

Evolving to Meet the Challenges

Landscape-scale Conservation and the Role of Selecting Species

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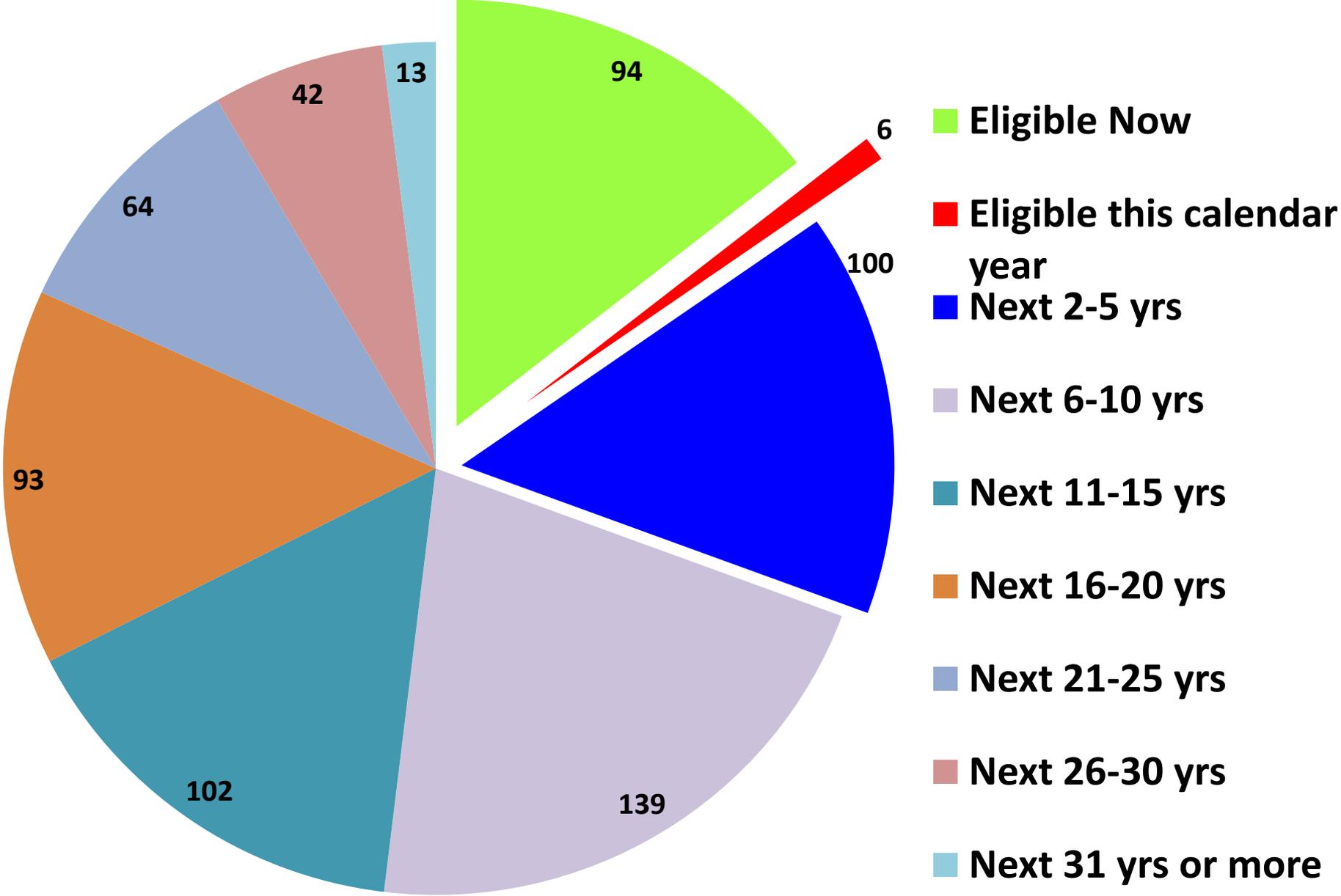
September 25, 2012

My history with this effort

- Member of the National Steering Committee that developed the guidance
- Recently managed budget, performance, and workforce for the National Wildlife Refuge System
- 24 years in conservation, including 23 years with Refuges and 1 year with Ecological Services

- How We Evolve and Change
- Landscape –scale Conservation
- Role of Selecting Species

Retirement Status of Refuge Managers (Series- 0485)Summer 2012





Changes in Technology



1-PA-D



Three examples of how conservation has evolved

1. Natural Heritage Programs
2. State Wildlife Action Plans
3. Fire management

- Also read Charlie Baxter's Open Letter



Home

Species & Communities

- Field Guides
- Biodiversity Matrix
- Tracking List
- Natural Communities
- Ecological Surveys
- Submit Data

Conservation Lands

- Interactive Map
- FL Forever Projects Map
- Summary Report (PDF)

Invasive Species

- iMapInvasives

Planning & Analysis

- Florida Forever
- CLIP

Data Requests

HIGHLIGHTS



FNAI receives NatureServe Conservation Impact Award

The 2012 Conservation Impact Award recognizes several recent accomplishments as well as FNAI's leadership role within the NatureServe network.



