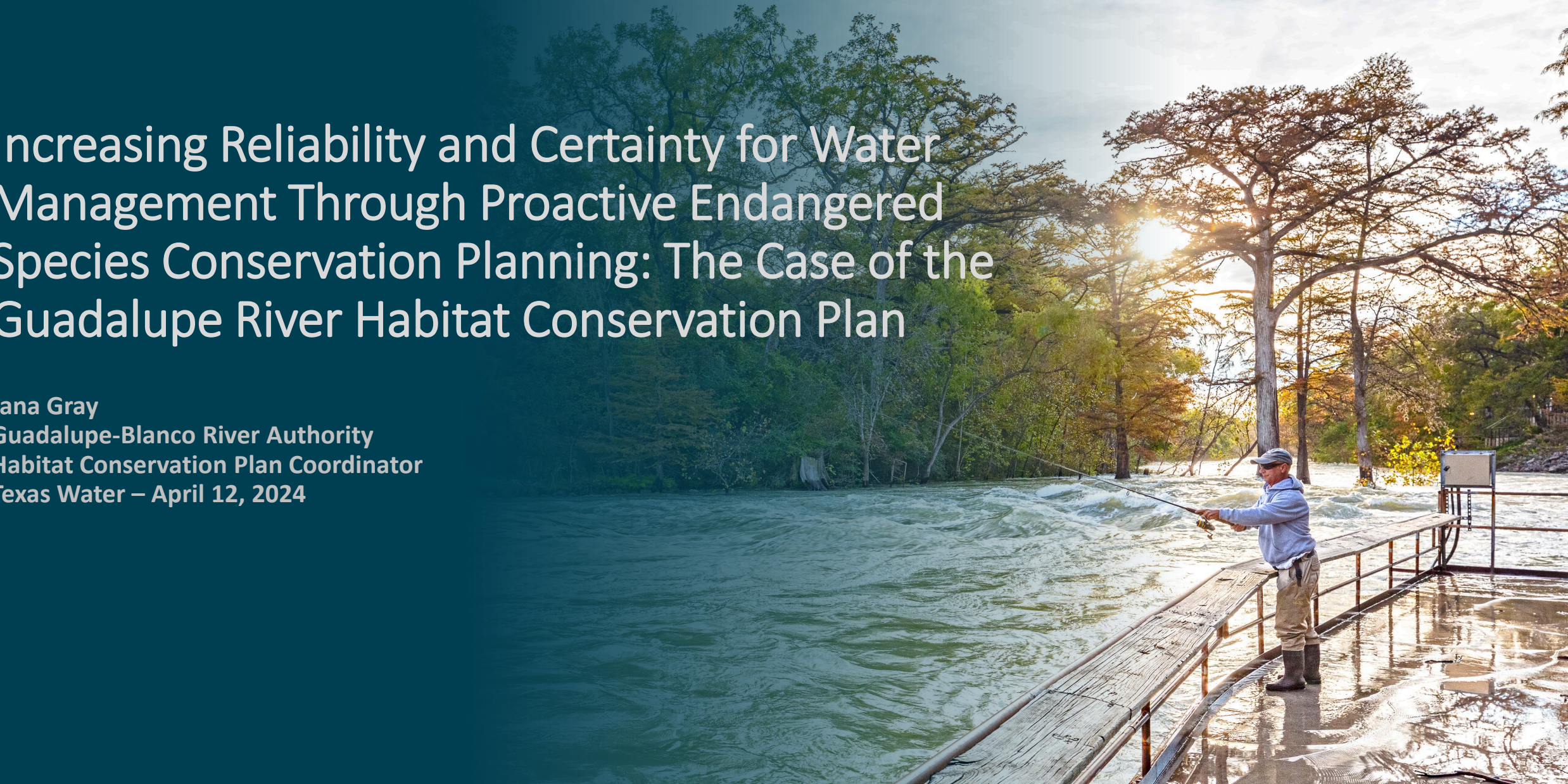




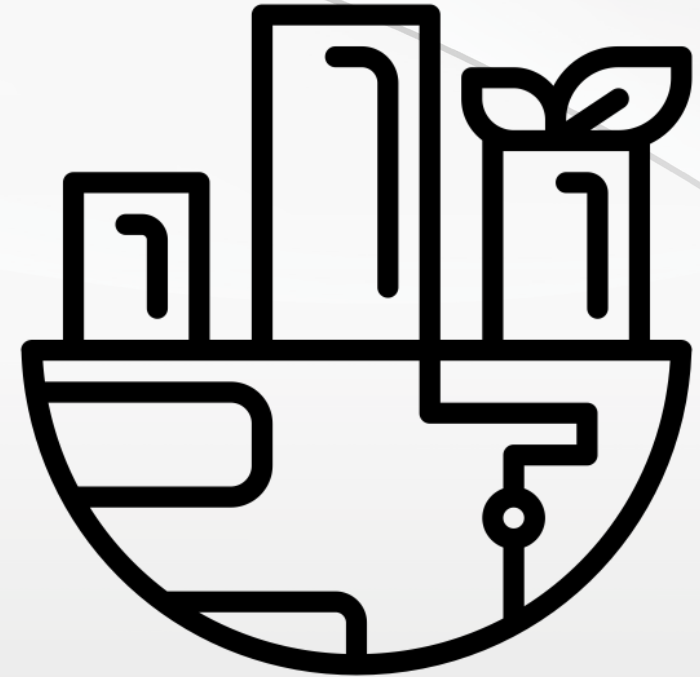
Your Trusted
Water Resource

Increasing Reliability and Certainty for Water Management Through Proactive Endangered Species Conservation Planning: The Case of the Guadalupe River Habitat Conservation Plan

Jana Gray
Guadalupe-Blanco River Authority
Habitat Conservation Plan Coordinator
Texas Water – April 12, 2024



**How GBRA is
bridging the gap
between growth
and the
environment**



The Guadalupe-Blanco River Authority

The GBRA was created in 1933 as the Guadalupe River Authority as a water conservation and reclamation district and a public corporation and reauthorized in 1935 as the Guadalupe-Blanco River Authority.

