



**GOPHER TORTOISE
PUBLIC MEETING
DECEMBER 13, 2022**



- ❖ Please join using computer audio
- ❖ Closed captioning is available by selecting the Closed Caption icon at the bottom of your Zoom screen

MEETING AGENDA

USFWS Introductions

Meeting Instructions

USFWS Presentation

Question & Answer Period

Closing Remarks

MEETING GROUND RULES

- The meeting is being recorded and will be posted to: [LINK](#)
- Microphones and videos of participants will be restricted for the duration of the meeting unless the moderator unmutes you during the question-and-answer portion.
- Questions will be addressed during the question-and-answer session following the presentation. We will do our best to address questions in the order received to allow everyone an opportunity to voice their questions.

INTRODUCTIONS

- **Lourdes Mena** – Division Manager, Florida Classification and Recovery
- **Nicole Rankin** – Manager, Division of Conservation and Classification, Southeast Regional Office
- **Mike Marshall** – Project Director, Texas A&M Natural Resources Institute
- **Michelina Dziadzio** – Monitoring Coordinator, Wildlife Diversity Conservation Section, Florida Fish and Wildlife Conservation Commission
- **John Tupy** – Fish & Wildlife Biologist, Mississippi Ecological Services Field Office
- **Scott Hoffman** – Biologist, Branch of Delisting and Foreign Species, Headquarters
- **Brian Folt** – Ecologist, Ft Collins Science Center, USGS
- **Conor McGowan** – Asst Unit Leader, Florida Cooperative Research Unit, USGS
- **Melissa Lombardi** – Biologist, Division of Conservation and Classification, Southeast Regional Office
- **Jo Emanuel** – Fish & Wildlife Biologist, Florida Ecological Services Field Office

GOPHER TORTOISE

During this time, we will present an overview of the biological information and modeling projections in the species status assessment and the Service's decisions in the October 12, 2022, Federal Register notice.

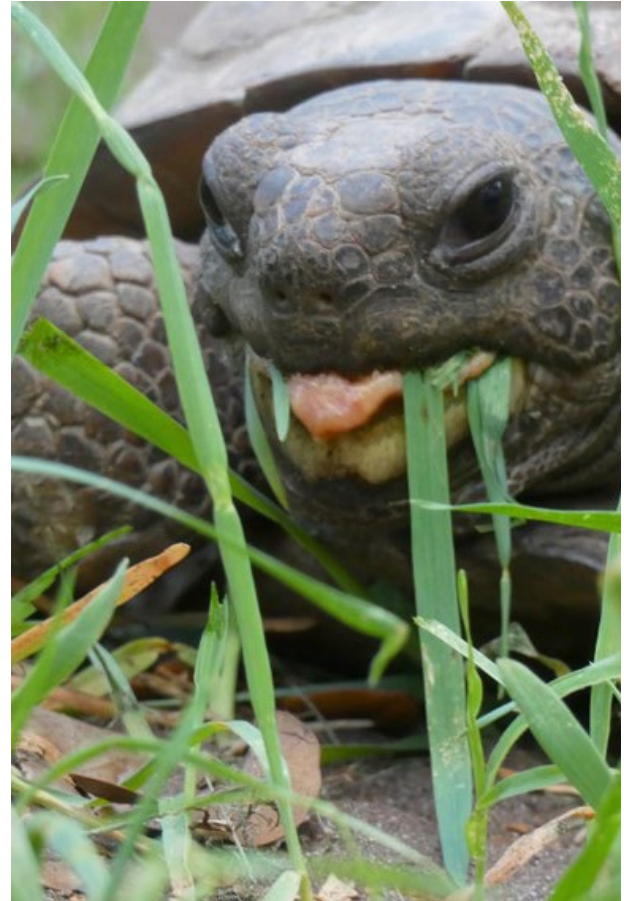
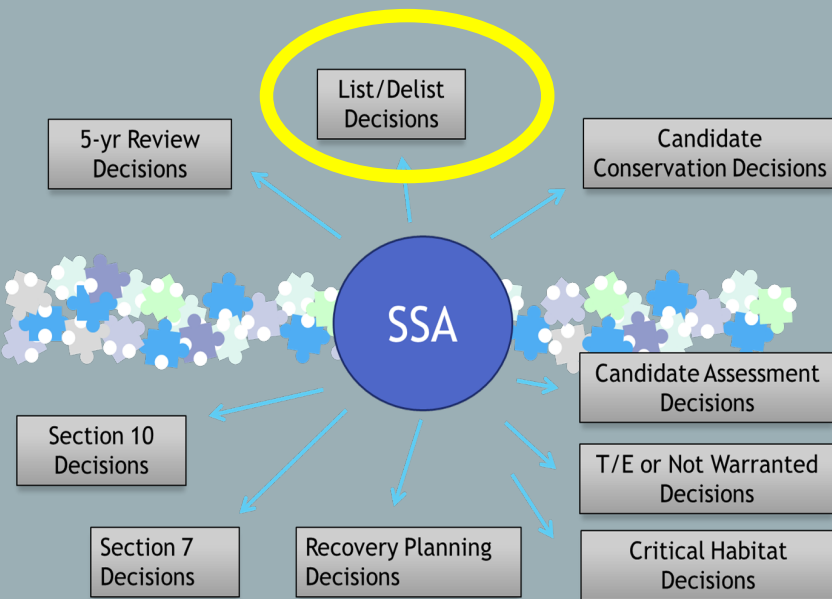


Image Credit: Mark Miller

FEDERAL ACTIONS



- Core Team – FWS, FWC, Texas A&M, UF
- Experts Teams – Species and Habitat
- Partner Review – State and Federal Partners
- Peer Review – 7 Reviewers; 30 Responses

July 1987: Western Portion – Listed As Threatened

January 2006: Eastern Portion - Petitioned for listing and designation of critical habitat

