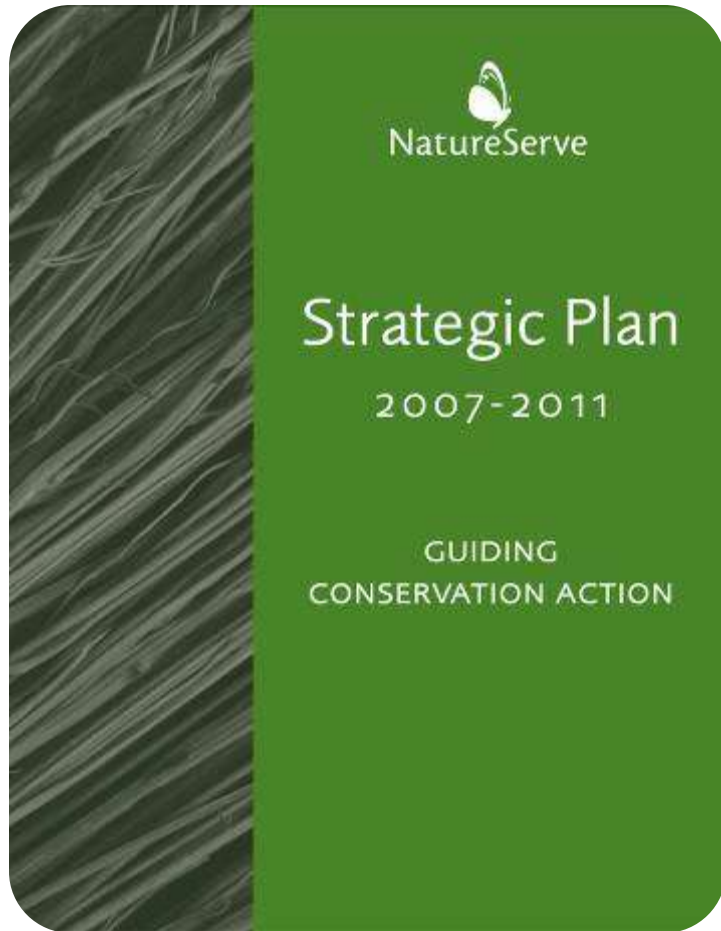


# Screening an Area for At-Risk Species: Biodiversity Data Delivered to the Desktop

**April 2010**

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[Kat\\_maybury@natureserve.org](mailto:Kat_maybury@natureserve.org)  
703.908.1882



# NatureServe

A Network Connecting Science With Conservation

## Our Mission

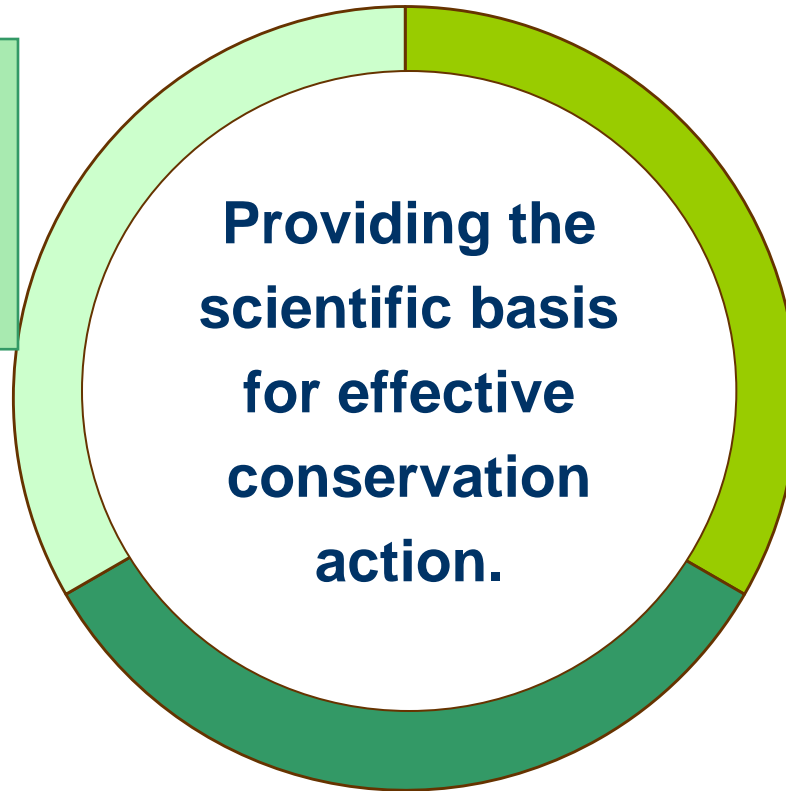
To provide the scientific basis for effective conservation action