GBRA's services:

- Water Supply
- Wastewater Services
- Hydroelectric Power
- Laboratory
- Recreation



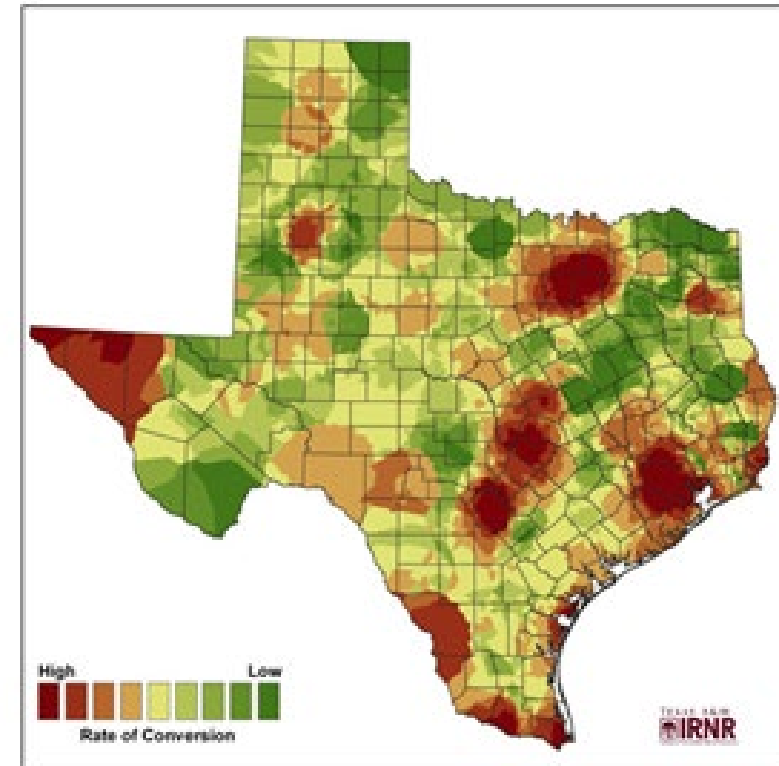
GBRA's Growing Need for Endangered Species Protection

- Potential mussel/salamander species federal listing in the Guadalupe River Basin
- Whooping crane, a federally listed, endangered species, is located within the basin
- Threat of endangered species lawsuits
 - GBRA has been through a lawsuit settled in 2015 involving the whooping crane
- Need to remain in compliance with the Endangered Species Act of 1973 (ESA)



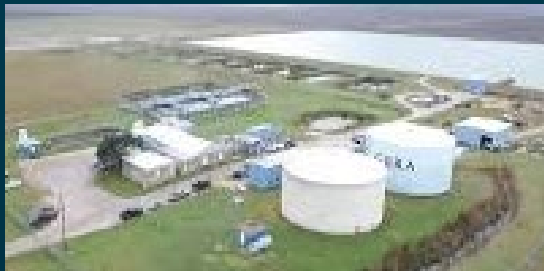
Threats to Endangered Species

- Loss and fragmentation of habitat
- Introduced species
- Climate change
- Change in quality and quantity of water



A recent Texas Land Trends report shows changes in ownership size, land use and property values of privately held farms, ranches and forests in the state from 1997-2012. (Texas A&M Institute of Renewable Natural Resources graphic)

Can Development and the Protection of Endangered Species Coexist?



Services

vs



ESA

Stability of:
Wastewater
Water Supply
Hydrodam
Operations

What is a “Habitat Conservation Plan?”



- “Take” under the Federal Endangered Species Act (ESA)
 - Framework to conserve and protect endangered and threatened species and their habitats both domestically and abroad.
 - "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."
- “Incidental Take Permit” (ITP)
 - Permit issued by U.S. Fish and Wildlife Service (USFWS) to parties conducting economic activities that result in take of threatened and/or endangered species
 - ITP provides regulatory assurances that the entity can continue its activities
 - Contingent on submission of a habitat conservation plan (HCP)
- “Habitat Conservation Plans”
 - i. describe how take will occur
 - ii. estimate volume of take
 - iii. specify conservation measures that will be implemented to offset take
 - iv. must be informed by “best available science”