September 2009: 90-day Finding on Eastern Portion: **Substantial**

July 2011: Eastern Portion – 12-month Finding: Warranted, but precluded

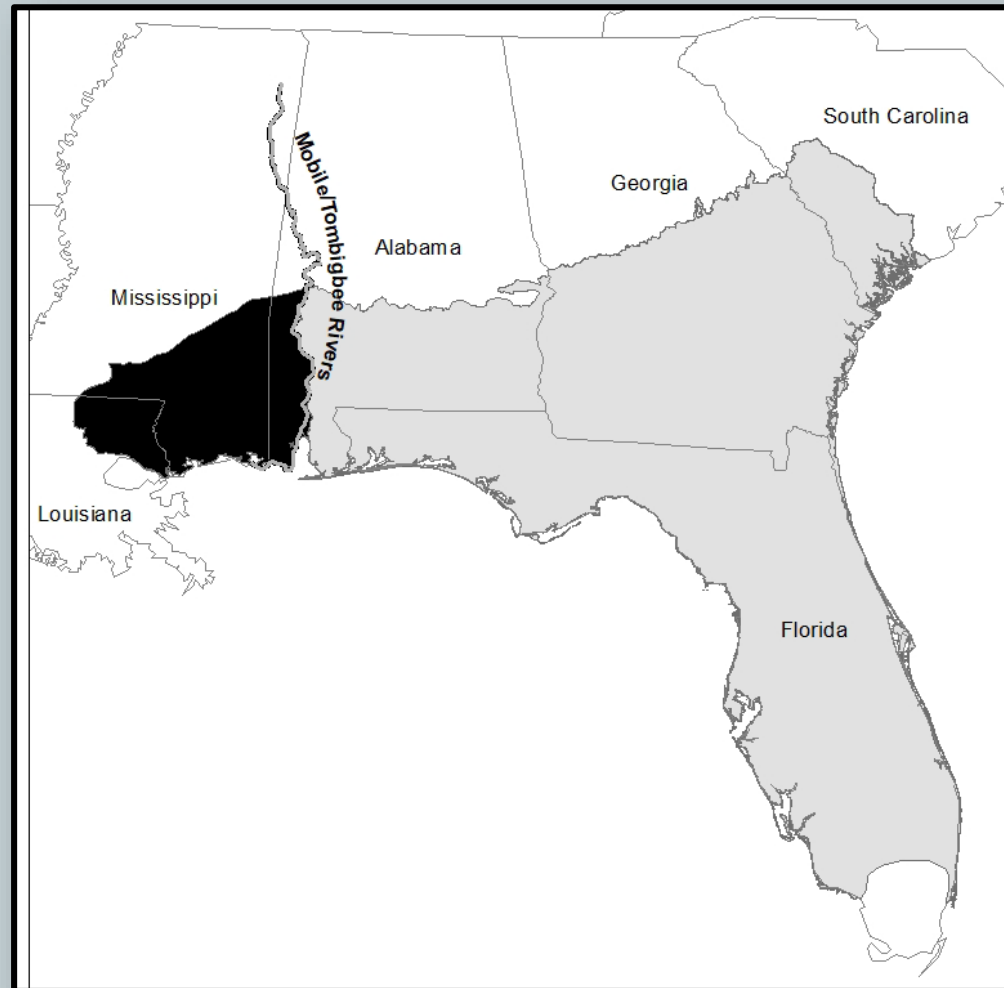
2019-2021: Species Status Assessment conducted

August - November 2021: Four Recommendation Team Meetings

October 12, 2022: Notice of Finding Published to Federal Register

RANGE AND DISTRIBUTION

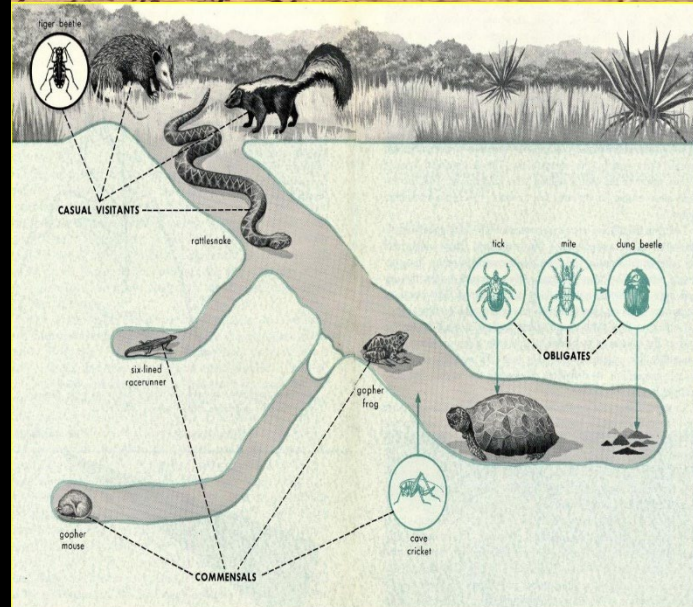
Southeastern Atlantic and Gulf Coastal Plains



GOPHER TORTOISE (*GOPHERUS POLYPHEMUS*) FACTS

- ✓ **Lifespan:** Estimated 50-80 years
- ✓ **Carapace:** Domed, brown to grayish-black.
- ✓ **Plastron:** Yellow and Hingeless
- ✓ **Hind Feet:** Elephantine / Stumpy
- ✓ **Forelimbs:** Shovel-like, claws
- ✓ **Adults:** Up to 15 inches in length and 13 pounds
- ✓ **Generalist Herbivore:** Primarily broadleaf grasses, legumes, and fruit
- ✓ **Fossorial:** Excavates and uses own burrow
- ✓ **Keystone Species:** Burrows used by more than 350 other species

Graphic Source: Dr. Walter Auffenberg,
Florida Museum of Natural History (Auffenberg 1969)



GOPHER TORTOISE HABITAT

- ✓ **Sandy Soils**
- ✓ **Open Canopy**
- ✓ **Sparse Midstory**
- ✓ **Herbaceous Vegetation**
- ✓ **Frequent Disturbance, primarily fire**



FACTORS INFLUENCING VIABILITY: PRIMARY THREATS

✓ **Habitat Loss/Degradation**

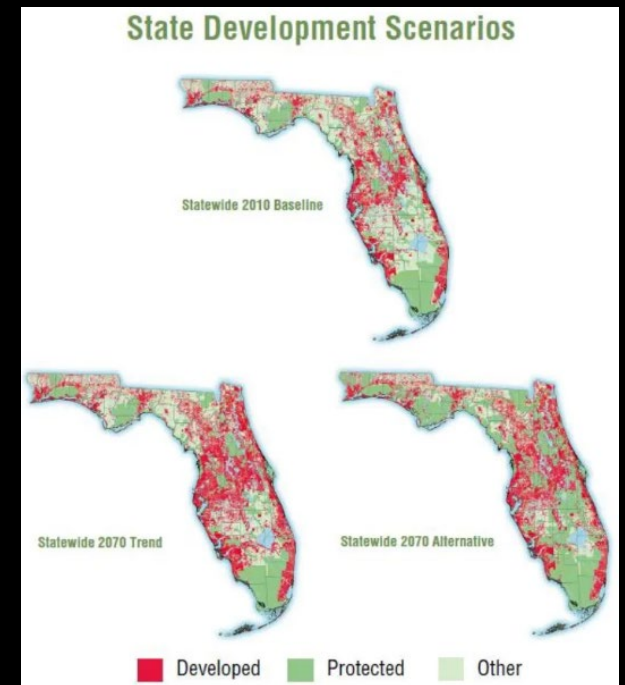
- Development
 - Increased road density
 - Invasive species
 - Reduced management in adjacent or nearby habitat

✓ **Climate Change**

- Increased drought frequency and temperatures
 - Increased wildfire
 - Reduced prescribed fire
 - Possible impacts to incubation and sex ratios
- Sea level rise

✓ **Insufficient/Incompatible Habitat Management**

- Insufficient frequency or intensity to maintain good habitat conditions
- Incompatible with gopher tortoise needs



PROTECTIONS AND CONSERVATION EFFORTS

State and Federal Protections

- USFWS
 - Threatened – West
 - ESA Sect. 6, 7, and 10
- NRCS
 - Working Lands for Wildlife
 - Longleaf Pine Initiative
 - Conservation Practices
- USFS
 - Collaborative Forest Landscape Restoration Program
- Protected in all states

Agreements, BMPs, and Other

- MOAs, CCAs, and CCAAs
- Gopher Tortoise Crediting Strategy
- Rangewide Conservation Strategy (DoD)
- Numerous BMPs
- The Gopher Tortoise Initiative (GA)
- Headstarting