NatureServe

# Framework: Three Major Goals

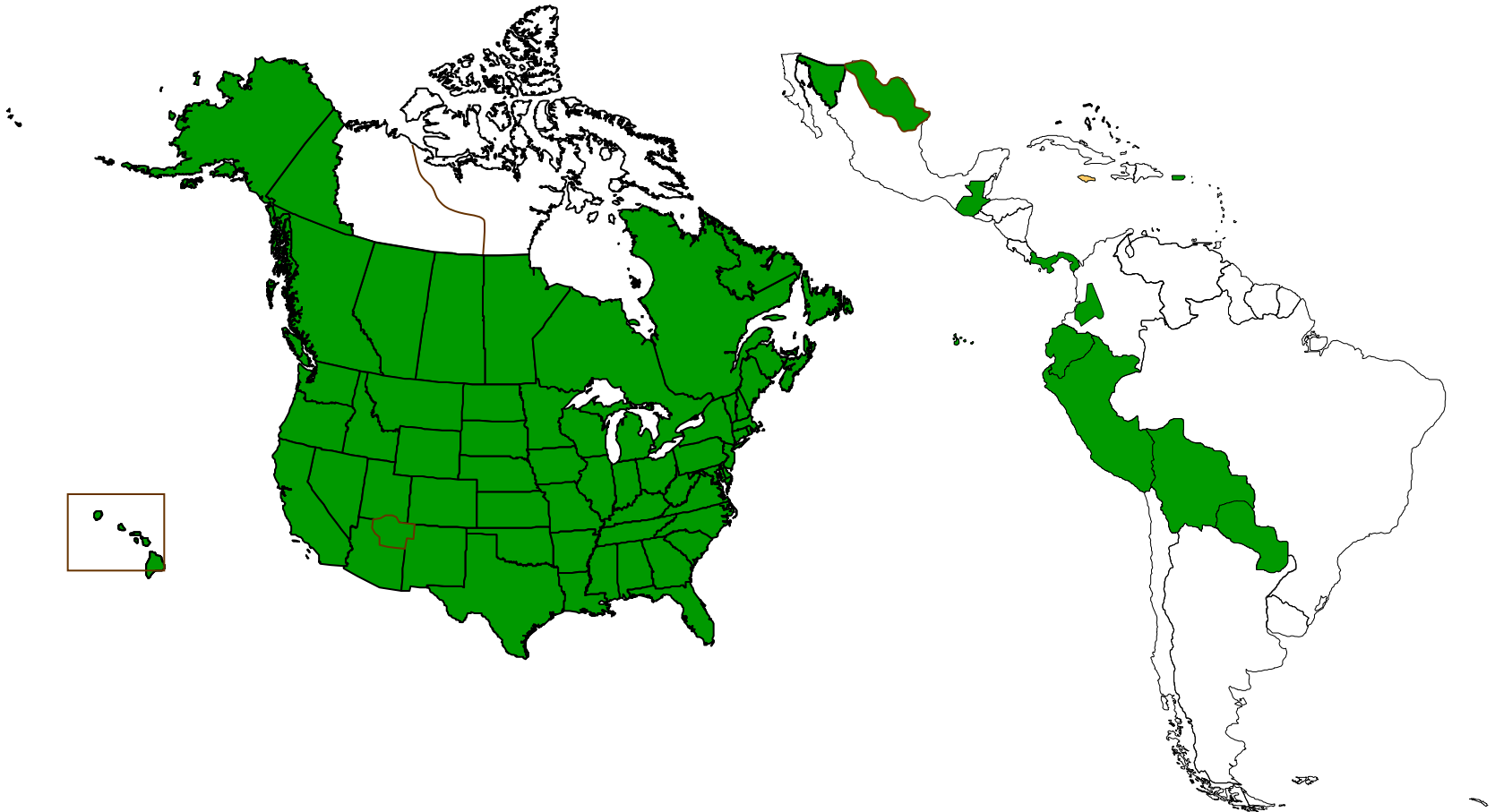
**GOAL 1**  
Inform  
Natural Resource  
Decisions