Benefits of an HCP

REGULATORY ASSURANCES

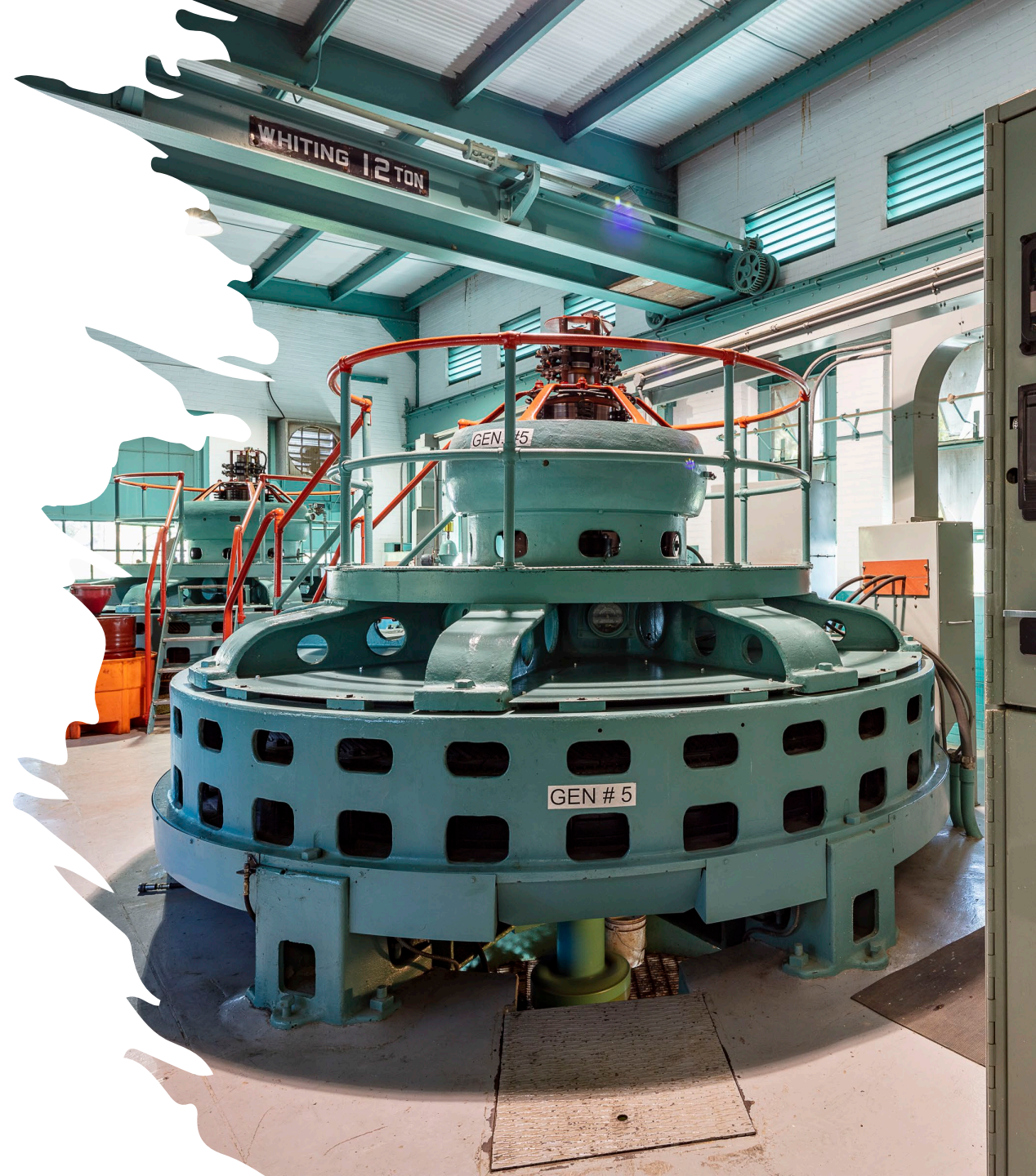
Secure federal regulatory assurances to protect ability to meet water supply and treatment demands

LONG-TERM STABILITY

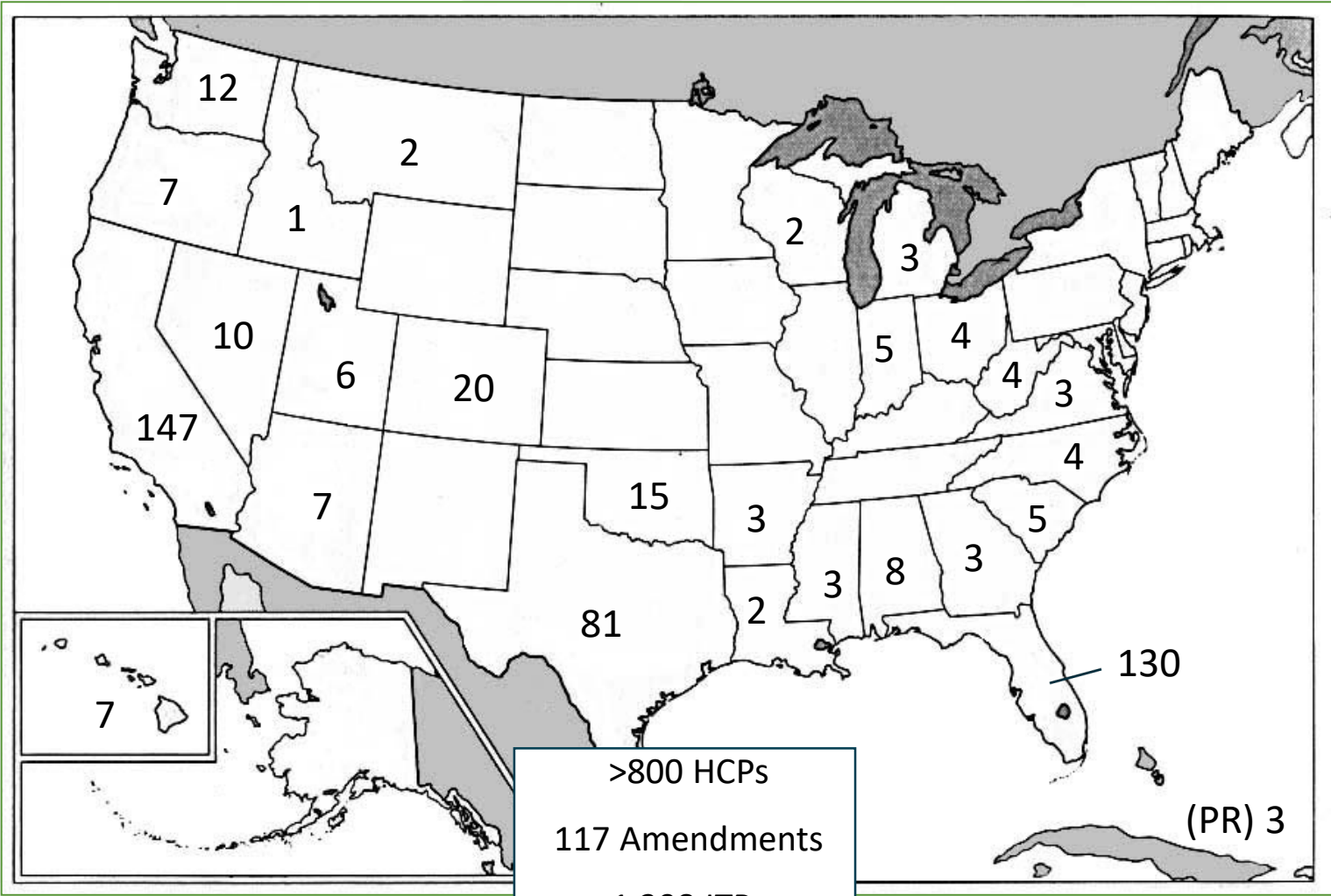
Regulatory certainty for 50-year permit term provides guaranteed planning horizon for operations, budget, and expansion

