

Stakeholder Engagement and Species Status Assessments

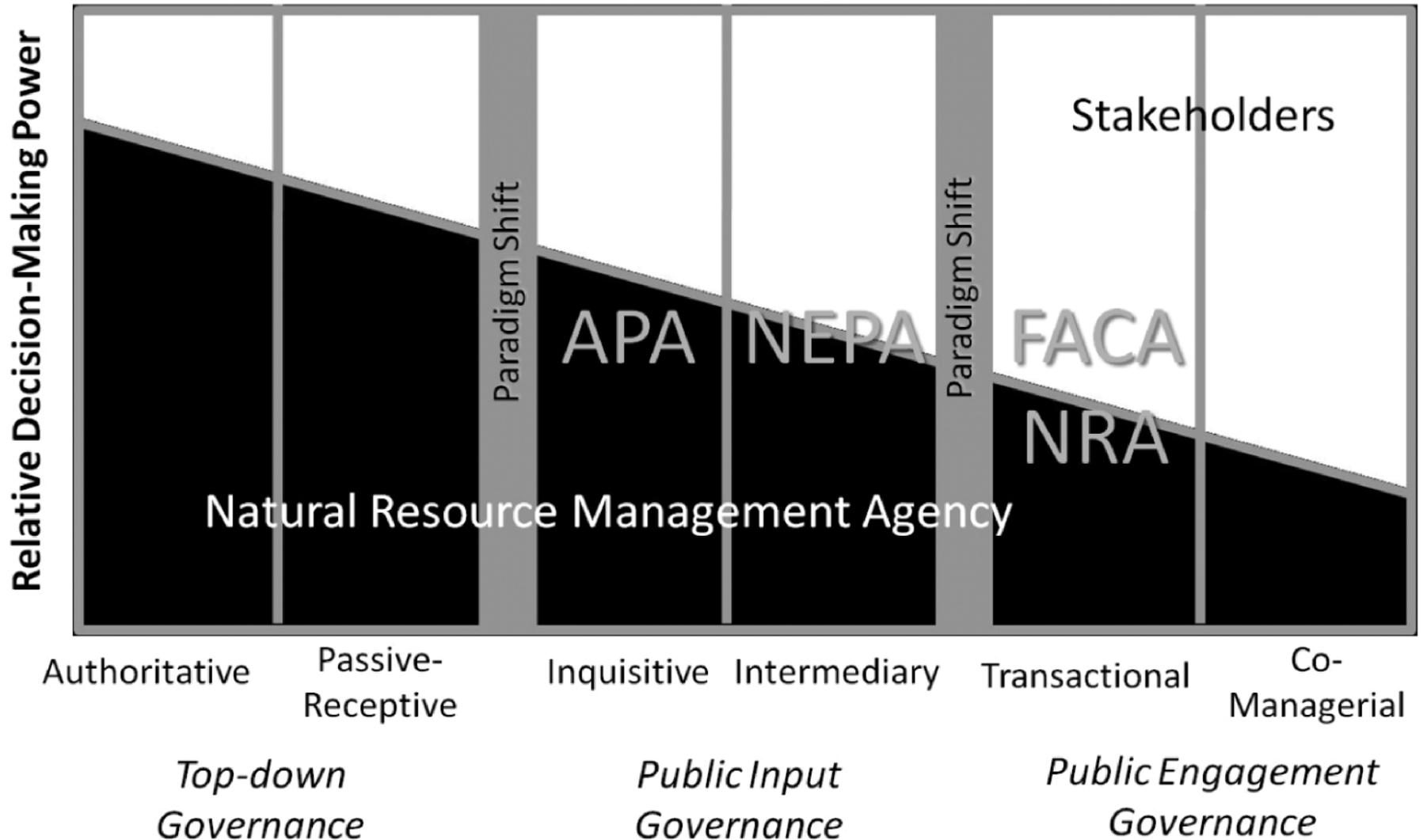
Adam Zerrenner

U.S. Fish and Wildlife Service

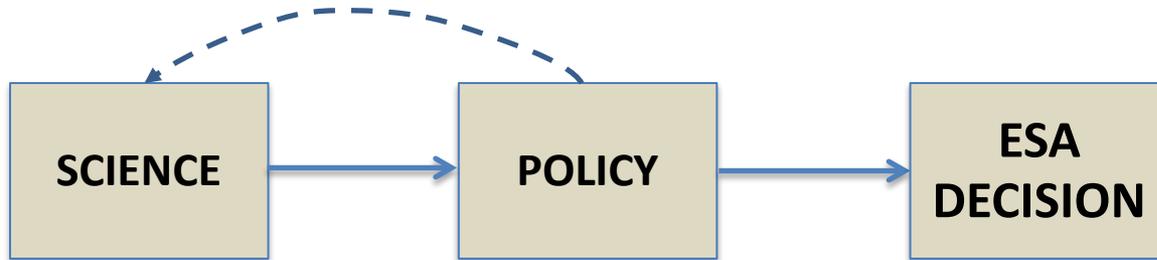
ESA Decisions

Species' Status

Engaging with the Public and Other Stakeholders (Leong et al. 2009)