**GOAL 2**  
Advance Scientific  
Understanding

**GOAL 3**  
Build Conservation Capacity

# The NatureServe Network

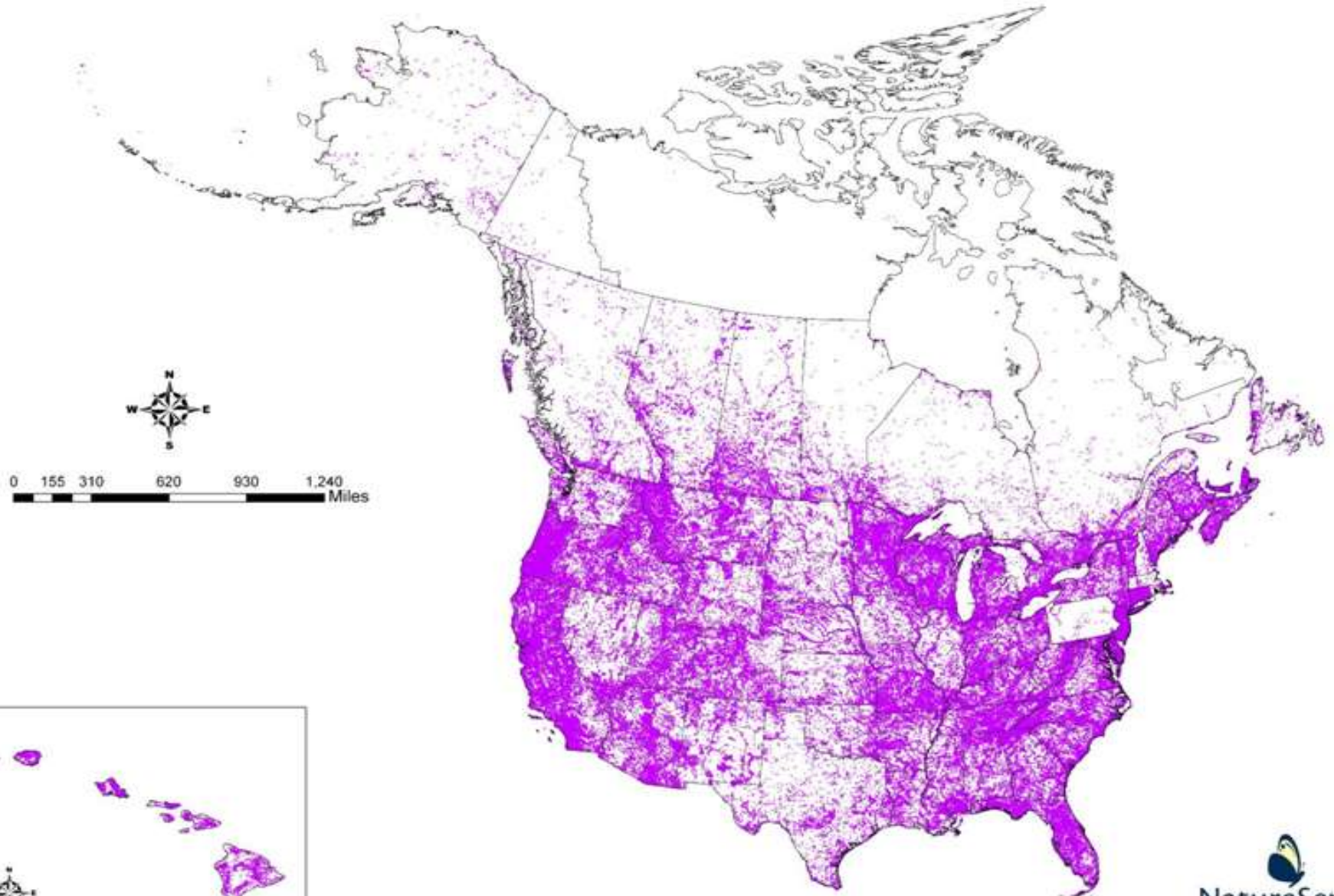




Virginia Div. Natural Heritage  
Photo by L. Richardson

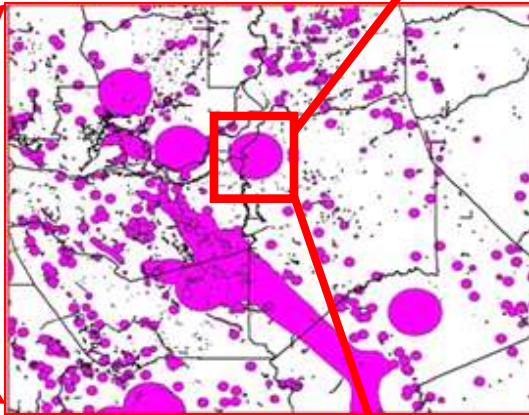
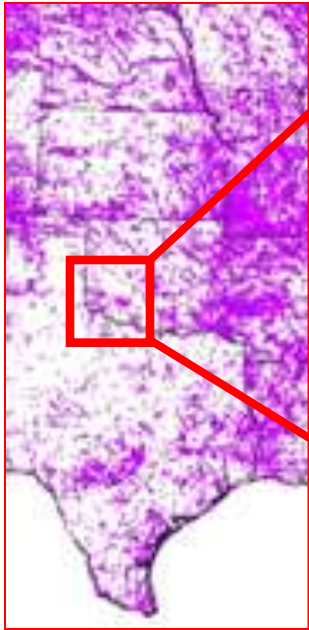
Photo by  
R. White

# 600,000+ Mapped Populations



\*Notes: Animal data for Washington and Alaska is not currently available.  
The data presented for MA, NH, and PA only includes species ranked as G1 or G2.

# Beyond the Map



Shape	Polygon
Feature_id	538
Feat_code	1010
Mod_by	rlb
Mod_date	20070418 16:58:31
Mappedby	LJS
Mappeddate	19920214
Themefield	
Eo_id	9357.000000
Sname	Neonympha mitchellii mitchellii
Scomname	Mitchell's Satyr
Acreage	49.04195
Precision	S
Element_id	11743.000000
Elcode	IILEPN3021
Eo_num	22.000000
Surveysite	BLUE CREEK FEN
Directions	Where Blue Cr. crosses Territorial Rd. Site is to
Mdot_row	
Firstobs	1958
Lastobs	2006-07-06
Eo_data	1958: ind. specimen collected; 1987-06-28: 75
Eorank	CD
Usesa	LE
Sprot	E
Grank	G1G2T1T2
Srank	S1
Last_map_b	LJS
Last_mapda	1992-02-14 00:00:00
Elcat	Animal

# Respected Information Source

- *“The network’s database on species and ecosystems is widely viewed as the **most complete and detailed in the nation**, and is **the country’s leading source of biological information** for conservation planners, government agencies and land managers.”*  
– **The New York Times** (March 2000)
- *“NatureServe has established an impressive record of accomplishment . . . There is **no other information resource comparable to its authoritative centralized database of species occurrences**, compiled over 25 years by natural heritage programs... NatureServe combines its scientific resources, a commitment to working in partnership with other institutions, and a strong vision for the future to provide a foundation for conservation action.”*  
-- **Edward O. Wilson**, Pulitzer-Prize winning author of *The Diversity of Life* (June 2002)