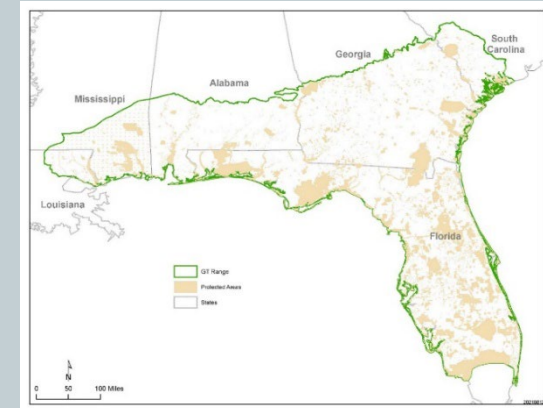
Conservation Lands

- 1.7m acres potential GT Habitat
- Gradient of public ownership
- Conservation easements
- Management Plans
- **2011-2019**
- ~120,000 ac. acquired (AL, FL, LA, and SC)
- ~26,740 ac. acquired (federal)
- The Georgia GT Initiative – permanent protection for 26 viable populations across ~124,000 acres of land



Photo credits: John Tupy

State	Protection
Alabama	Protected; non-game species
Georgia	State threatened species
Florida	State threatened species
Louisiana	State threatened species
Mississippi	State endangered species
South Carolina	State endangered species





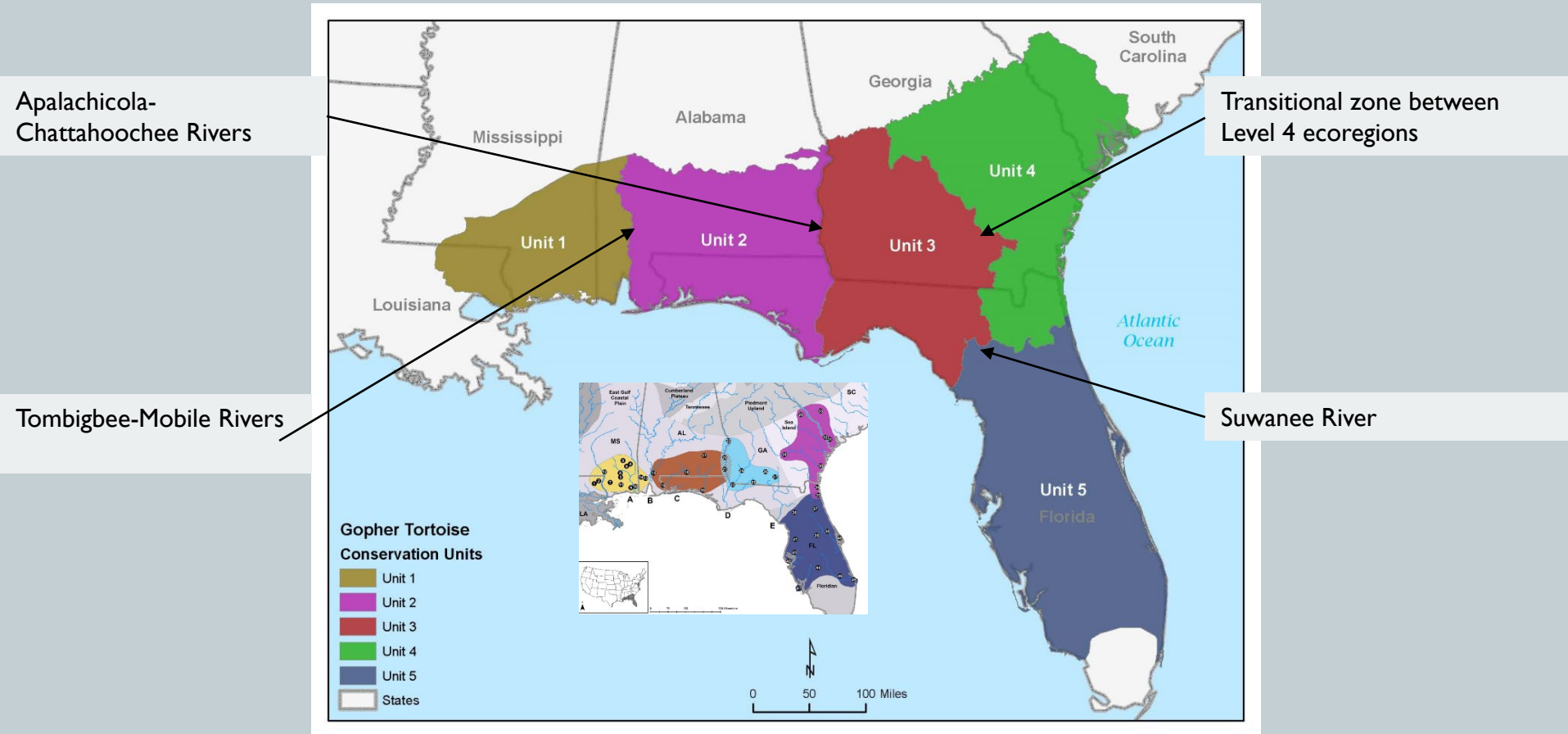
PRIVATE FOREST LANDS



- 80% of potential gopher tortoise habitat in species range is managed for forest production
- 10,000 observations across 91 counties in range (2013-2019)
- Forest certifications, best practices, and partnerships contribute to conservation
- Condition and occupancy on most of these lands is unknown
- Potential for conversion to development or other land uses

ANALYSIS

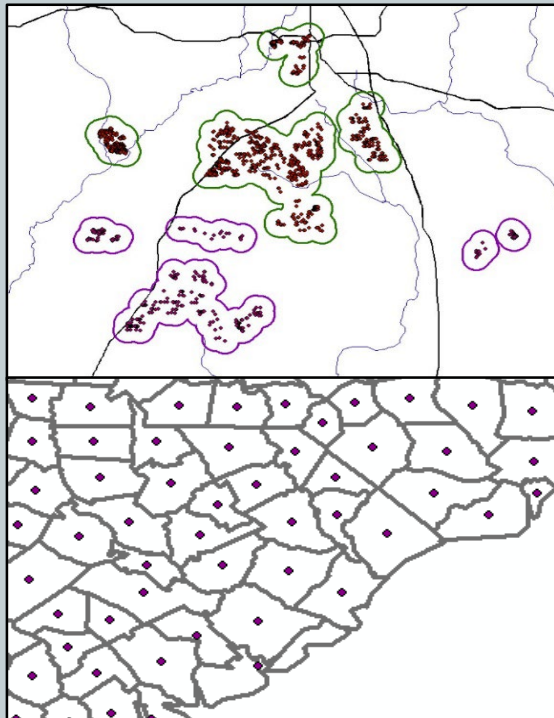
- ✓ **Genetics** ✓ **GT Conservation Units** ✓ **Barriers** ✓ **Ecoregions** ✓ **Expert Input**