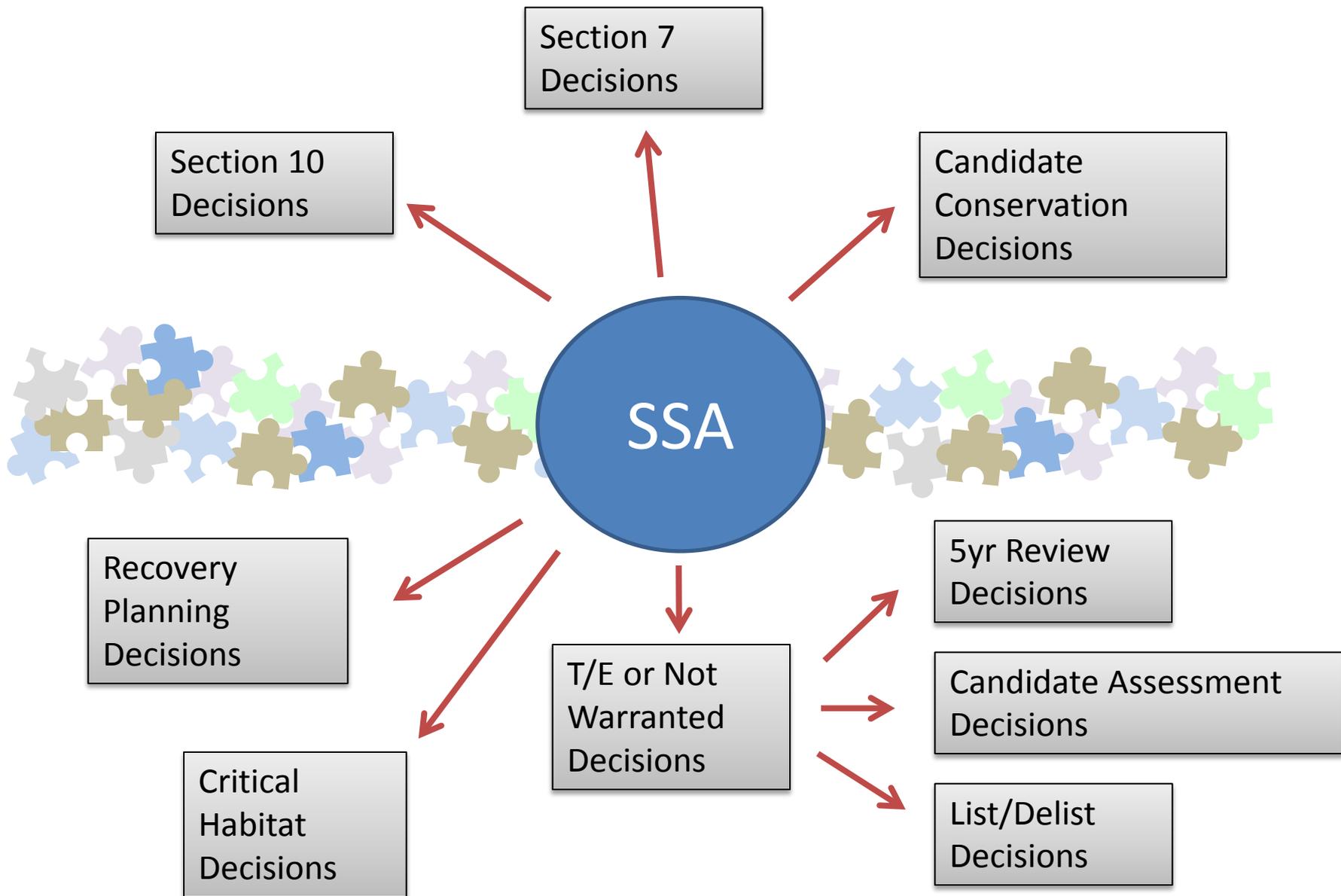


ESA Science and Policy



Decision Elements	Science – species risk	Policy – ESA standards
Process	SSA Framework	ESA Decision Making
Who	Biologists and Other Scientists	FWS Decision Makers
How	Scientific Analysis (Biological and environmental data)	Policy Analysis (Legal interpretation)
Outcome	Viability Characterization	Policy Judgment