STEWARDSHIP & PUBLIC RELATIONS

Directly benefit endangered species and indirectly benefit overall Guadalupe River ecosystem and community



Habitat Conservation Plans Across the US



No Surprises Assurances

- Introduced in 1998 to make HCP's more attractive
- Assured that if "unforeseen circumstances" arise, the Services will not require the commitment of additional land, water or financial compensation
- "The government will honor these assurances as long as a permittee is implementing the terms and conditions of the HCP, permit, and other associated documents in good faith."





GBRA's Growing Need for Endangered Species Protection

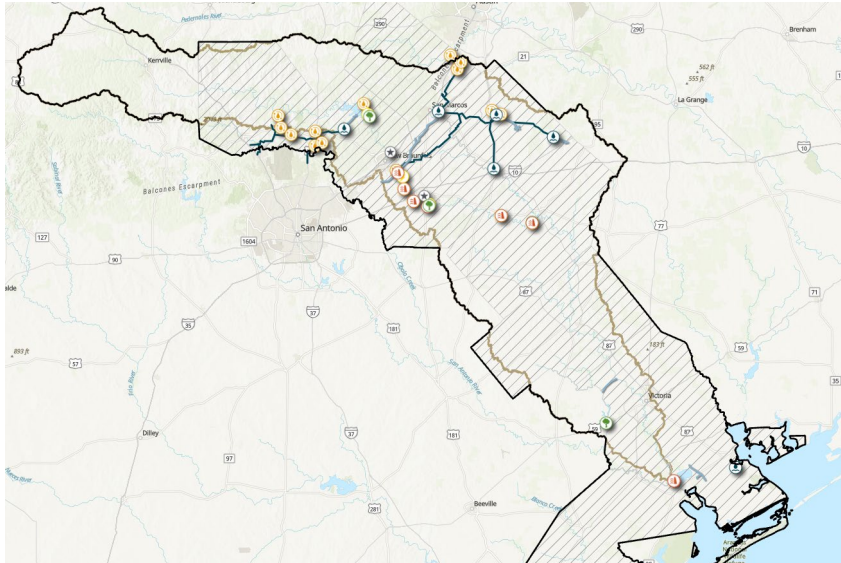
Basin anticipated growth of
over 70% by 2070 (TWDB 2022)