Atlas of Florida's Natural Heritage

FNAI is pleased to announce publication of a comprehensive, richly illustrated atlas of Florida's species, communities, and conservation efforts. [Online credit card ordering now available.](#)



FNAI at the Florida Senate

FNAI Director Gary Knight was recently asked to present to the Florida Senate Committee on Environmental

Scrub
Scrub



Learn more about this element

Global Rank: G2 State Rank: S2
Federal listing: NOT APPLICABLE
State listing: NOT APPLICABLE



AUBURN
UNIVERSITY

The Alabama Natural Heritage Program

Office of the Vice President for Research

ABOUT ALNHP

DATA

SERVICES

PUBLICATIONS & REPORTS

DONATE

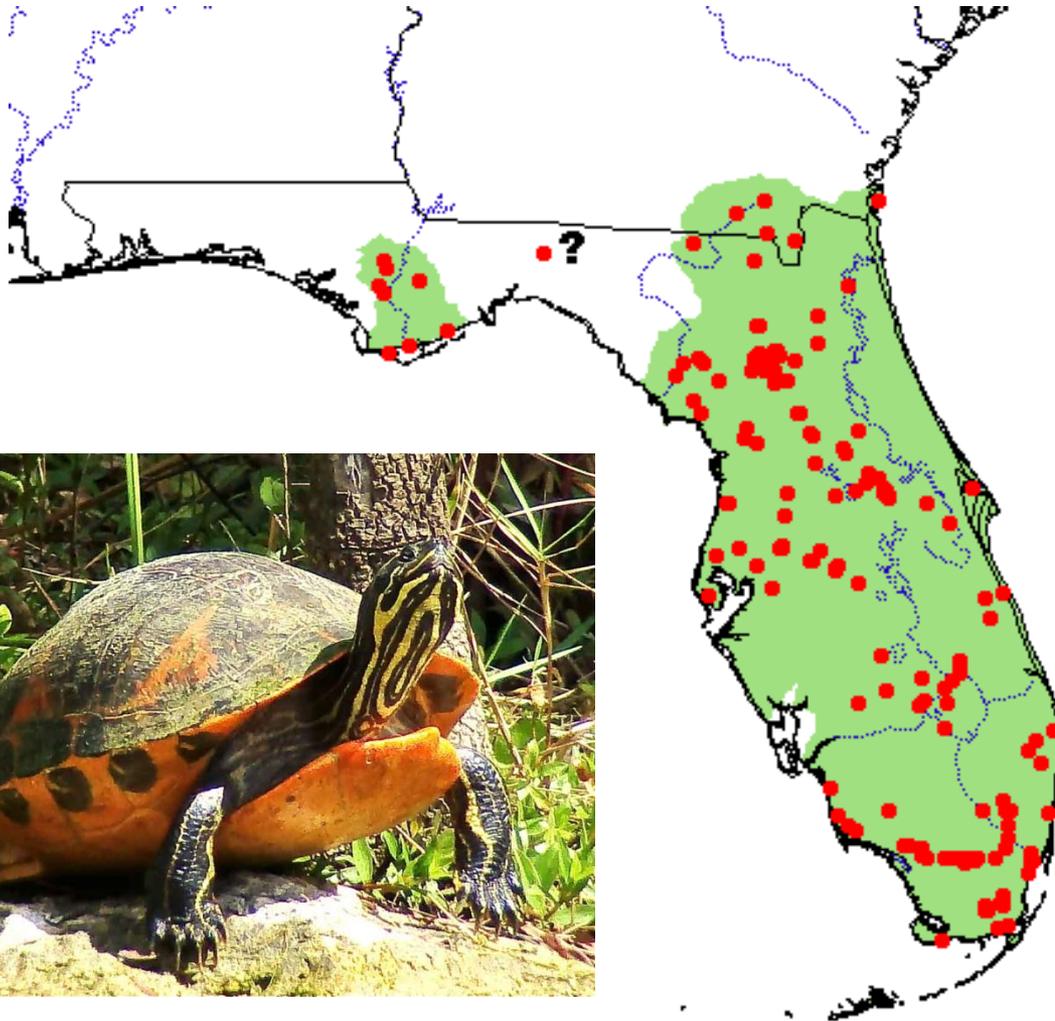
FORMS

LINKS



Welcome to the home page of the Alabama Natural Heritage Program, a program of the Environmental Institute

Occurrences of Florida Red-bellied Turtle



Just 1 of
the 1,341
“Elements”
that FNAI
tracks



Pollinator Conservation

Farm Service Agency accepts pollinator habitats in reserve program

[News](#)[Videos](#)[Video Details](#)[Wikipedia](#)[Images](#)[Related Links](#)[Twitter](#)[BBC Results](#)[Shopping](#)

 [Rocky Mount Telegram](#) 2012-07-28 : NASHVILLE – [Nash County USDA Farm Service Agency Executive Director Sharon B. Taylor](#) announced that pollinator habitats, which support a variety of pollinator species, will now be accepted as a [Continuous Sign-up Conservation Reserve Program](#) practice. It is a voluntary program that helps producers apply conservation practices to safeguard environmentally sensitive... [more »](#)

*A Guide to Understanding, Protecting,
And Providing Habitat for Native Pollinator Insects*



POLLINATOR CONSERVATION HANDBOOK

The Xerces Society
In Association with The Bee Works

Featuring Photographs by Dr. Edward S. Ross



State Wildlife Action Plans



- On November 5, 2001, President Bush signed the Department of the Interior and Related Agencies Appropriations Act, 2002, which created the State Wildlife Grants (SWG) program.
- Congress stipulated that each State fish and wildlife agency that wished to participate in the SWG program must develop a Comprehensive Wildlife Conservation Strategy (Strategy) by October 1, 2005. Each Strategy was required to address eight elements listed in Section VII.