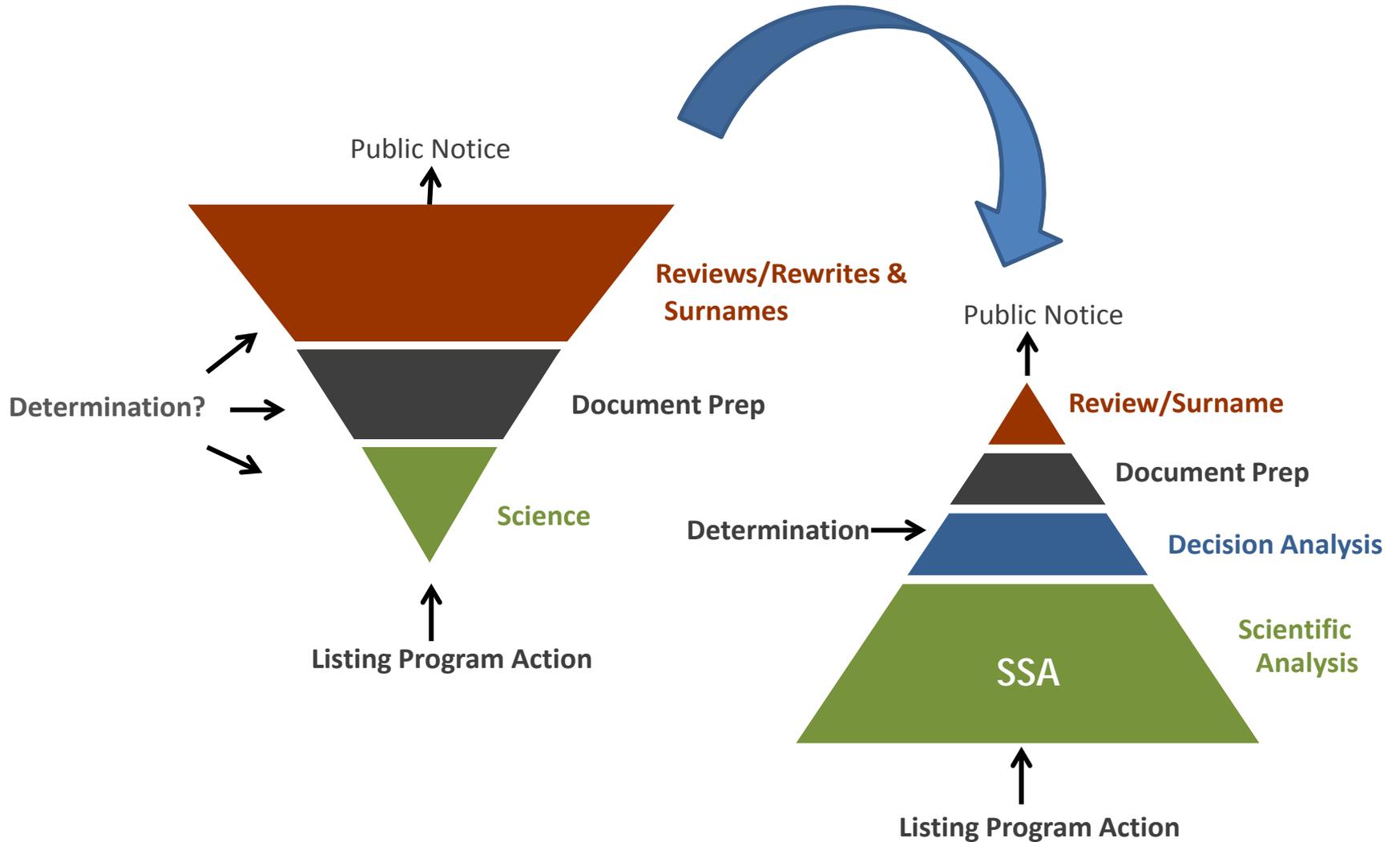
Species Status Assessment informs all ESA Decisions



SSA Framework Overview

SCALE	NEEDS		CURRENT CONDITION		FUTURE CONDITION
Individuals	Life History	<i>Historic and Current Causes and Effects</i>	Snapshot of resources and circumstances in terms of species' needs.	<i>Future Causes and Effects</i>	Consider what the species will have in the future in terms of its needs.
- Life Stages	Breeding, Feeding, Sheltering				
	Specific Resource Needs (habitat)				
Populations	Population Parameters				Forecasting: Resiliency
Species	Distribution and Diversity of Populations				Redundancy Representation

SSA Flips the Pyramid

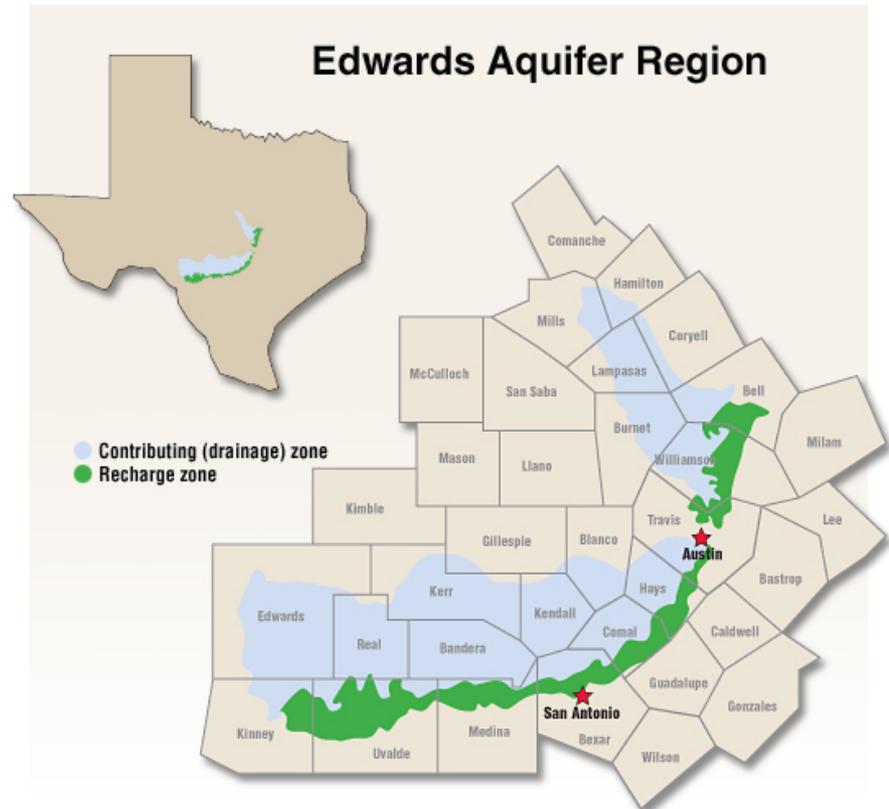




Edwards Aquifer Recovery Implementation Program Participants
Dr. Robert L. Gulley, Program Manager
November 2011