- Increasing water supply needs
- Increasing wastewater treatment needs

Existing and new infrastructure
Operations & Maintenance

Proactively planning
around the ESA provides GBRA
services stability

The Guadalupe River Habitat Conservation Plan: A History



Proposed Covered Species



False spike



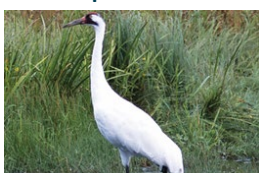
Guadalupe fatmucket



Guadalupe orb



Eastern black rail



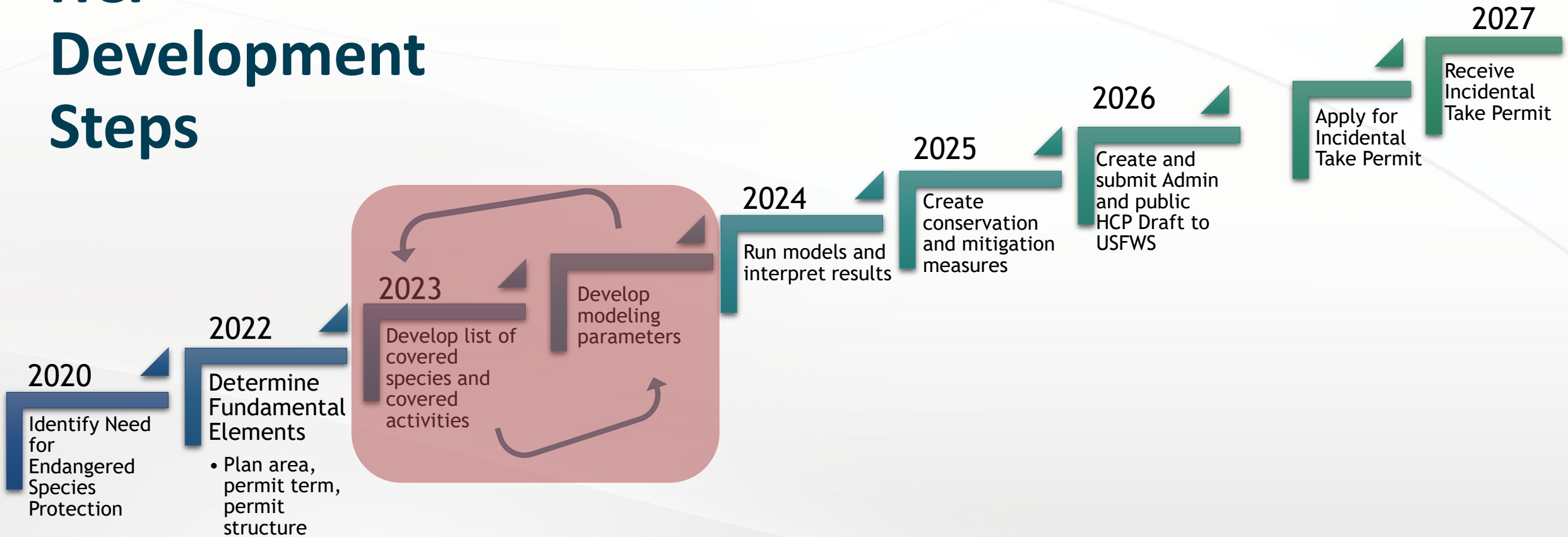
Whooping crane



Guadalupe darter

- Directed by the Board of Directors of GBRA in 2019 to create an HCP that welcomed others with activities in the basin
- Why? Proactive measure to prepare for potential mussel listings and contribute to endangered whooping crane conservation
- Creating a system that benefits those who are unable or do not have the expertise to develop an HCP protect their activities
- In the planning phase of the GRHCP

HCP Development Steps



HABITAT CONSERVATION PLAN

HCP PLAN AREA



GBRA FACILITY

Type

- Office
- Water Treatment Plant
- Wastewater Treatment Plant
- Recreation Park
- Dam
- Hydroelectric Plant