Eight Elements of SWAP's

- (1) **Information on the distribution and abundance of species of wildlife**, including low and declining populations as the state fish and wildlife agency deems appropriate, that are indicative of the diversity and health of the state's wildlife; and,
- (2) **Descriptions of extent and condition of habitats and community types** essential to conservation of species identified in (1); and,
- (3) **Descriptions of problems** which may adversely affect species identified in (1) or their habitats, **and priority research and survey efforts** needed to identify factors which may assist in restoration and improved conservation of these species and habitats; and,
- (4) **Descriptions of conservation actions** proposed to conserve the identified species and habitats and priorities for implementing such actions; and,
- (5) **Proposed plans for monitoring** species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions; and,
- (6) **Descriptions of procedures to review the plan** at intervals not to exceed ten years; and,
- (7) Plans for **coordinating the development, implementation, review, and revision of the plan with federal, state, and local agencies and Indian tribes** that manage significant land and water areas within the state or administer programs that significantly affect the conservation of identified species and habitats.
- (8) **Broad public participation** is an essential element of developing and implementing these plans, the projects that are carried out while these plans are developed, and the species in greatest need of conservation.

State Wildlife Action Plans

Florida's Wildlife Legacy Initiative



*Keeping Common
Species Common*



Florida Fish and Wildlife
Conservation Commission
Visit: MyFWC.com/wildlifelegacy

Florida's State Wildlife Action Plan



A comprehensive wildlife
conservation strategy

FLORIDA'S
Wildlife
Legacy Initiative
MyFWC.com/WildlifeLegacy

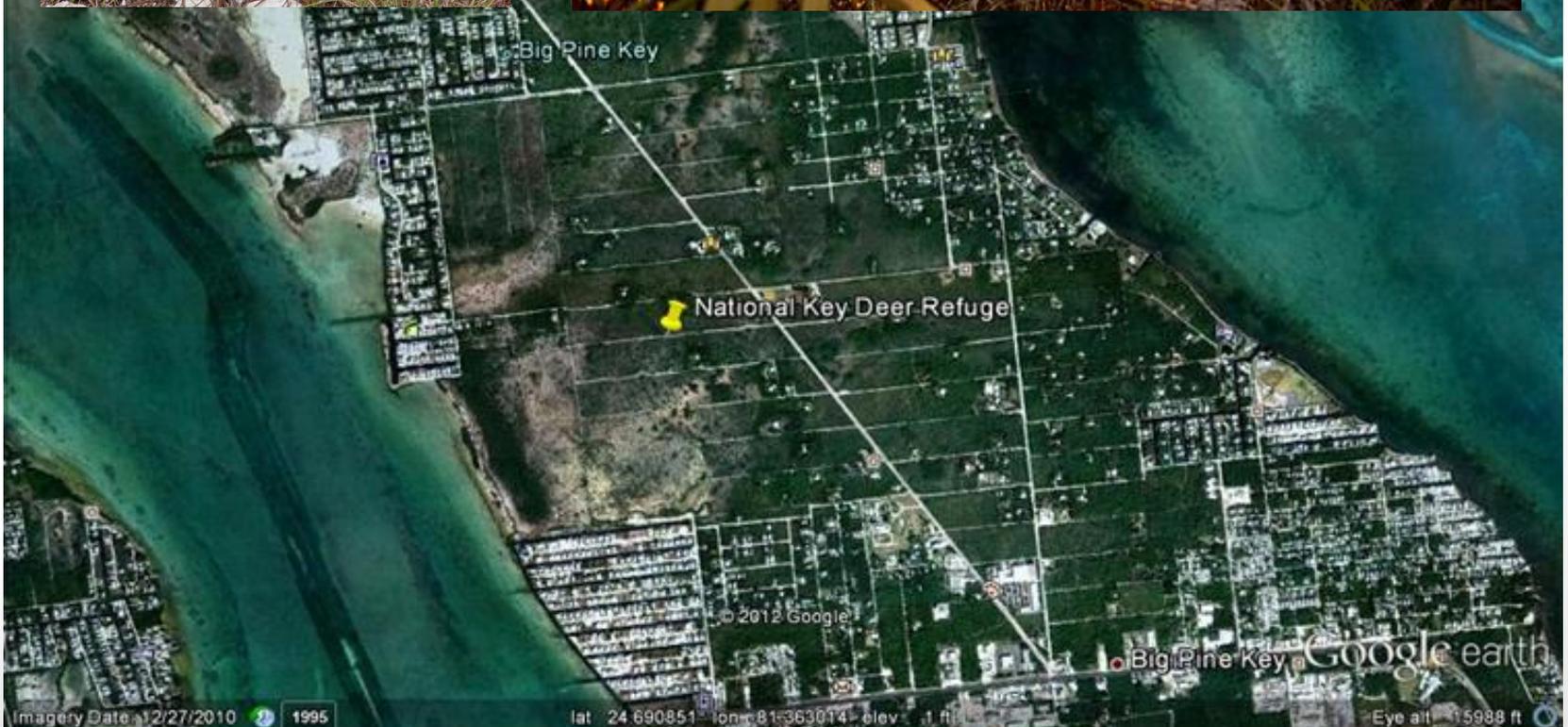


The payoff?