Edwards Aquifer Habitat Conservation Plan

- A stakeholder-based effort that balanced human needs with the recovery of listed species
- Edwards Aquifer – HCP permit issued 2013

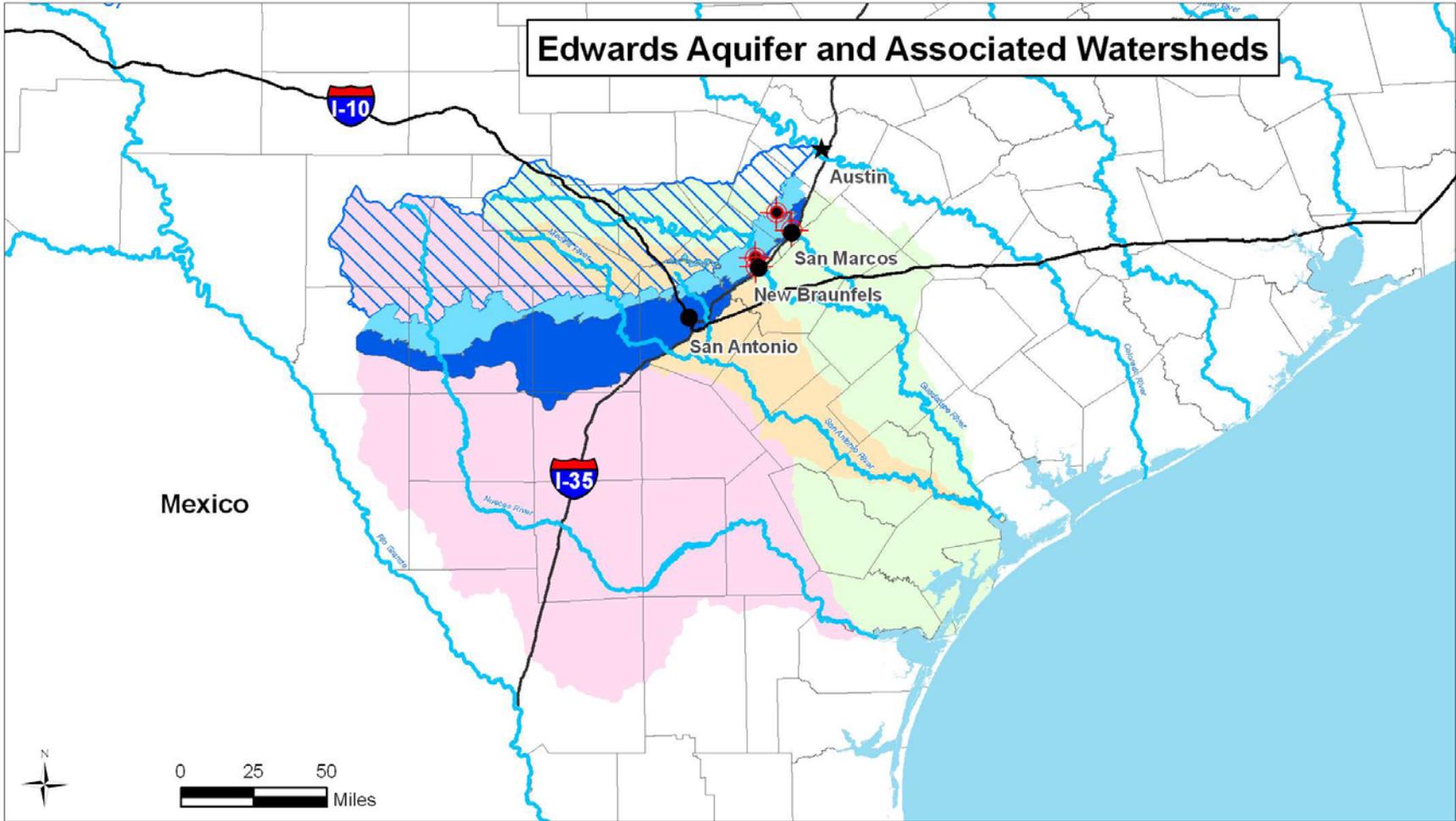


From the contributing zone of the Edwards Aquifer, water flows south and east across the recharge zone. The Edwards is a karst aquifer, characterized by sinkholes, sinking streams, caves, large springs, and a large subsurface drainage system. The aquifer is so permeable that groundwater levels respond quickly to rainfall.

TCEQ map for general illustration only; not official boundaries.