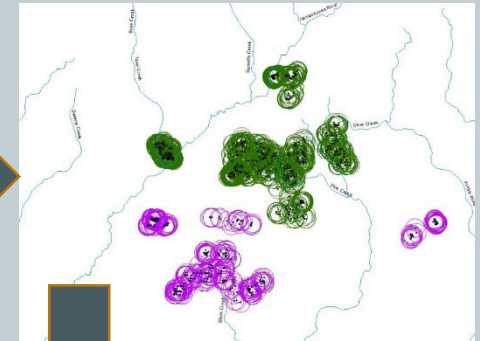
GOPHER TORTOISE DATA AND POPULATION DELINEATIONS

Data Types

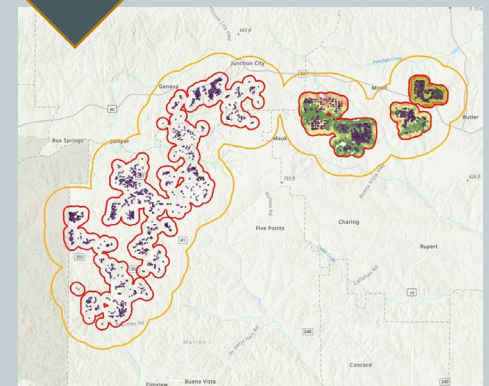
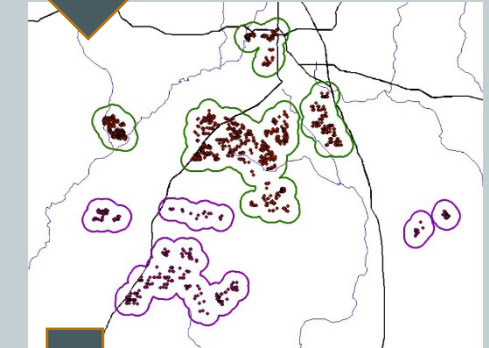
- Spatially Explicit
- County Centroid



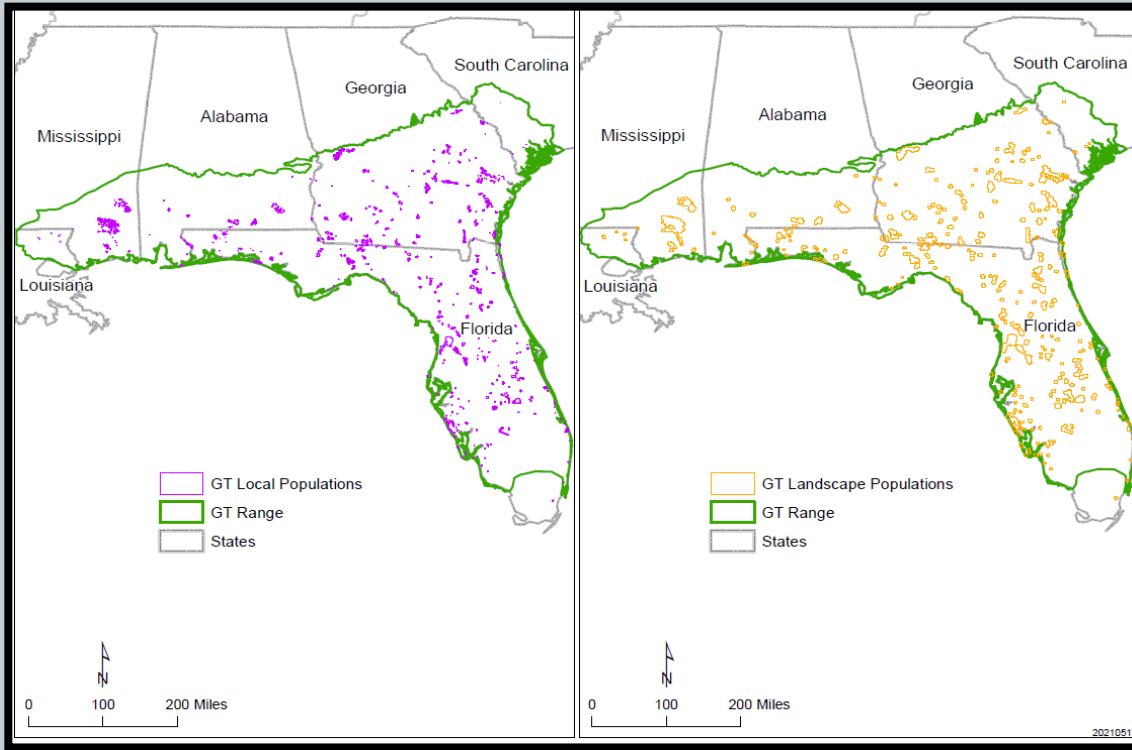
Local Populations:
600-meter buffer
around burrows