GBRA WATER SUPPLY PIPELINE

RAW WATER



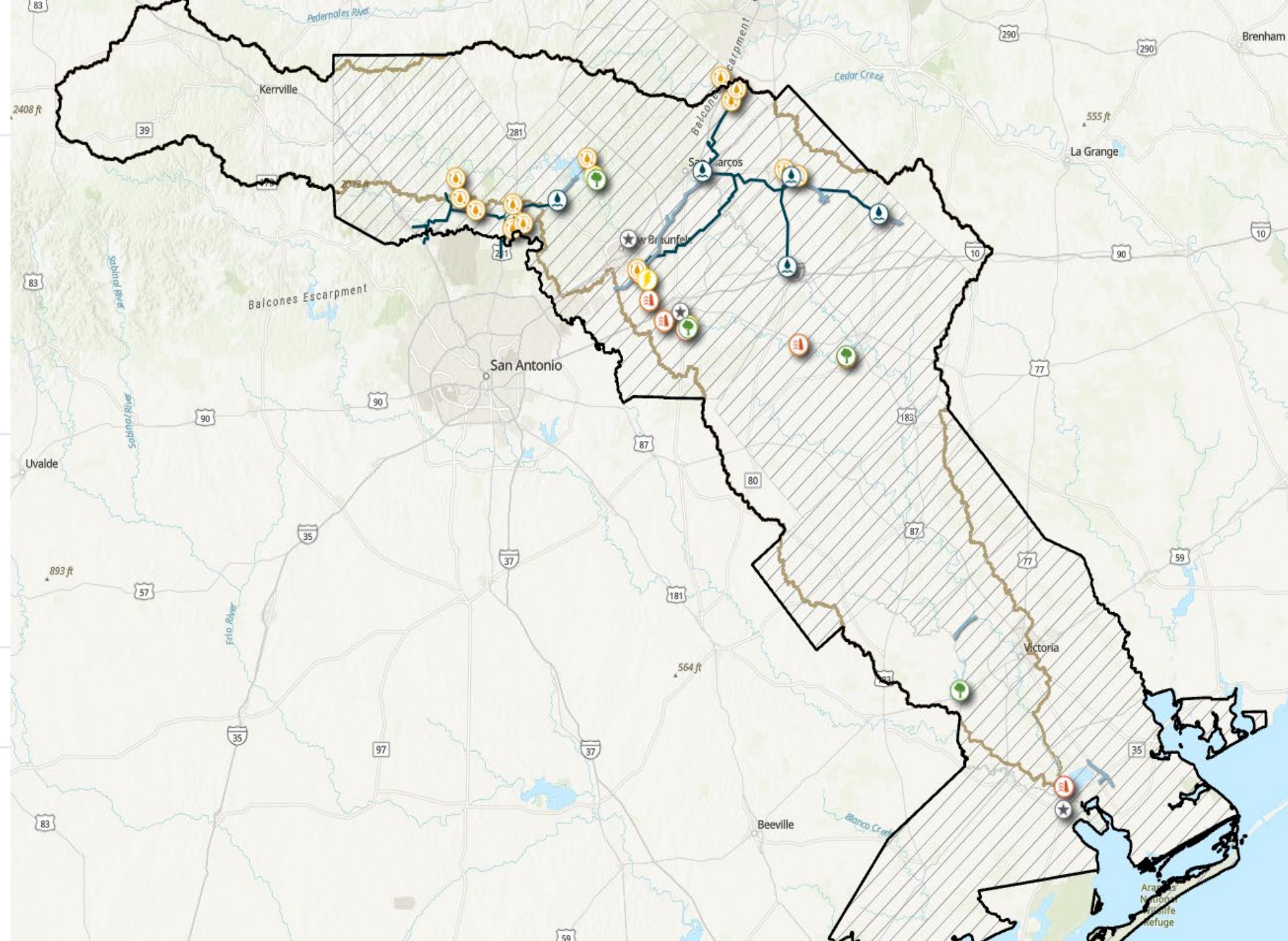
TREATED WATER



GBRA DISTRICT



GUADALUPE RIVER BASIN



Proposed HCP Species



False spike



Guadalupe orb



Guadalupe fatmucket



Eastern black rail



Whooping crane

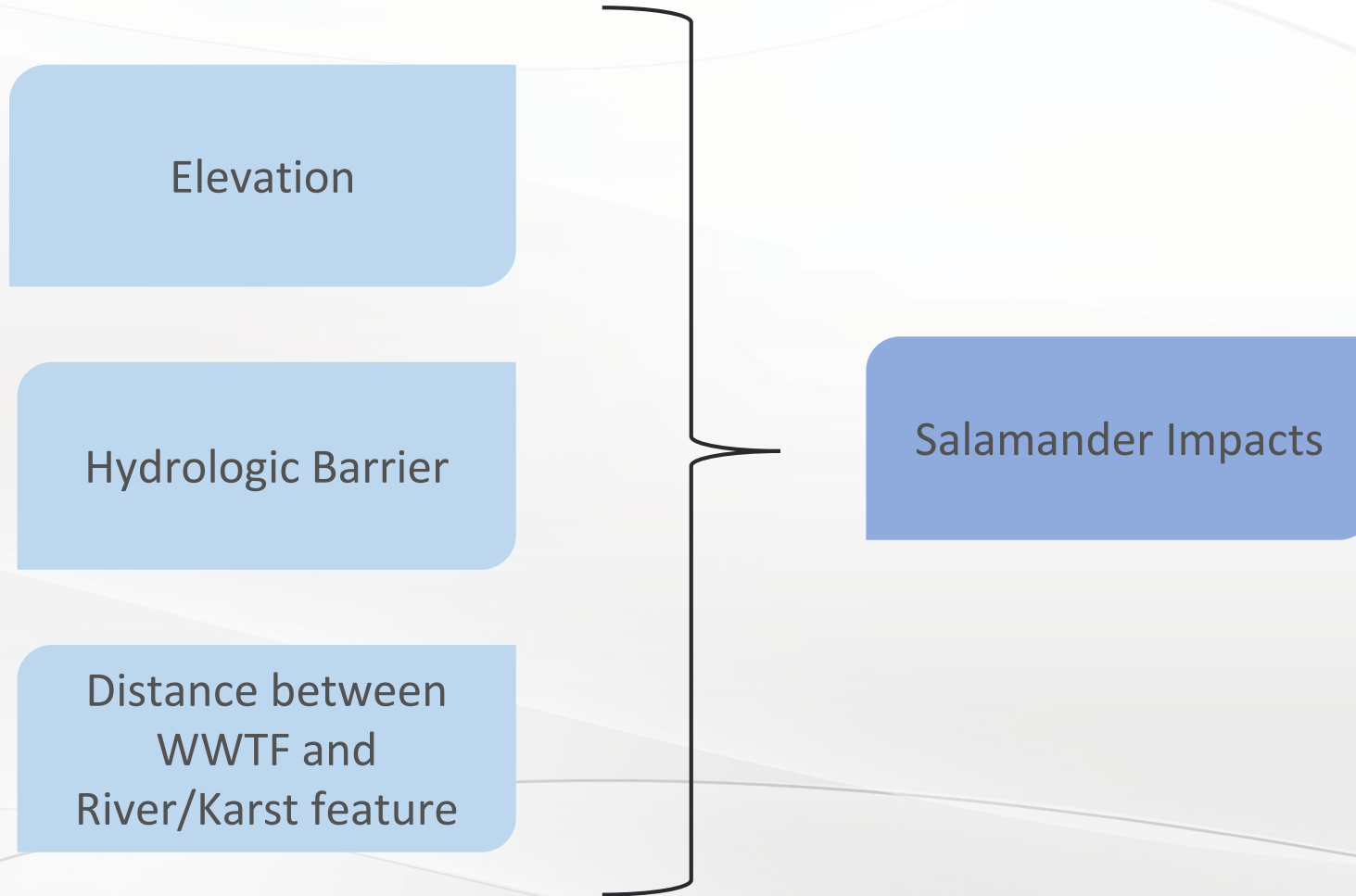


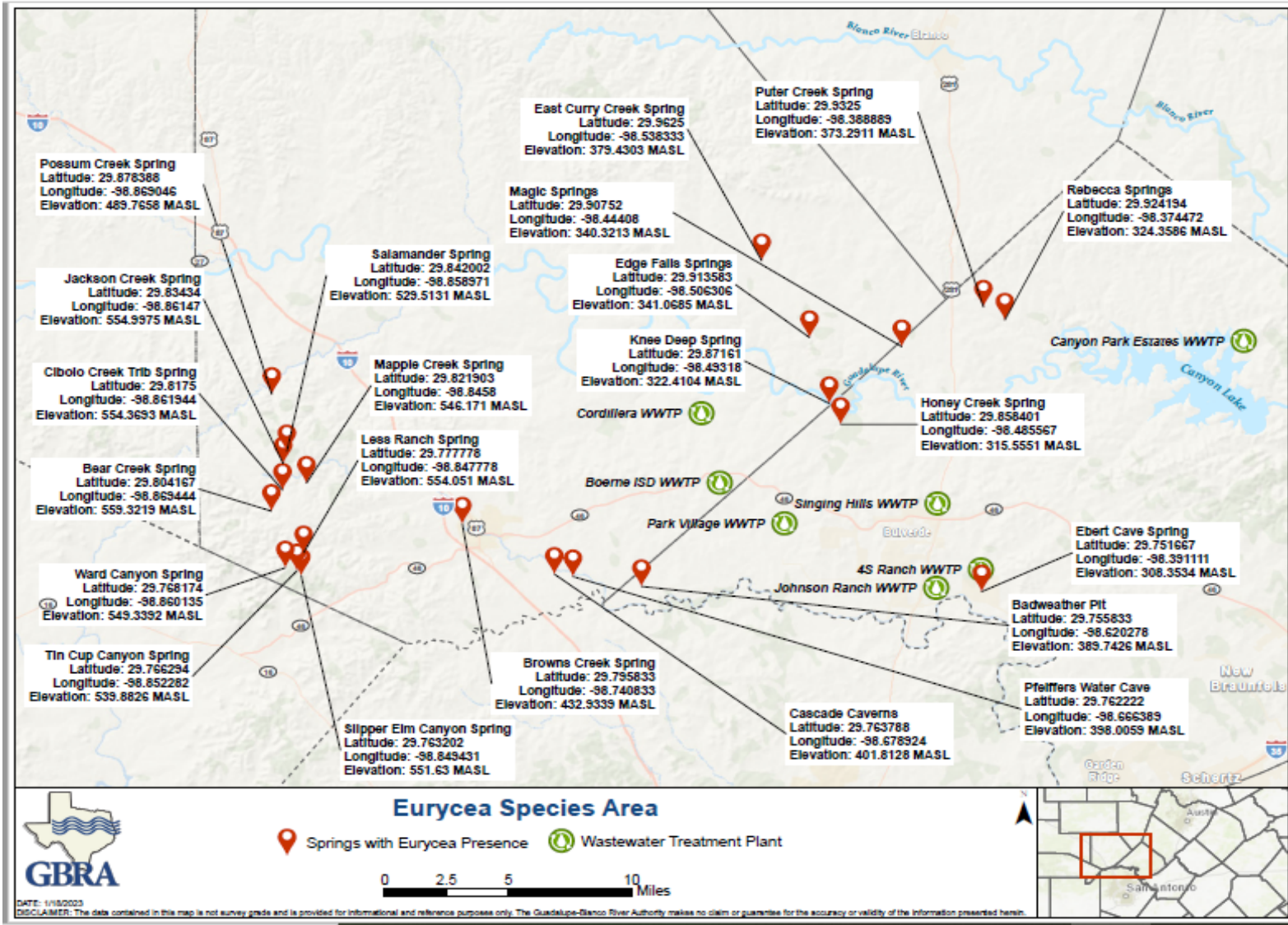
Guadalupe darter

Using the
GRHCP in
Planning



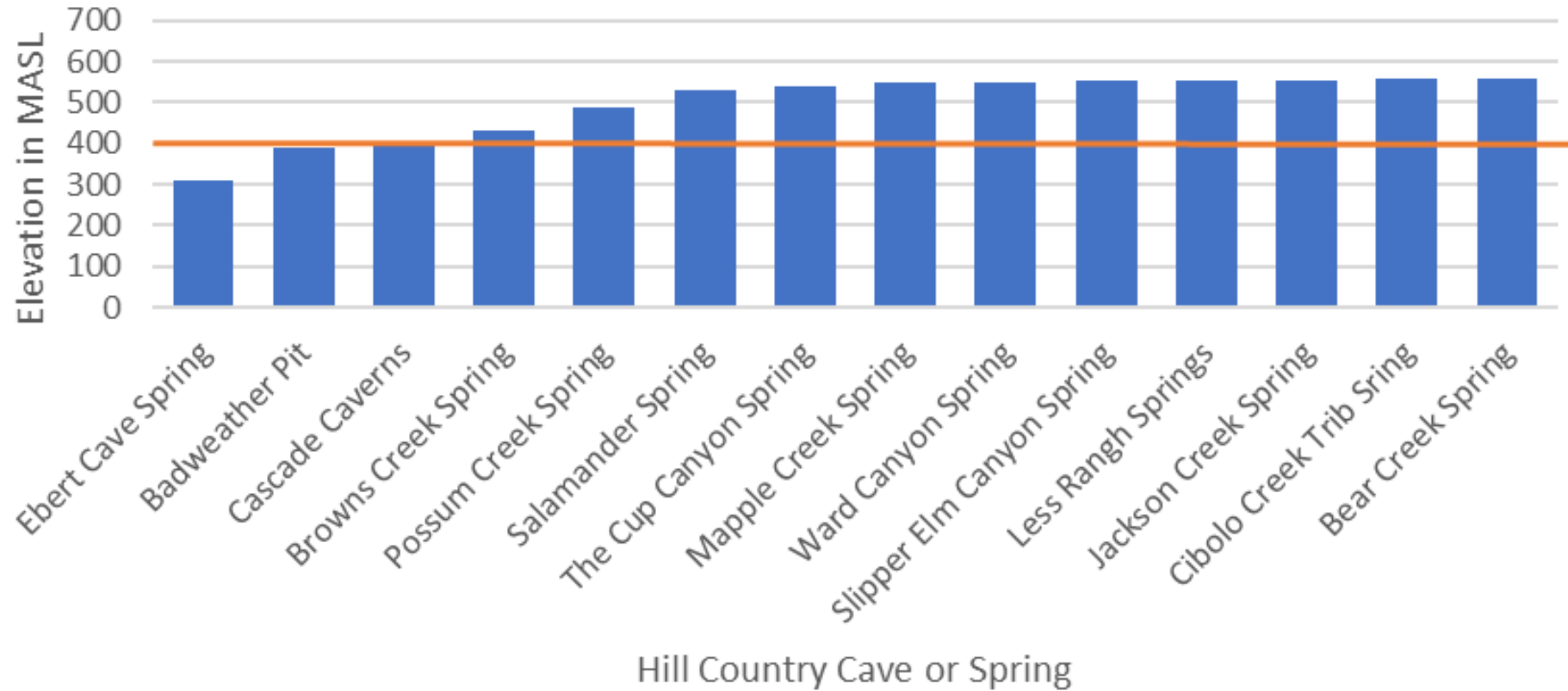
Salamander Impact Estimation For Effluent Discharged From GBRA WWTF





Hill country springs and GBRA operations

Elevation (MASL) of Hill Country Caves and Springs