Edwards Aquifer and Associated Watersheds



 Spring Locations

Edwards Aquifer Zones

-  Artisan
-  Recharge
-  Contributing
-  Guadalupe River watershed
-  Nueces River watershed
-  San Antonio River watershed

Edwards Aquifer downstream associated species

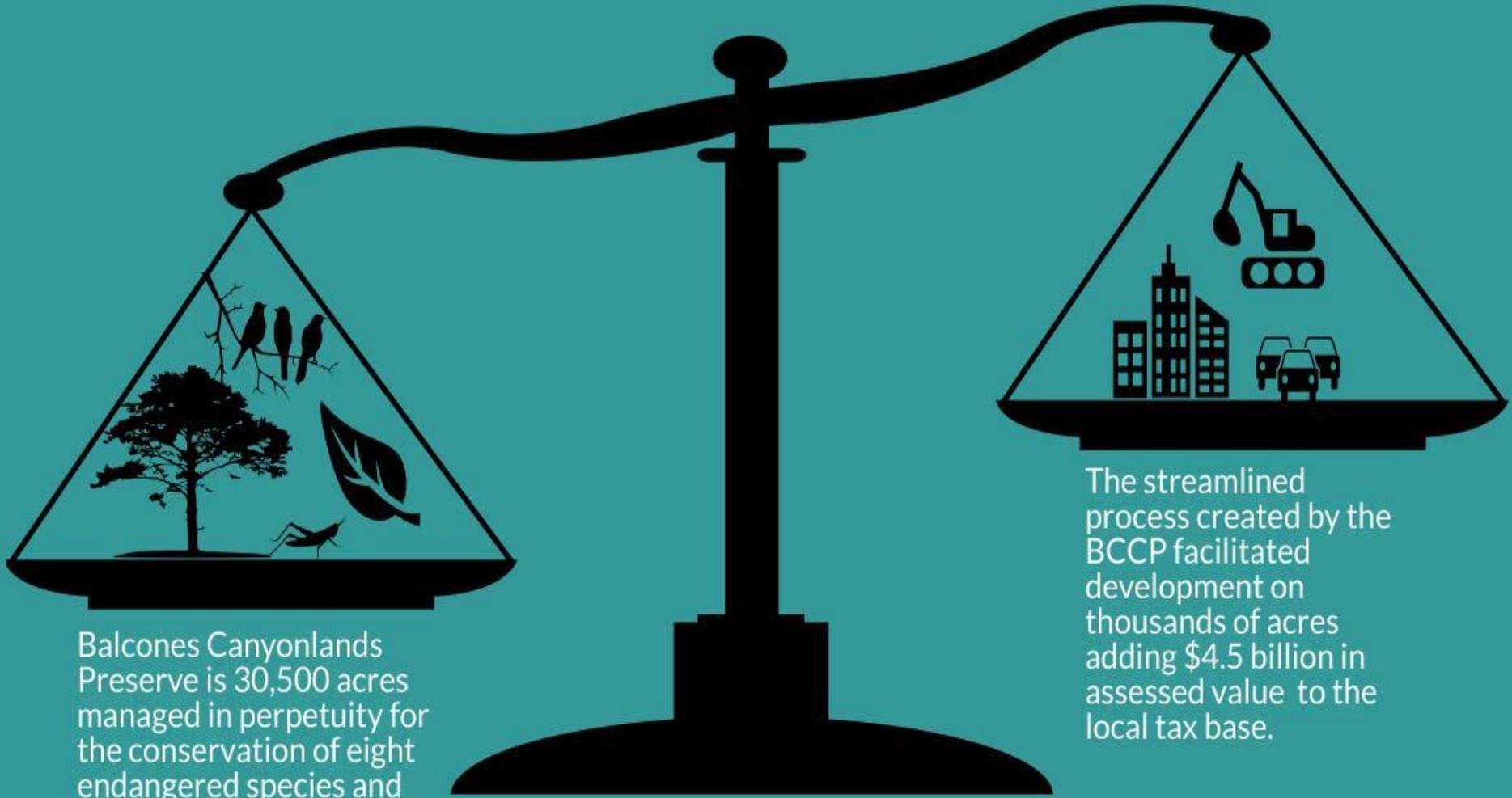
Birds	Whooping crane (<i>Grus americana</i>)	Endangered
Clams	False spike (<i>Quincuncina mitchelli</i>)	Under Review
Clams	Smooth Pimpleback (<i>Quadrula houstonensis</i>)	Under Review
Clams	Texas Fawnsfoot (<i>Truncilla macrodon</i>)	Under Review
Clams	Texas Pimpleback (<i>Quadrula petrina</i>)	Under Review
Clams	Texas heelsplitter (<i>Potamilus amphichaenus</i>)	Under Review
Clams	Golden orb (<i>Quadrula aurea</i>)	Under Review

BALCONES CANYONLANDS CONSERVATION PLAN

Celebrating 20 years as a leading example of balancing conservation with economic development.