Landscape Populations:
2500-meter buffer
around burrows



LOCAL AND LANDSCAPE POPULATIONS



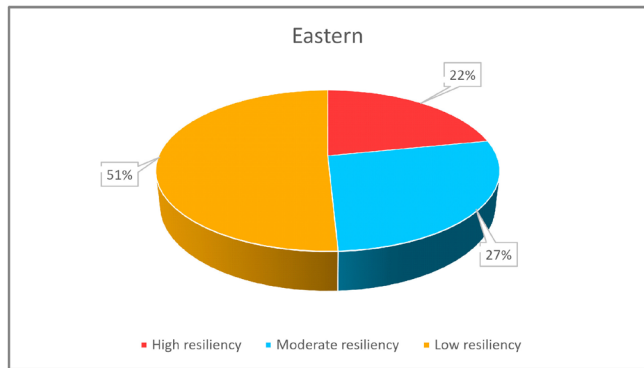
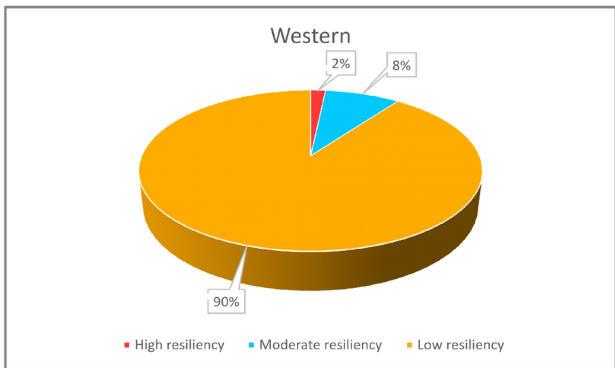
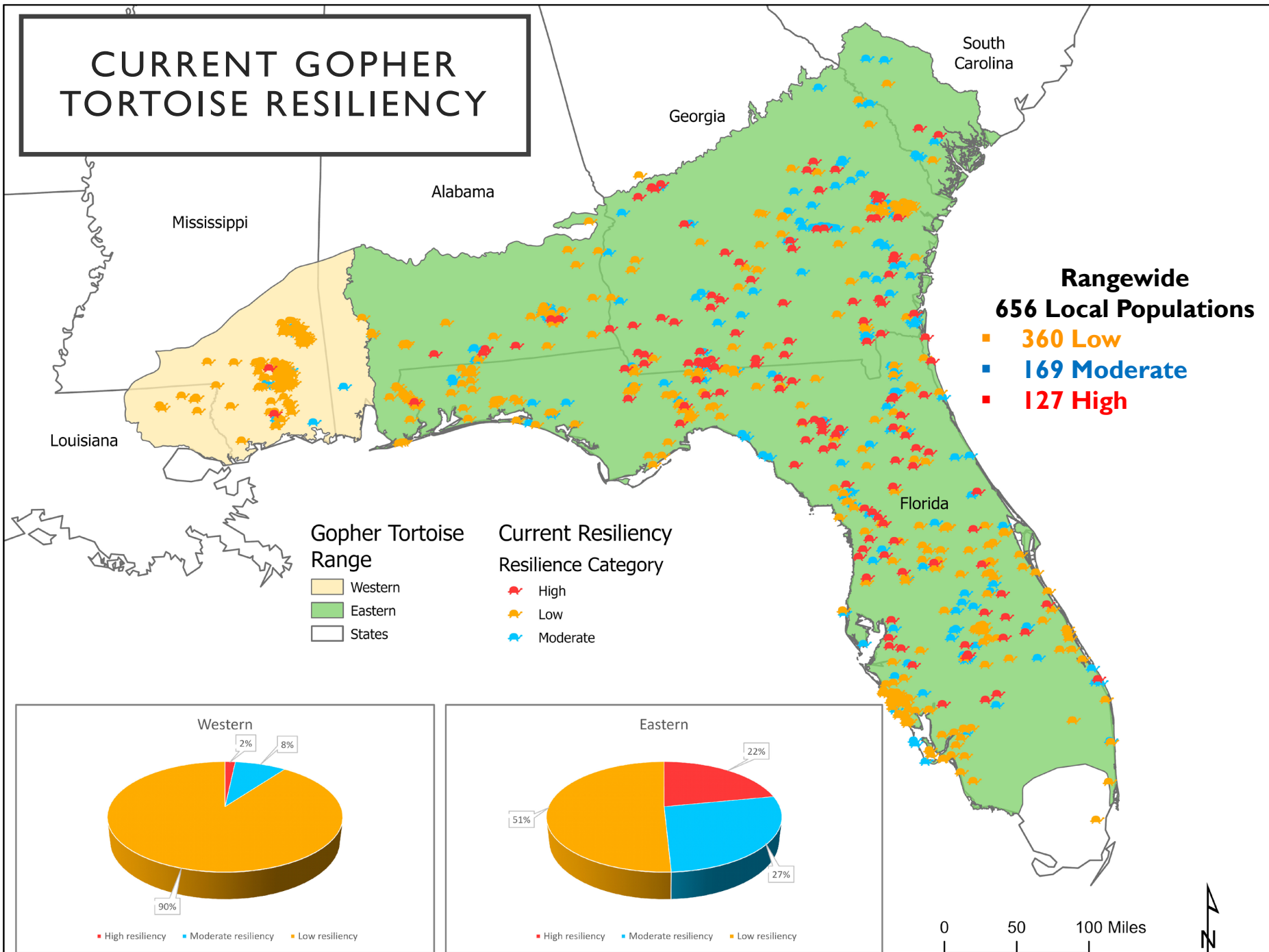
Spatially Delineated Populations

State	Local	Landscape
FL	316	161
GA	151	63
MS	99	7
AL	77	14
LA	7	5
SC	6	4

656
local populations

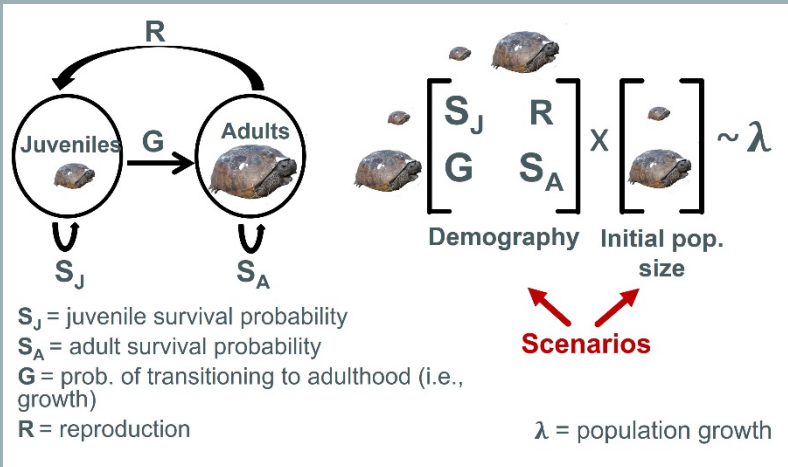
253
landscape populations

CURRENT GOPHER TORTOISE RESILIENCY



FUTURE CONDITION MODELING

HOW WILL GOPHER TORTOISE POPULATIONS RESPOND TO FUTURE CONDITIONS ACROSS THE RANGE?