Opportunity to Proactively Plan

- Ability to plan around endangered species using elevation data
- Have data to support this decision
- Decision not to cover salamanders has been well received

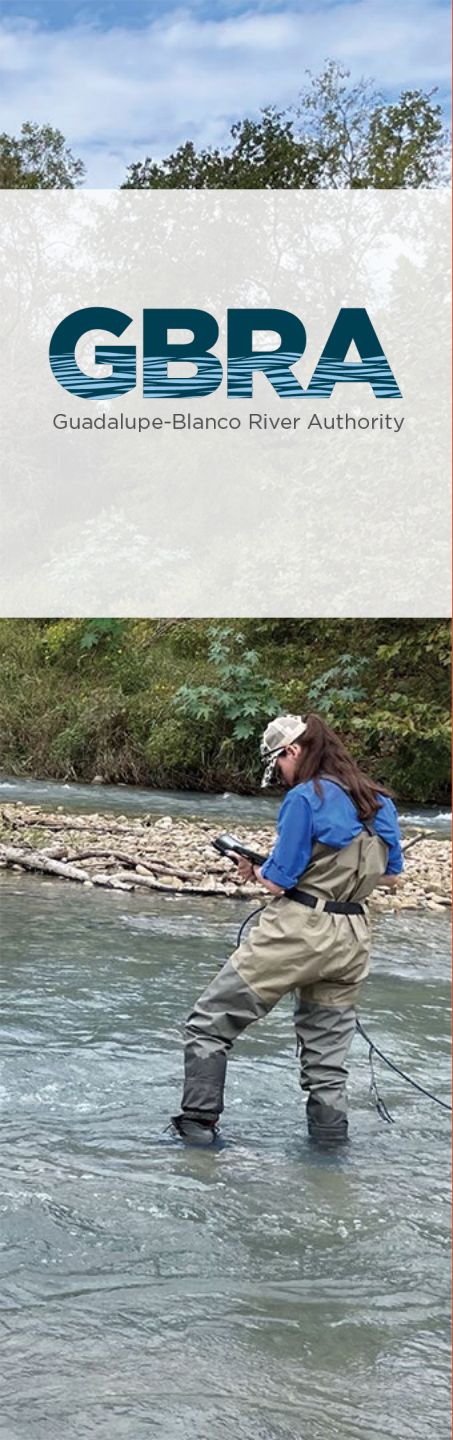




Guadalupe-Blanco River Authority

Big Picture

- **Strategic Conservation Planning:** GBRA's proactive approach demonstrates balancing operational needs with ESA stewardship.
- **Stability and Sustainability:** The GRHCP ensures water needs for current and future communities will be available.
- **Precedent for Proactive Conservation:** GBRA's plan sets a roadmap for compliance and stewardship for other entities.



GBRA

Guadalupe-Blanco River Authority

Acknowledgements

GRHCP Team

Nathan Pence

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Deputy Executive of
Environmental Science

Daniel Large

HCP Director

Technical Advisory Group

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Anchor QEA

Cindy Loeffler

Retired TPWD

Webster Mangham

Trinity River Authority

Ryan Smith

Texas Nature
Conservancy



GBRA.ORG

Thank you!

Jana Gray, MS

**Guadalupe-Blanco River Authority
Habitat Conservation Plan Coordinator
jgray@gbra.org**