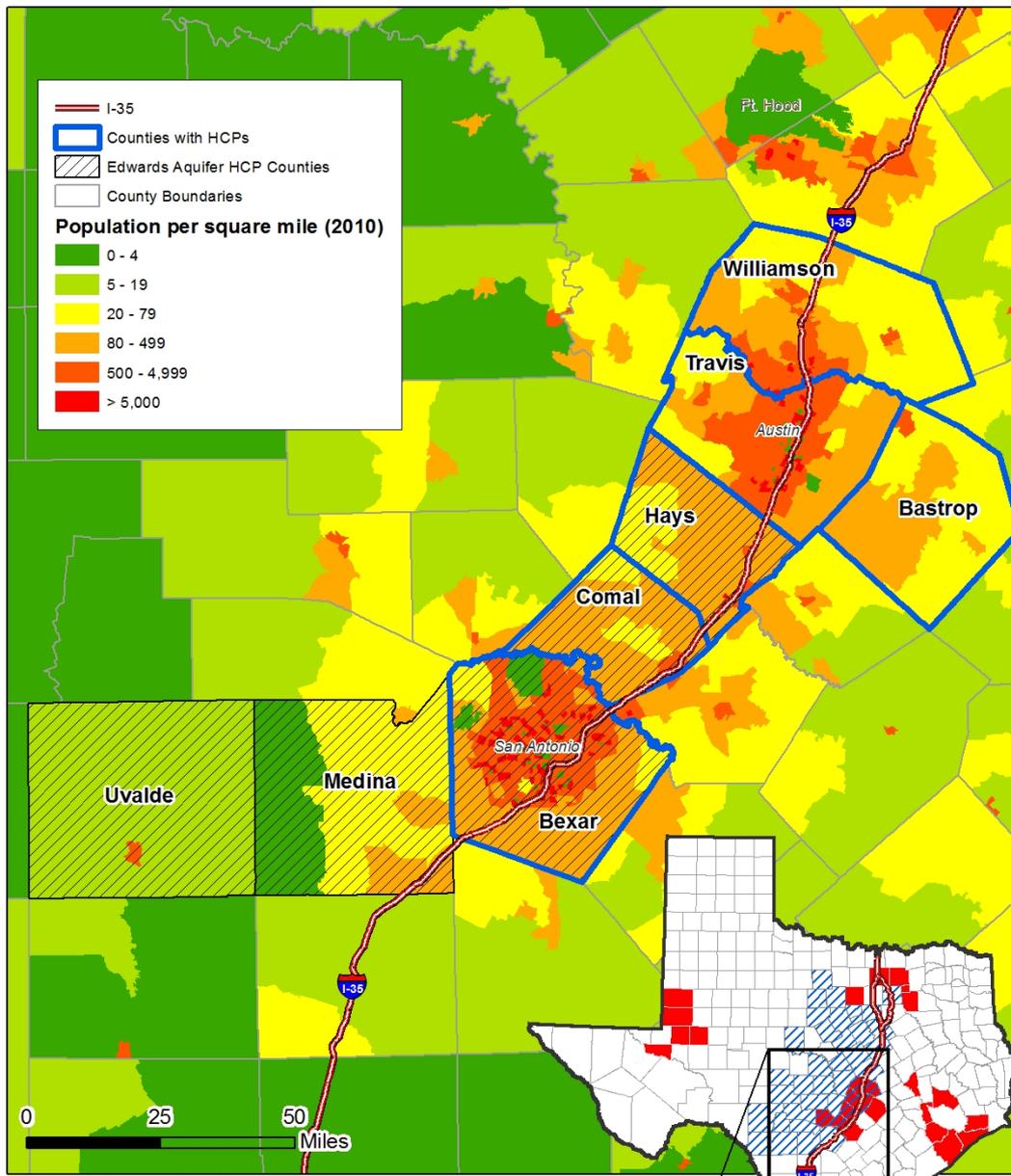


BCP: Balancing Success

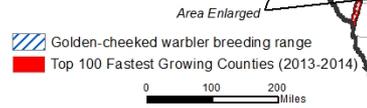


Balcones Canyonlands Preserve is 30,500 acres managed in perpetuity for the conservation of eight endangered species and twenty-seven species of concern for the benefit of all of Austin.

The streamlined process created by the BCCP facilitated development on thousands of acres adding \$4.5 billion in assessed value to the local tax base.