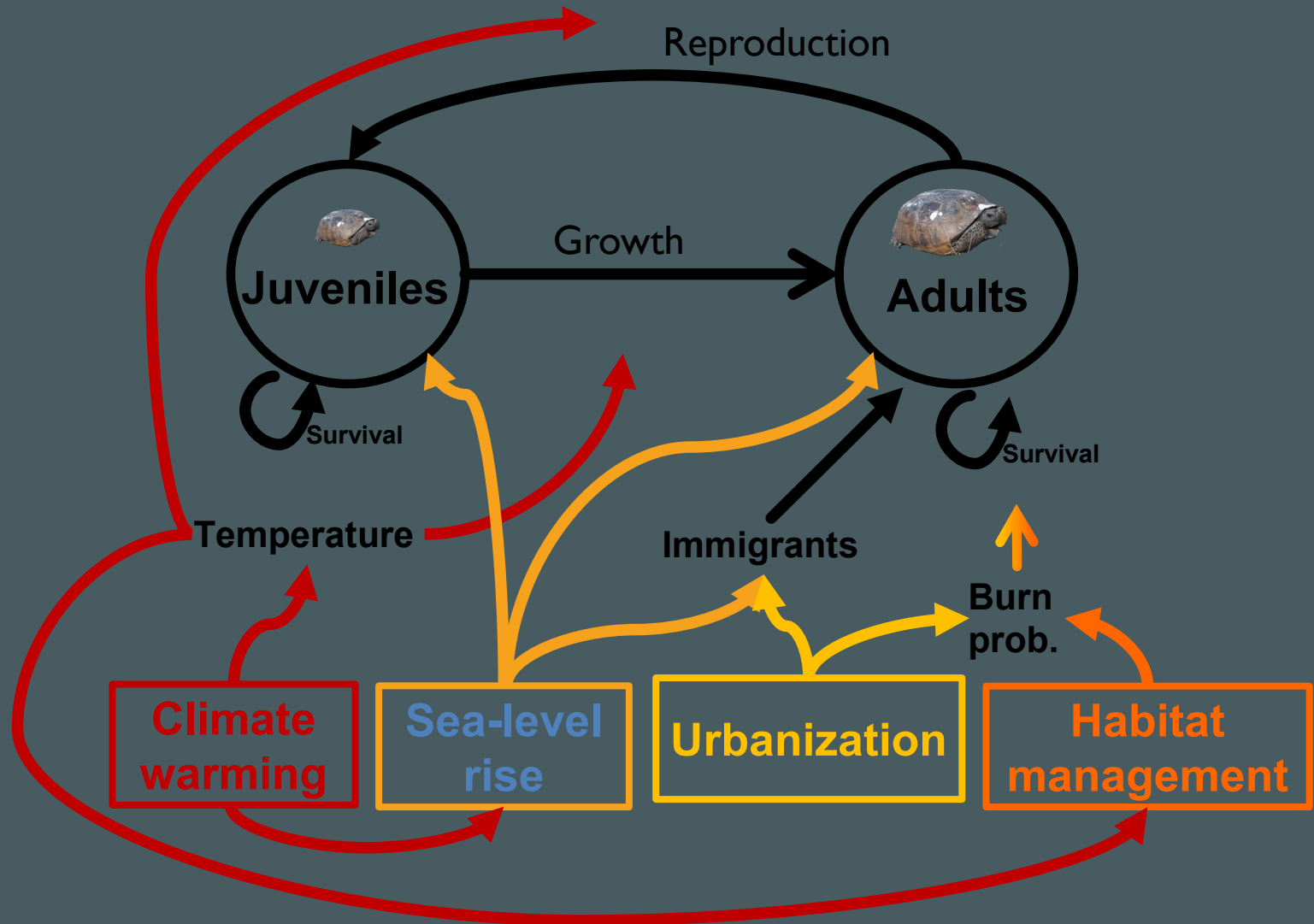


Predictive Population Model

- Incorporated other published models
- Demography specific to each population
- Accounted for uncertainty by modeling threats with different scenarios
- Projected populations forward in time under each scenario
 - 40-, 60-, and 80-year timesteps

Folt et al. 2022. Using predictions from multiple anthropogenic threats to estimate future population persistence of an imperiled species. *Global Ecology and Conservation* 36: e02143

SCENARIOS



FUTURE SCENARIOS

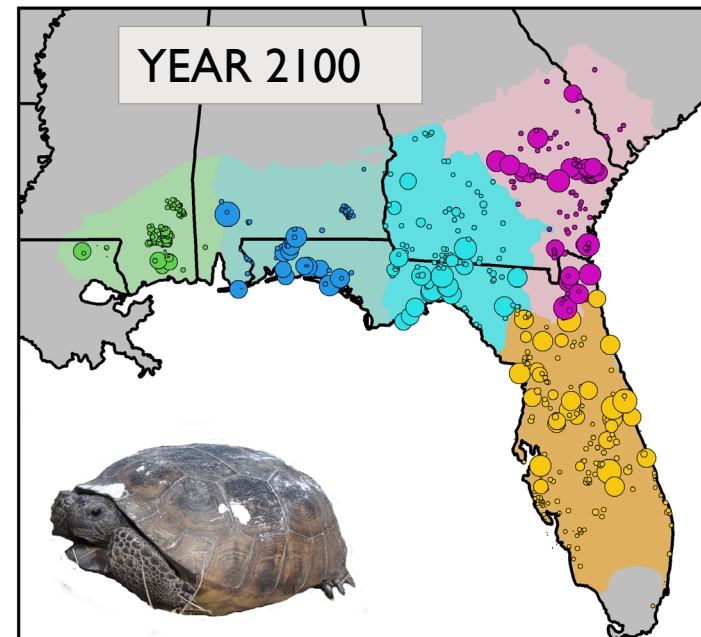
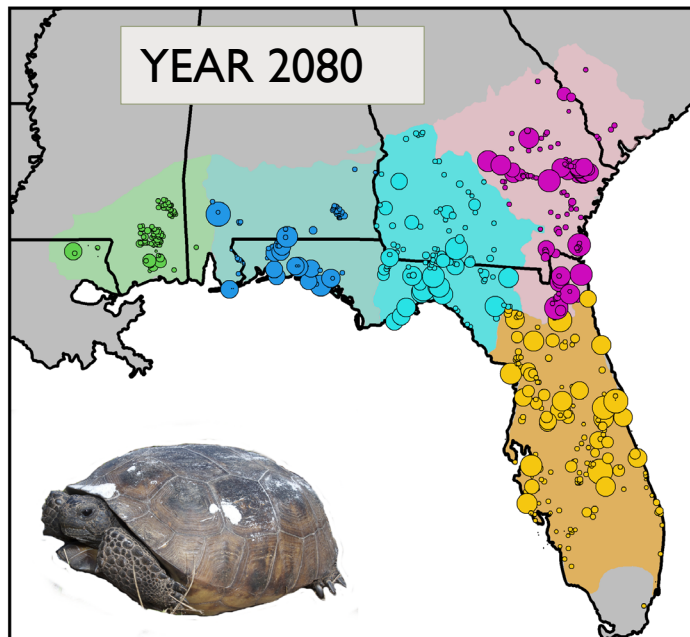
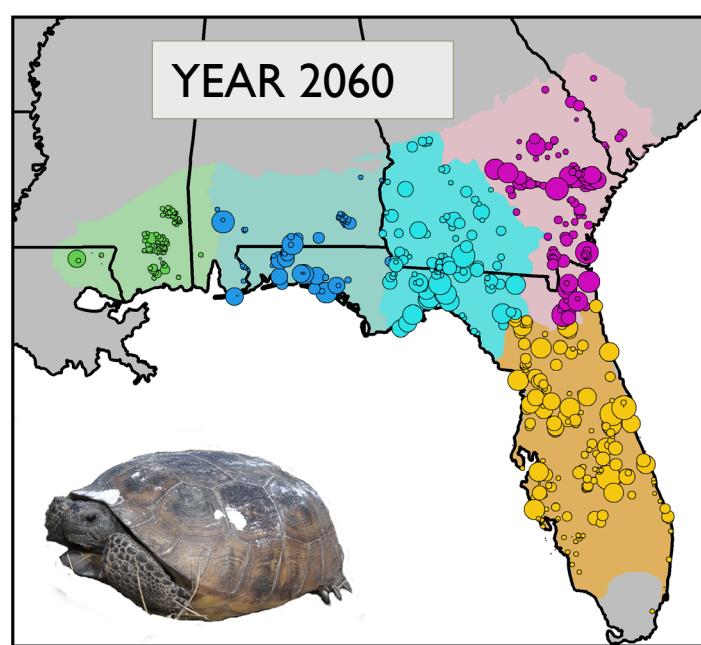
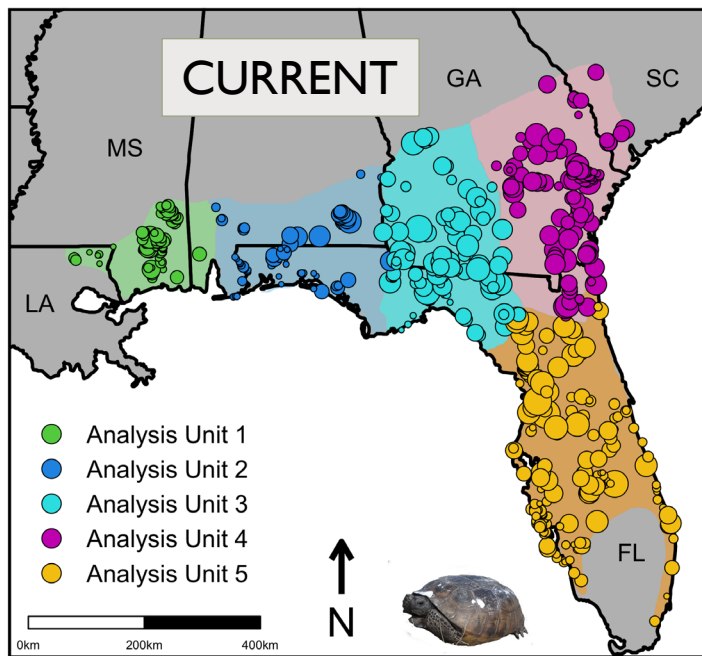
Scenarios	Climate warming (°C)	Sea-level rise (m)	Urbanization	Habitat management	Immigration
Low stressors	1.0	0.54 m	P = 0.9	Status quo	1%
Medium stressors	1.5	1.83 m	P = 0.5	Status quo	1%
High stressors	2.0	3.16 m	P = 0.1	Status quo	1%
Decreased management	1.5	1.83 m	P = 0.5	Less fire	1%
Very decreased management	1.5	1.83 m	P = 0.5	Much less fire	1%
Improved management	1.5	1.83 m	P = 0.5	More fire	1%
No immigration	1.5	1.83 m	P = 0.5	Status quo	0%
Intermediate immigration	1.5	1.83 m	P = 0.5	Status quo	1%
High immigration	1.5	1.83 m	P = 0.5	Status quo	2%
Very high immigration	1.5	1.83 m	P = 0.5	Status quo	4%