- \$667 Million in State Wildlife Grants from 2002 to 2012







Right to burn provision

- PROVISION TO BE IN DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR HERITAGE DOWNS AND RUNNING WITH THE LAND:
- The following provisions shall apply to the Heritage Trust Property located adjacent to Heritage Downs.
- (a) Assumed Inconveniences and Disturbances from Heritage Trust Property. By the acceptance of a deed of conveyance to a Lot or Dwelling located within Heritage Downs, such Owner acknowledges and agrees that such Owner may experience noise and smoke emanating, from time to time, from the Heritage Trust Property in connection with prescribed burning techniques employed by the South Carolina Department of Natural Resources ("SCDNR") to reduce understory growth, improve wildlife habitat, and decrease chances of wild fires, and the same may be a nuisance to the Owner. Neither the Declarant, nor the Association, nor the SCDNR, nor any of its respective affiliates, directors, officers, employees, contractors, consultants, shareholders, assignees, successors, nominees or agents, will be liable to any Owner for any inconvenience or damage sustained by such Owner as a result of any such noise and smoke emanating from or in proximity to the Heritage Trust Property. Furthermore, the SCDNR shall not in any way be considered an insurer or guarantor of the effectiveness of any such controlled burns undertaken or failed to be undertaken to reduce the chances for wild fires, and neither the Declarant, nor the Association, nor the SCDNR shall be liable for any loss or damage resulting from any failure of the SCDNR to provide safety measures with respect to such controlled burns, or from a failure or ineffectiveness of any safety procedures that may be undertaken.

Ways we evolve and change:

- By changes in our workforce
- By changes in technology
- By learning new things and changing the way we think
 - Study our successes and study our failures. Look for the patterns. Take the good models and duplicate them
- Evolutions and changes happen at different scales, but they're linked (Natural Heritage Programs preceded SWAP's)
- Lots of communication is important

Part I The Change Problem And Its Solution

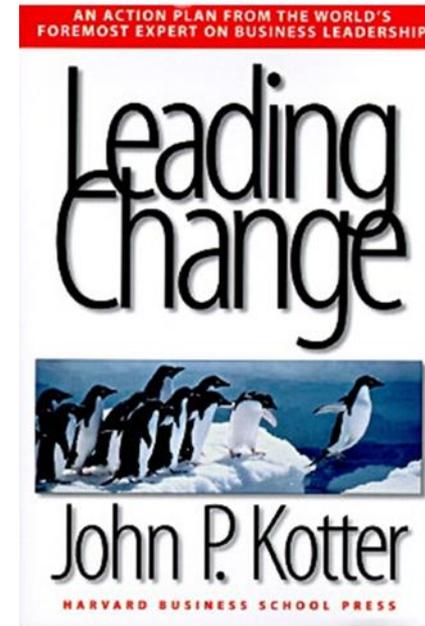
1. Transforming Organizations: Why Firms Fail
2. Successful Change and the Force That Drives It

Part II The Eight Stage Process

3. Establishing a Sense of Urgency
4. Creating the Guiding Coalition
5. Developing a Vision and Strategy
6. Communicating the Change Vision
7. Empowering Employees for Broad-Based Action
8. Generating Short-Term Wins
9. Consolidating Gains and Producing More Change
10. Anchoring New Approaches in the Culture