U.S. Fish and Wildlife Service 2016

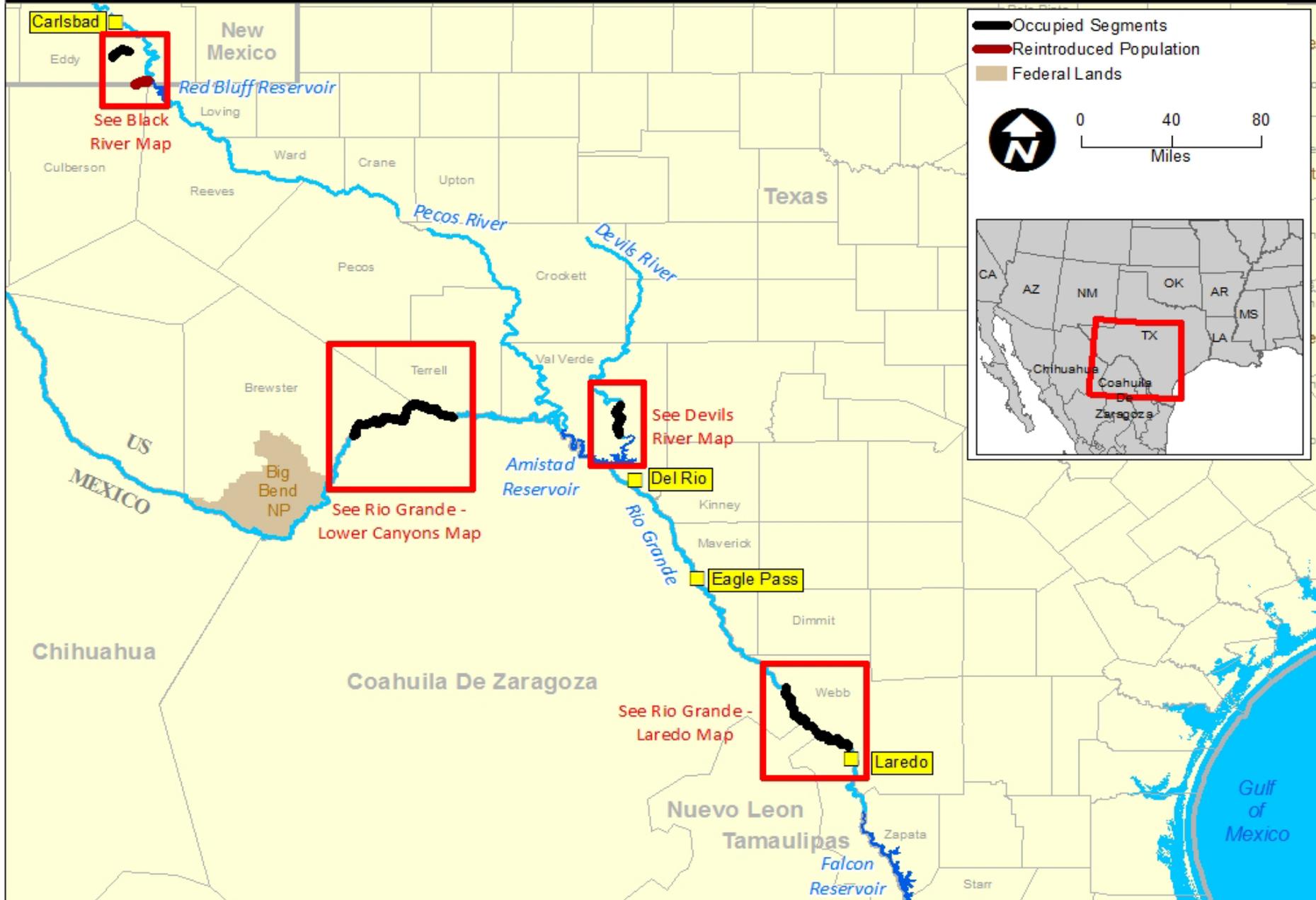






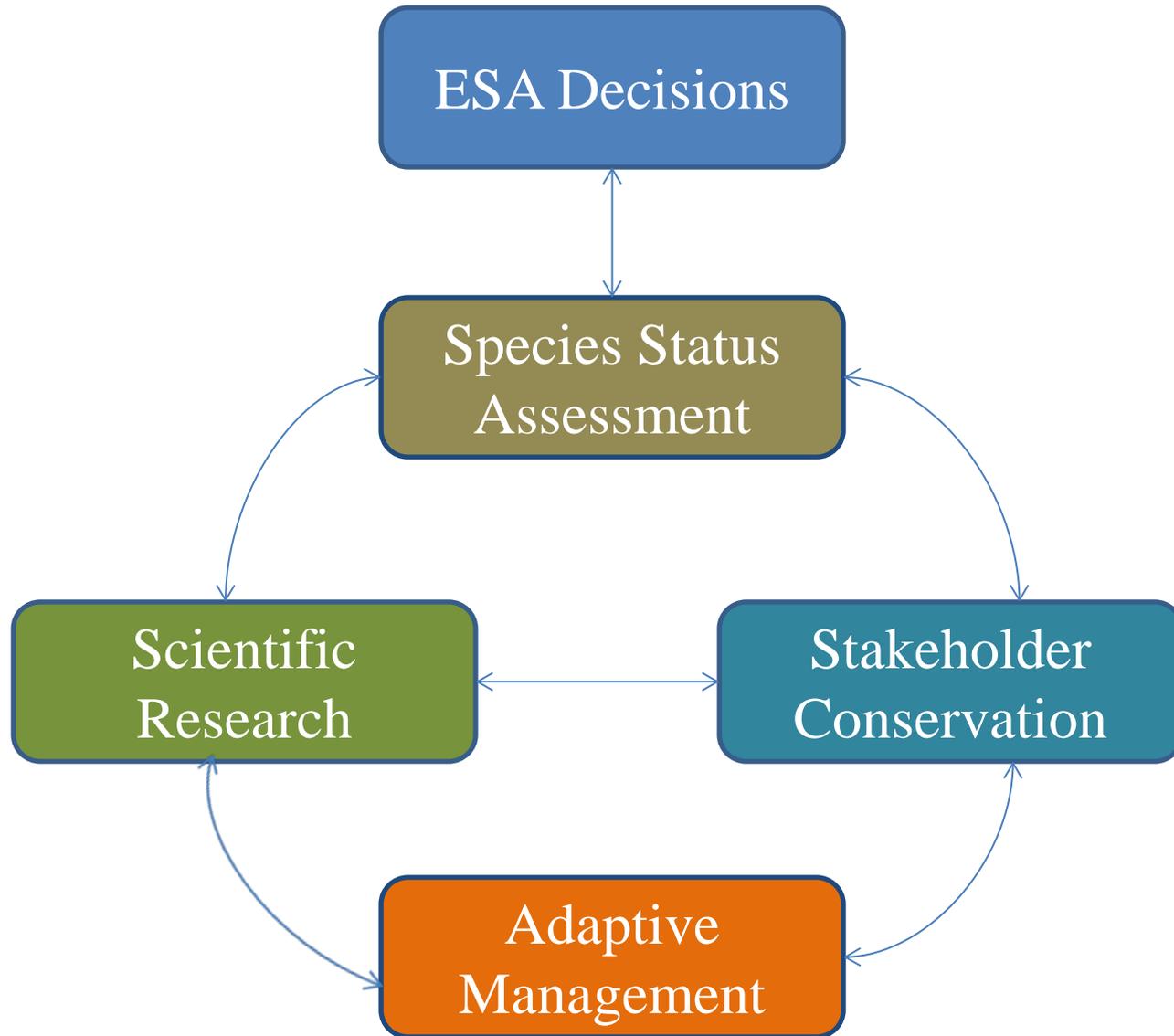
Texas hornshell Photo by Joel Lusk, U.S. Fish and Wildlife Service