IPCC 2013

NOAA sea-level rise model

SLEUTH urbanization model

Kupfer et al. (2020) predictions



FUTURE CONDITION ANALYSIS CONCLUSIONS

- Plausible future scenarios predicted populations remaining among all SSA analysis units in year 2100
- Populations exhibiting the greatest likelihood of remaining on the landscape in the future in Georgia and peninsular Florida
- Larger populations connected to nearby populations were more likely to remain on the landscape than smaller populations with less population connectivity
- Declines are expected but model projections suggest extinction risk is relatively low in the future



Image credit: Dr. Jeffrey Goessling

THREATENED OR
ENDANGERED
UNDER THE ESA

- Endangered – a species that is in danger of extinction throughout all or a significant portion of its range
- Threatened – a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range

DECISION SUMMARY

Area	Decision	Action
Rangewide	Not Threatened or Endangered	Not listed rangewide
Western Portion	DPS Threatened	Western DPS remains listed as Threatened
Eastern Portion	DPS Not Threatened or Endangered	Eastern DPS withdraw of candidate status

DPS=Distinct Population Segment (a listable entity)

RANGEWIDE DETERMINATION

Status Rangewide

Not Warranted for Listing

Evaluate for Significant Portion of the Range

Different Status?

Yes

Meets Significance Criteria?
(policy)

No

No Significant Portion

61834 Federal Register / Vol. 87, No. 106 / Wednesday, October 12, 2022 / Proposed Rules

DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service

50 CFR Part 17
[Docket No. FWS-R4-ES-2009-029;
F09E21000 FXE911109FDEB 223]

Endangered and Threatened Wildlife and Plants; Finding for the Gopher Tortoise Eastern and Western Distinct Population Segments

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notification of findings.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce findings on the status of the gopher tortoise (*Gopherus polyphemus*) rangewide and in the eastern (east of the Mobile and Tombigbee Rivers) and western (west of the Mobile and Tombigbee Rivers) portions of the range under the Endangered Species Act of 1973, as amended (Act). After a review of the best available scientific and commercial information, we find that listing the gopher tortoise as an endangered or a threatened species rangewide is not warranted. We find that the gopher tortoise in the eastern portion of its range and the gopher tortoise in the western portion of its range meet the criteria of separate distinct population segments (DPS), as defined by our Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act. We determine the Eastern DPS of the gopher tortoise is not warranted for listing at this time. Further, we confirm that the Western DPS of the gopher tortoise meets the definition of a threatened species. Additionally, this notice serves as our completed 5-year review of the Western DPS of the gopher tortoise. We ask the public to submit to us any new information that becomes available concerning the threats to the gopher tortoise or its habitat at any time.

DATES: The finding announced in this document was made on October 12, 2022.

ADDRESSES: This finding is available on the internet at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2009-029. Supporting information that we developed for this finding including the species status assessment report, peer review, and future condition modeling, are found in the decision file available at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2009-029 and on the Service's website at <https://www.fws.gov/office/florida-ecological-services/library>, and is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Florida Field Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256. Please submit any new information or materials concerning this finding to the above address.

FOR FURTHER INFORMATION CONTACT: Lourdes Mona, Division Manager, Florida Classification and Recovery, U.S. Fish and Wildlife Service, Florida Ecological Services Field Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256-7517; telephone 904-731-3134; or James Austin, Acting Field Supervisor, Mississippi Ecological Services Field Office, 6578 Dogwood View Parkway, Jackson, MS 39213; telephone 601-321-1129. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Previous Federal Actions

On July 7, 1987, the gopher tortoise (*Gopherus polyphemus*) was listed under the Act as a threatened species (52 FR 23376) in the western portion of its range, from the Tombigbee and Mobile Rivers in Alabama west to southeastern Louisiana on the lower Gulf Coastal Plain. On January 19, 2006, we received a petition dated January 13, 2006, from Save Our Big Scrub, Inc. and Wild South requesting that the population of the gopher tortoise in the eastern portion of its range be listed as a threatened species under the Act and critical habitat be designated. On September 9, 2009, we published a 90-day finding (74 FR 46401) that the petition contained substantial information indicating that listing may be warranted for the eastern population of the gopher tortoise. On July 27, 2011, we published a 12-month finding (76 FR 45130) on the petition to list the gopher tortoise in the eastern portion of its range, and, in that finding, we evaluated the status of the gopher tortoise in the western portion of its range. We reaffirmed that the gopher tortoise warranted listing as a threatened species in the western portion of its range. We found the gopher tortoise in the eastern portion of its range was warranted for listing but precluded by higher priority listing actions (warranted but precluded finding).

The species was placed on the candidate list (a list of species that have been found to warrant listing, but which are precluded by higher priority listing actions) and received a listing priority number of 8 based on the magnitude and immediacy of the threats. The eastern population of gopher tortoise was included in subsequent annual candidate notices of review (CNORs) (76 FR 66370, October 26, 2011; 77 FR 09994, November 21, 2012; 78 FR 70194, November 22, 2013; 79 FR 72450, December 5, 2014; 80 FR 86584, December 24, 2015; 81 FR 87246, December 2, 2016; 84 FR 54732, October 10, 2019; 85 FR 73104, November 16, 2020; 87 FR 20132, May 3, 2022).

On April 1, 2021, the Center for Biological Diversity (CBD) filed a complaint alleging our "warranted but precluded" finding for the eastern population of the gopher tortoise violated the Act because we were not making "expeditious progress" in adding qualified species to the lists of endangered or threatened species and because we had not shown that the immediate proposal of the eastern population of the gopher tortoise was precluded by higher priority actions consistent with 16 U.S.C. 1533(b)(3)(D)(ii). On April 26, 2022, the Service entered into a court-approved settlement agreement with CBD requiring the Service to submit either a warranted or a not warranted finding for the eastern population of gopher tortoise to the Federal Register by September 30, 2024.