Part III Implications For The Twenty-First Century

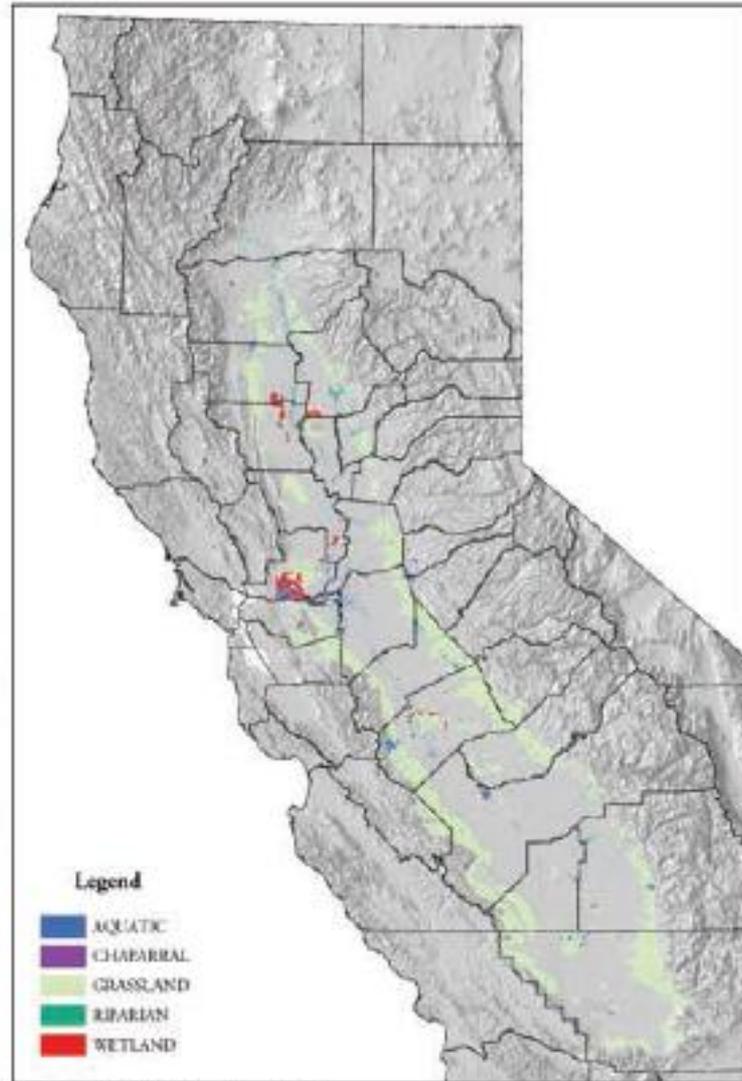
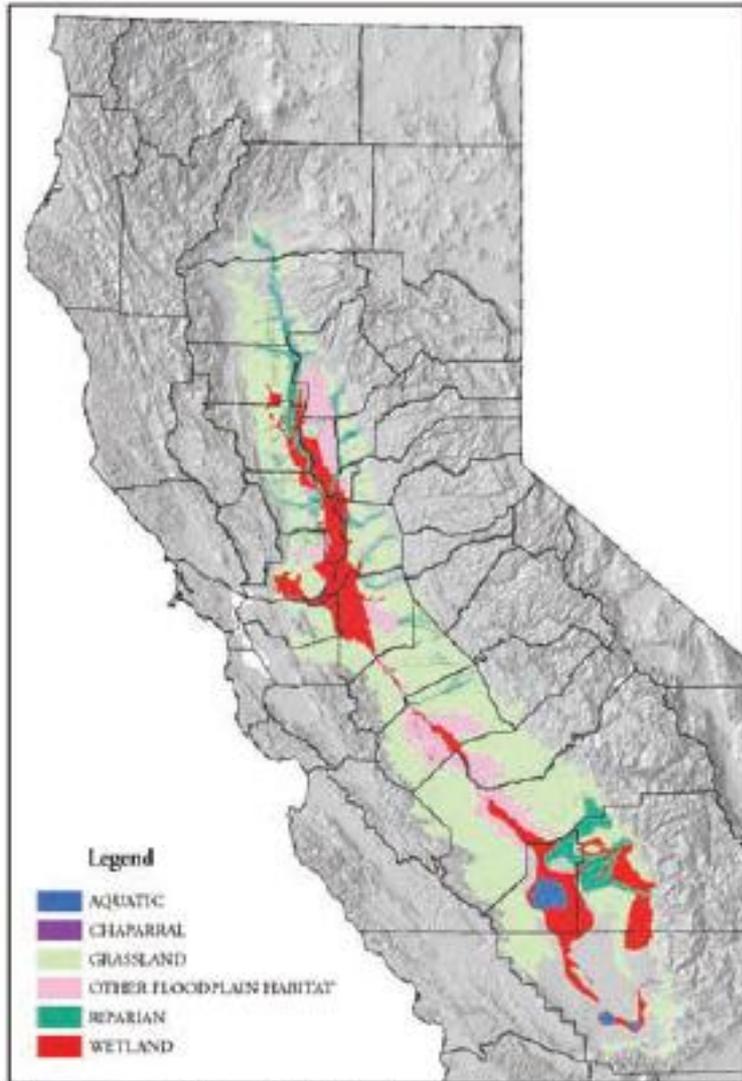
11. The Organization of the Future
12. Leadership and Lifelong Learning