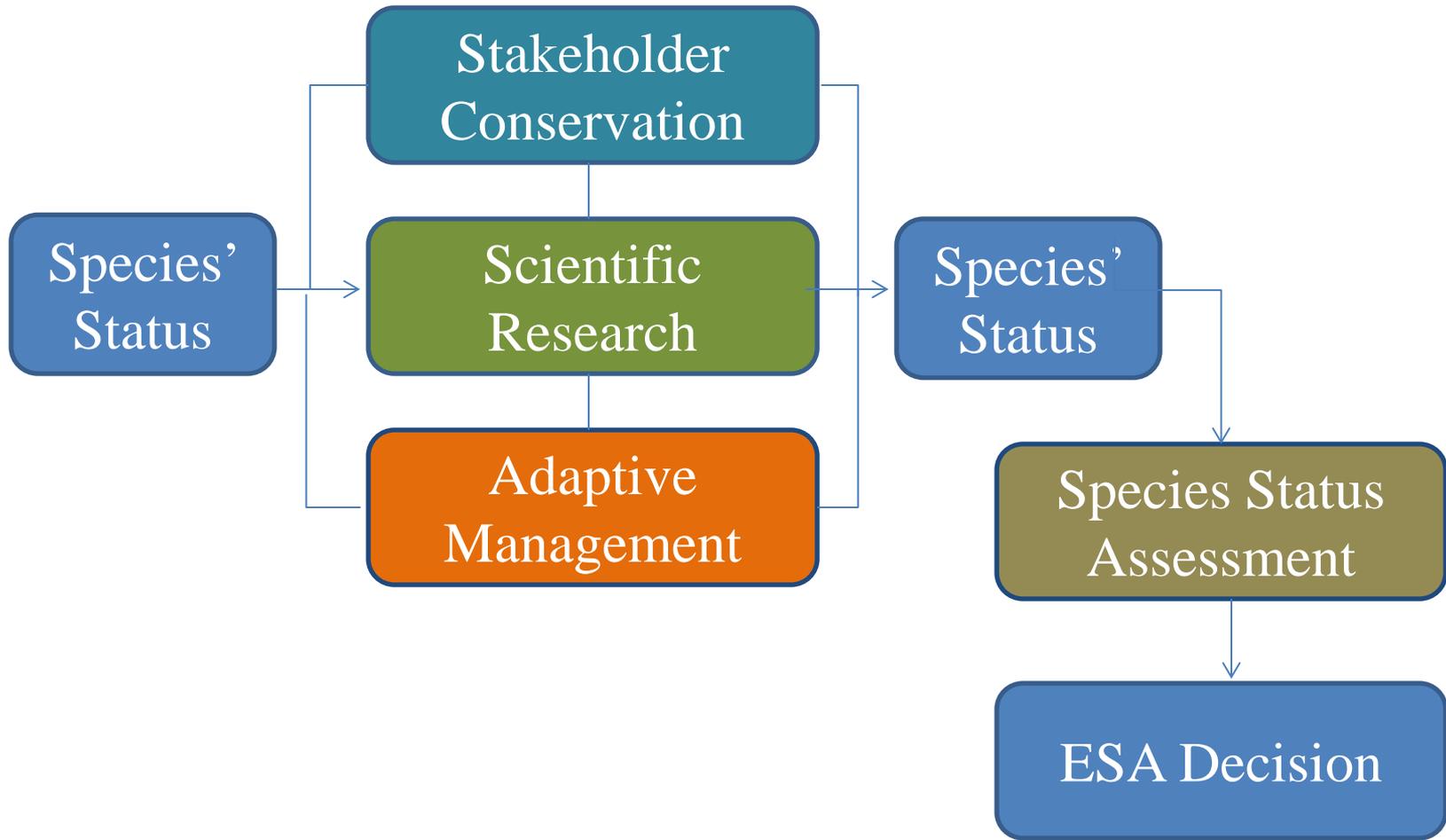
Texas Hornshell - Presumed Current Distribution



ESA Decisions

Species' Status





Stakeholder Engagement

- Presentations for TPWD, Texas Comptroller, other State agencies, and universities on SSA process
- Workshops and presentations for stakeholders on SSA process with SSA case studies
- Identify species where stakeholders were interested in voluntary conservation programs
- Help to identify opportunities for funded research and other expert information to be used in SSA



Central Texas Mussels SSA

- March 2, 2017, mailed letters to interested parties requesting information by May 1, 2017
- June 28-29, 2017, hosted a mussel science expert meeting to inform the SSA
- ***November 14-15, 2017, hosting the Texas Freshwater Mussel Conservation and Stakeholder Summit***
- TBD, overview webinar when the SSA Report becomes available