On June 20, 2019, we initiated a 5-year review for the western population of the gopher tortoise (84 FR 28850), and this document completes our status review under sections 4(c)(2) of the Act. See <https://ecos.fws.gov/ecp/species/C94> for the species profile for the gopher tortoise.

Supporting Documents

A species status assessment (SSA) team prepared an SSA report for the gopher tortoise. The SSA team was composed of Service biologists, in consultation with other species experts. The SSA report represents compilations of the best scientific and commercial data available concerning the status of the species, including the impacts of past, present, and future factors (both positive and beneficial) affecting the species, in accordance with our joint policy on peer review published in the Federal Register on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions.

RANGEWIDE STATUS

Not Endangered: High number of local populations currently distributed across the range representing known genetic groups

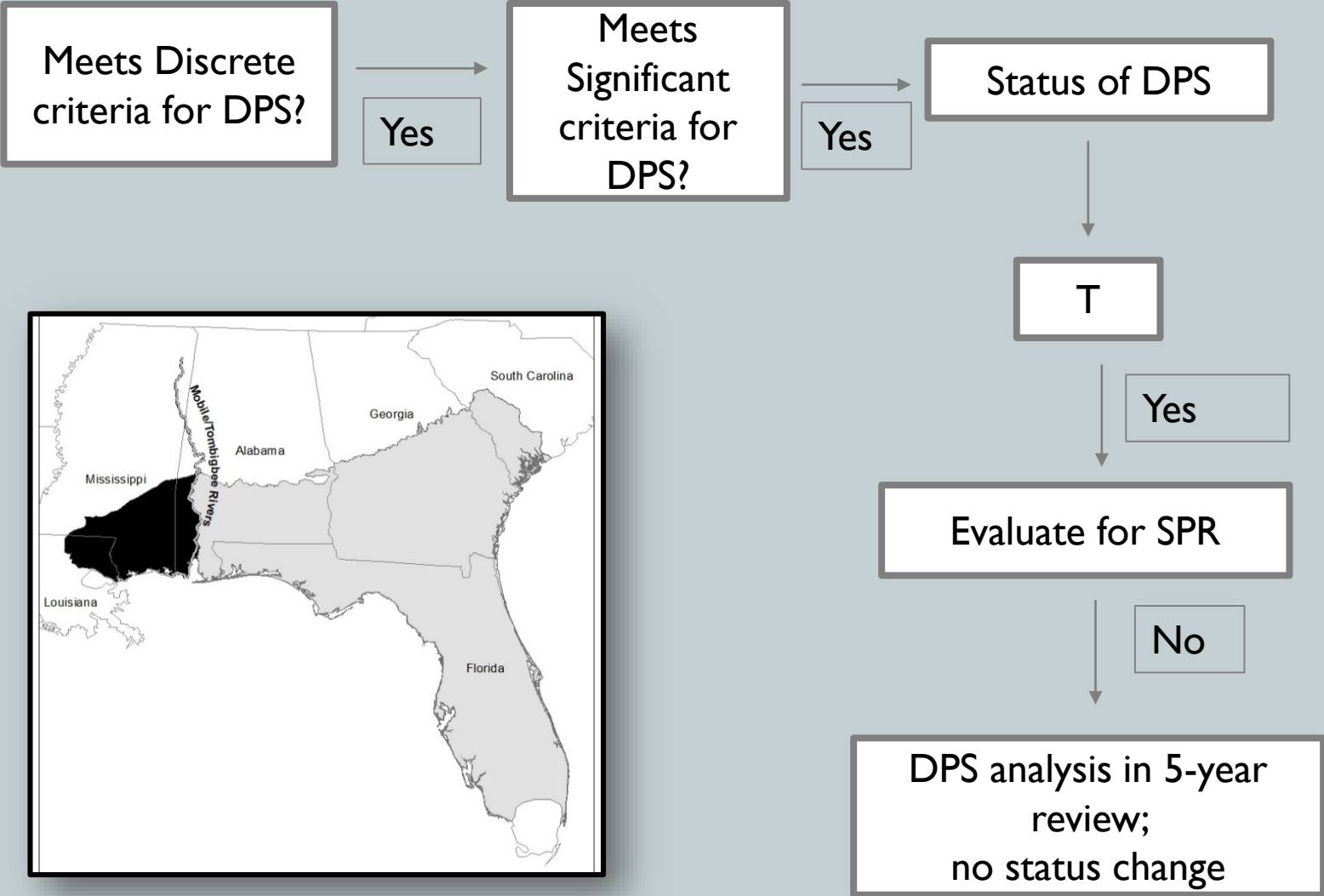
Current population resiliency-38% exhibit high or moderate resiliency

Not Threatened: Stressors vary in magnitude across the analysis units and are expected to continue

Populations on private lands not included in future models and provide additional individuals



WESTERN PORTION



WESTERN DPS

- Why threatened?
 - Threats same as rangewide
 - Ecological and life history characteristics lead to lower resiliency in many populations
 - Many populations are small with fewer landscape populations
 - 85% pops in Unit I projected unlikely to be remain on landscape in foreseeable future (decline in smaller populations)
- Why not endangered?
 - 110 local populations (2% high resiliency, 8% moderate, and 87% low resiliency)
 - Populations remain in future projections

EASTERN PORTION

Meets Discrete criteria for DPS?

→
Yes

Meets Significant criteria for DPS?

→
Yes

Status of DPS



NW



Evaluate for SPR



No

Withdraw candidate



EASTERN DPS STATUS

Why the change since the 12-mo finding of candidate status in 2011?

Additional information

Better informed analyses

Discussion

Eastern DPS contains most individuals, populations, and potential habitat

Projections show declines in individuals and number of local populations in the future

Abundant local populations are projected to remain across the Eastern DPS in the future



Photo credit: Matt Elliott

EASTERN DPS

Meets Discrete criteria for DPS?

→
Yes

Meets Significant criteria for DPS?

→
Yes

Status of DPS



NW



Evaluate for SPR



No

Withdraw candidate



Notice of Finding and supporting docs are available at
<https://www.regulations.gov/document/FWS-R4-ES-2009-0029-0069>

Modeling Publication - Folt et al., 2022
<https://doi.org/10.1016/j.gecco.2022.e02143>

We are also posting these documents and a copy of
this presentation at
<https://www.fws.gov/project/gopher-tortoise>

Communication with USFWS

- Gophertortoise@fws.gov
- John Tupy, Species Lead – Western DPS
john_tupy@fws.gov
- Jo Emanuel, Species Lead – Eastern DPS
jo_emanuel@fws.gov



VIRTUAL PROCESS

- We will first call on participants who submitted a question when they pre-registered using the registration link.
- We will then open the Q&A period to anyone who would like to ask a question. We will first go through those participants who are using the Zoom web portal or Zoom app.
- We will then move on to those participants calling in through the phone who would like to ask a question.

INSTRUCTIONS FOR PRE-REGISTERED PARTICIPANTS

- When it is your turn, the moderator will call out your name and display your name on the screen.
- To indicate that you are ready to ask a question when the moderator reads your name, please use the “raise hand” feature at the bottom of your participants list or, if you are calling in through the phone, please press *9 to “raise your hand.”
- The moderator will then unmute you so that you can ask your question.