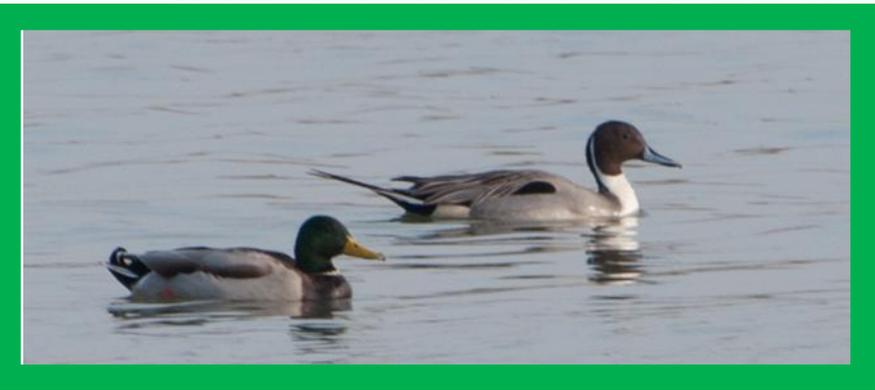
Landscape Scale Conservation

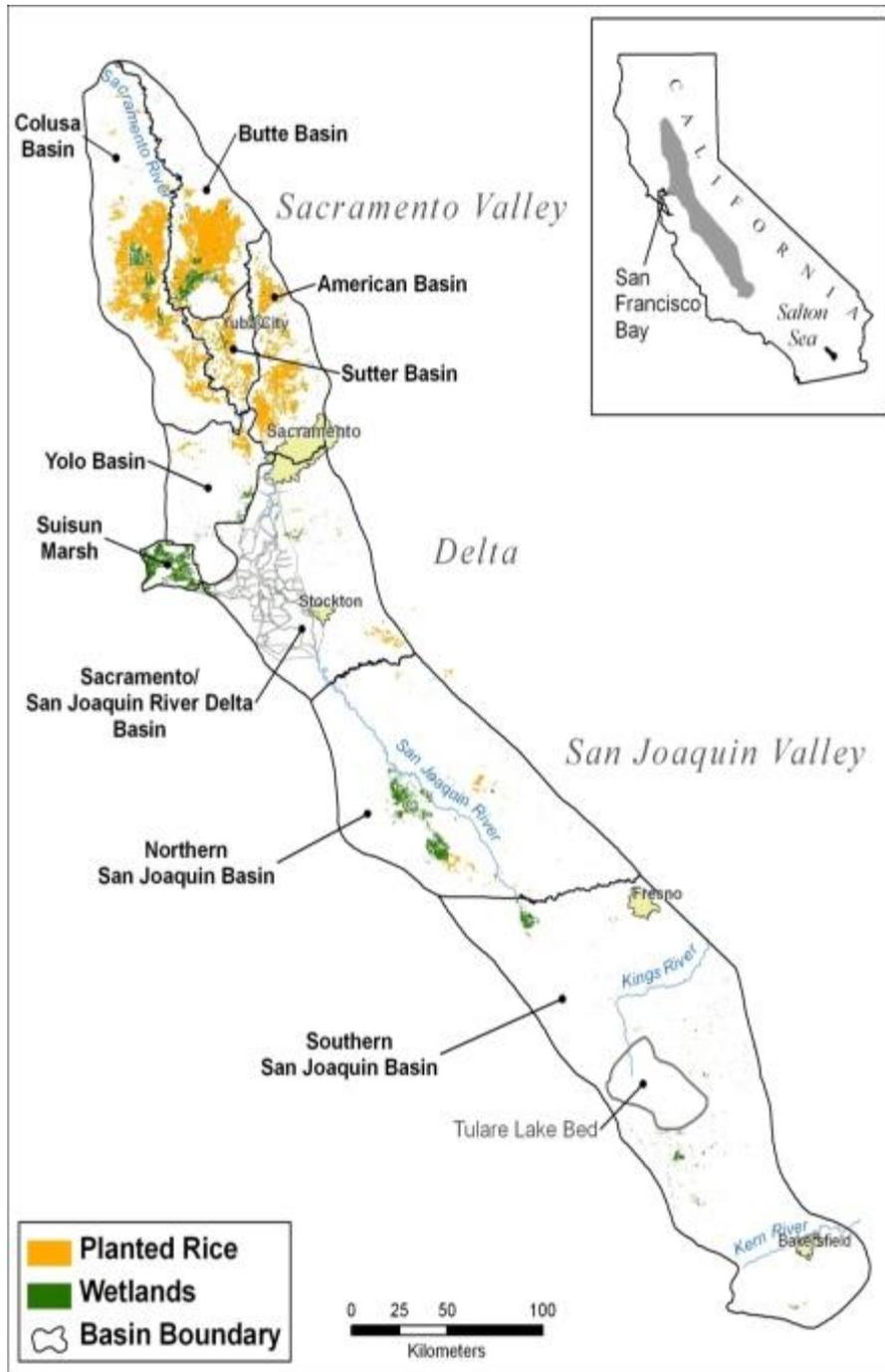
- Florida Keys
- Flint Hills
- Everglades Headwaters
- Butte Sink Refuge, Sacramento Complex, Central Valley JV, Pacific Flyway

Central Valley JV began in 1988



Data Sources: GIC Central Valley Historic Mapping Project, Chico State USGS 3-Arc Second Digital Elevation Model





- Planted Rice
- Wetlands
- Basin Boundary

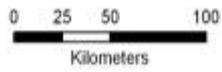




Figure 3-1. Central Valley Joint Venture basin boundaries.



Water Needs in Acre-Feet

Area	Level 1	Level 2	Level 3	Level 4	Objective
Sacramento NWR	0	46,400	50,000	50,000	50,000
Delevan NWR	0	20,950	25,000	30,000	30,000
Colusa NWR	0	25,000	25,000	25,000	25,000
Sutter NWR	0	23,500	30,000	30,000	30,000
Gray Lodge WA	8,000	35,400	41,000	44,000	36,000
Grassland RCD	50,000	125,000	180,000	180,000	130,000
Volta WA	10,000	10,000	13,000	16,000	6,000
Los Banos WA	6,200	16,670	22,500	25,000	18,800
Kesterson NWR	3,500	3,500	10,000	10,000	6,500
San Luis NWR	0	13,350	19,000	19,000	19,000
Merced NWR	0	13,350	16,000	16,000	16,000
Mendota NWR	25,500	18,500	24,000	29,650	4,150
Pixley NWR	0	1,280	3,000	6,000	6,000
Kern NWR	0	9,950	25,000	25,000	25,000
Total	103,200	353,050	473,550	505,650	402,450

It works!

Central Valley JV Acres Protected		
Basin	Objective	Protected 1990-2003
Yolo	5,000	2,935
American	2,000	318
San Joaquin	52,500	40,138
Tulare	5,000	54
Butte	10,000	10,690
Delta	3,000	1,704
Colusa	2,000	794
Sutter	500	145
Total	80,000	56,778

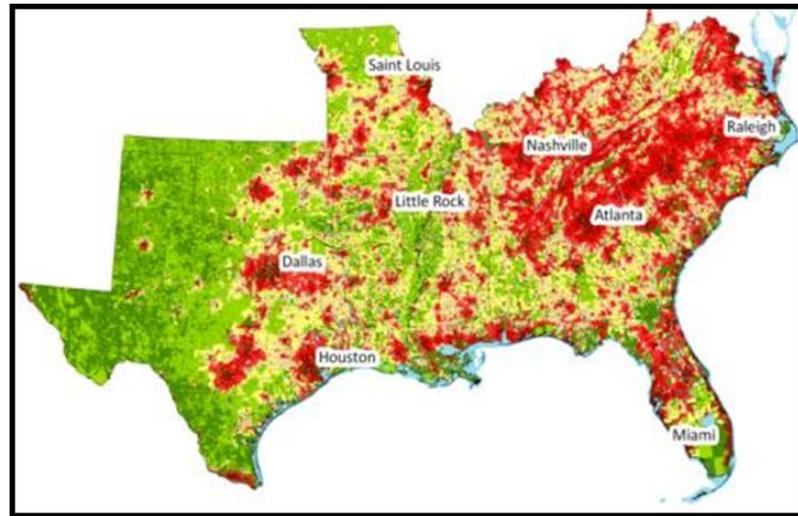
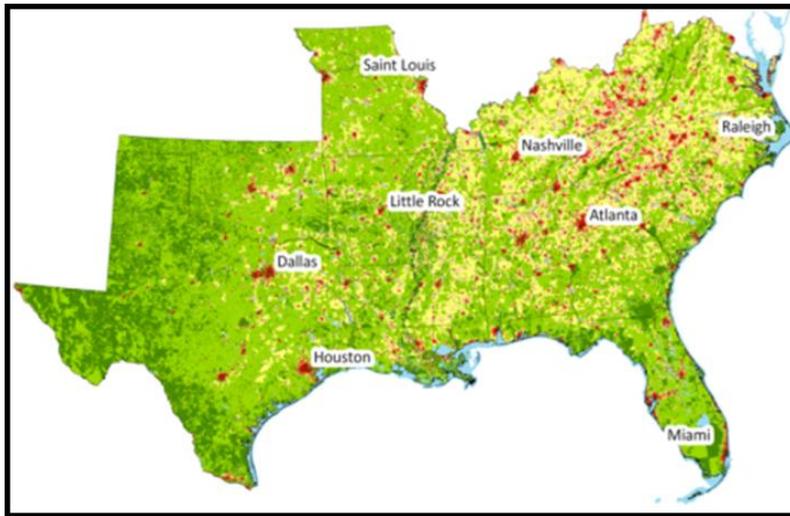
5-Year Review for Giant Garter Snakes, June 2012

Butte Basin: Surveys in 2008 to 2010 by USGS have found snakes at several new locations in southwest Butte County including the Butte Basin WA. Estimates of giant garter snake density along a linear segment at three locations in southwest Butte County were 7 snakes per kilometer, 94 snakes per kilometer, and 91 snakes per kilometer.

Consider the role of selecting species and where we stand now:

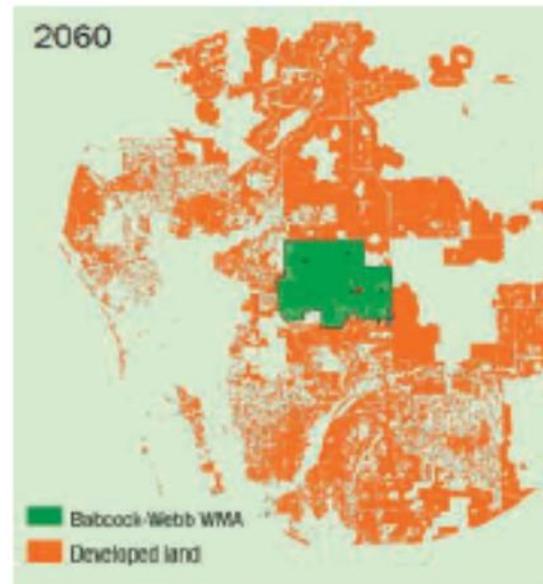
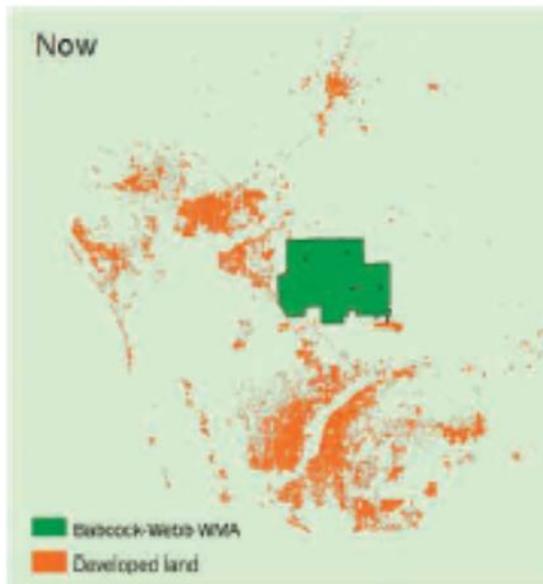
- We have information we've never had before
- We can see patterns that inform our work better than it's ever been informed
- Our job is to build our next best strategy so we can be even more successful with our conservation work
- Need solid reasons for conserving and restoring functional landscapes (rebuild the patient but you get only a foot, a scapula and two vertebrae)

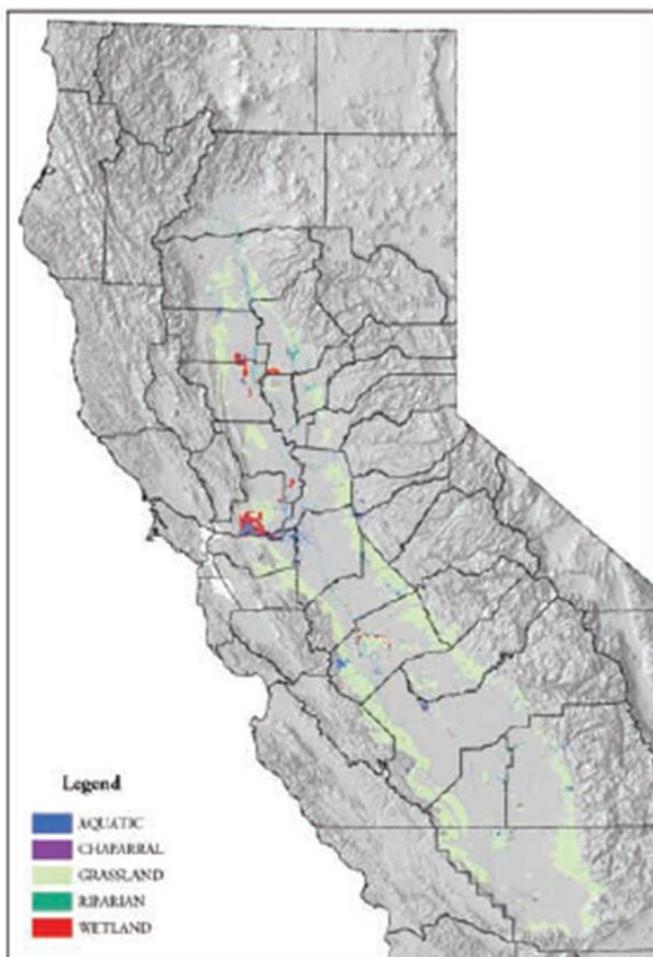
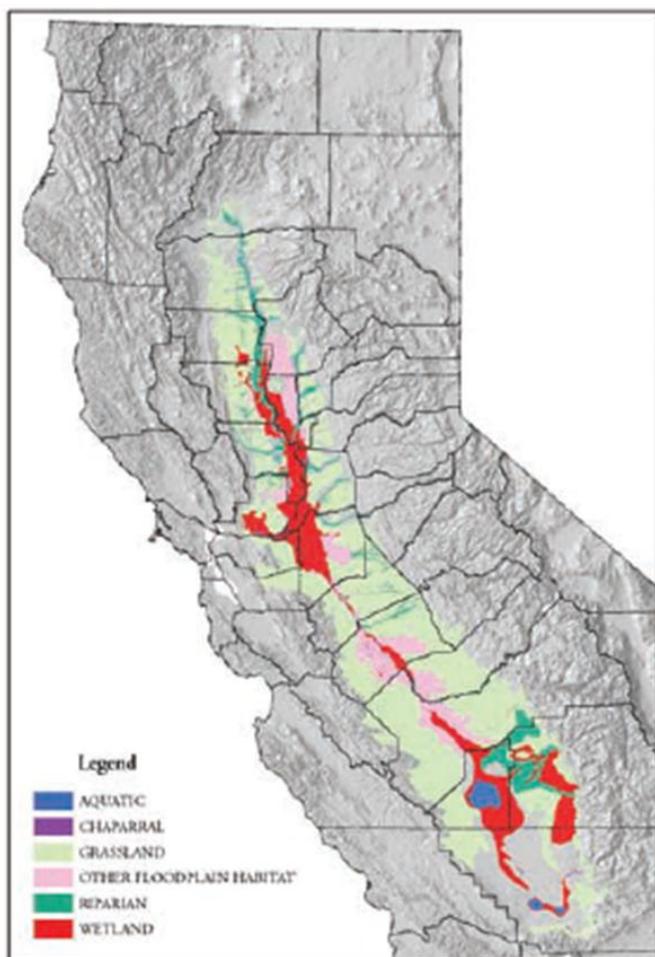
Urban Growth: 1940 - 2030



Southeast Conservation Adaptation Strategy -
SECAS

Projections for Developed Land Around Babcock-Webb WMA





Data Sources: GIC Central Valley Historic Mapping Project, Chico State USGS 3-Arc Second Digital Elevation Model

The Role of Selecting Species

- Part of the evolution
- The right next step in that evolution
- Will not be perfect, can't let that stop us
- Picking the scale(s) will be challenging, but remember they need to be linked, not linked perfectly
- We have a lot of skill in picking “target” species and using them for major successes. It's time to crank it up a notch and pick surrogate species that help us design “Functional Landscapes”
- South Florida Field Office has 68 listed species in the 19 counties we work in
- We need this step!

Adaptation and escalating/refining strategies



From page 8 of the draft guidance

- “Even with these limitations, the use of surrogate species is a meaningful first step in an adaptive approach that will be refined as conservation organizations develop collaborative capacity, use and develop new techniques, and improve our understanding of how landscape features and ecological processes affect biological outcomes.”

Partnerships, learning, evolving, doing conservation together



Message for these 2 days:

“What do you think?”