# Convenient One-Stop Shopping



# Web Service Screening Tool Launched

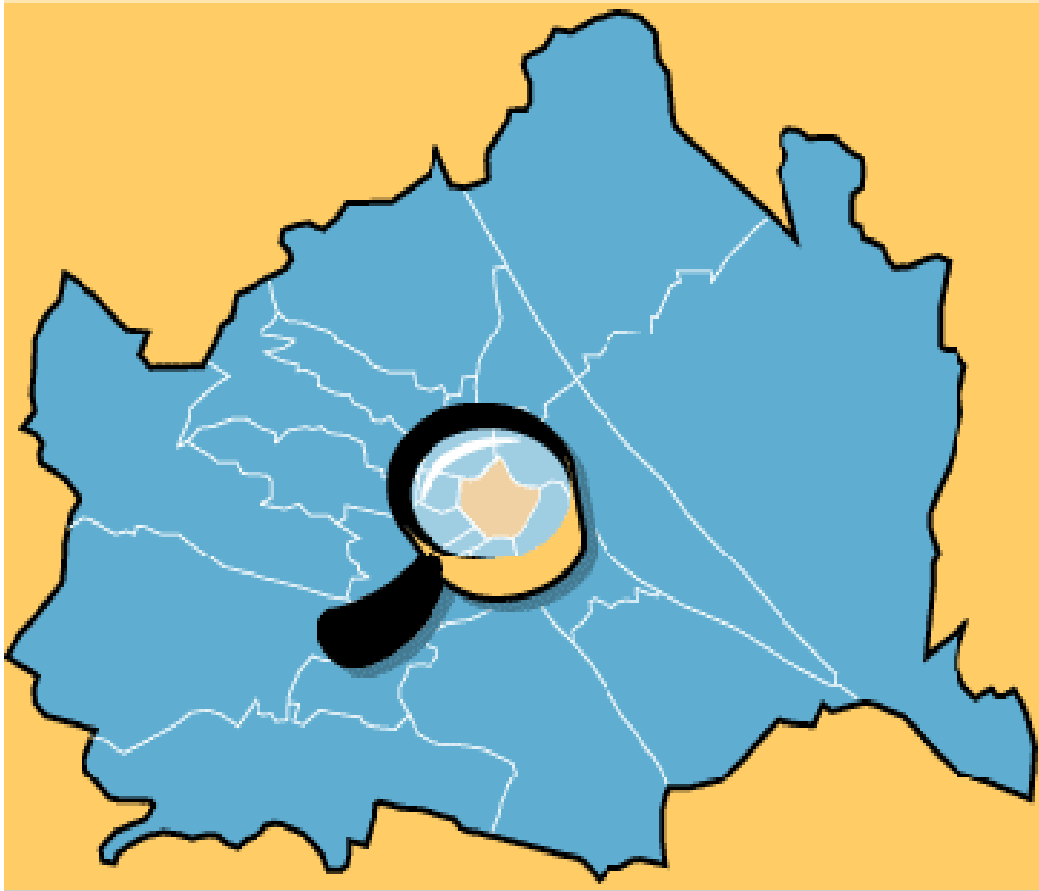
NatureServe has created a new web service that provides information on the at-risk plants and animals of North America.

**You can use this service to query an area of interest and determine whether any at-risk species are known from that area.**

Examples:

- Submit a custom polygon (any area larger than 1 square mile) and find out if any species with status under the U.S. Endangered Species Act are known to be in or near your project area.
- Discover which at-risk species are known within your county, watershed, USGS 7.5' quadrangle, or planning area.
- Find the best source for local information about these populations of plants and animals.

# How it Works



## 1. Select an area of interest:

- Custom Polygon
- FIPS County Code
- 8-digit HUC
- 7.5' Quadrangle

**2. Restrict results,**  
if desired e.g. only  
species with status  
under the USESA



# How it Works

- Does not return spatial data
- Offers scalable levels of information: the smaller the area queried the less detailed the information about what's in the area.

Low spatial resolution;  
High attribute detail



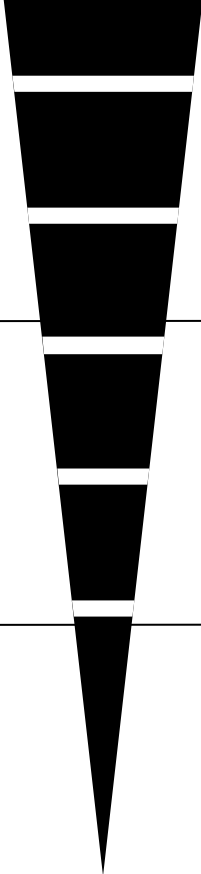
High spatial resolution;  
Low attribute detail

vs.

# How it Works

## *Size of Area Queried*

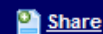
## *Information Detail Returned*

<p><b>Larger:</b> down to 1/4 Quad (~14 sq miles or 36 sq km)</p>		<p><b>Maximum:</b> species by name and with comprehensive information about the species, as well as information on each individual population (e.g., when last observed, viability)</p>
<p><b>Medium:</b> down to 1/4 of a 1/4 Quad (~3.7 sq miles or 10 sq km)</p>		<p><b>Intermediate:</b> species not named, but identified by major group (e.g., bird species 1; bird species 2; plant species 1), and with information about each</p>
<p><b>Small:</b> down to 1 sq mile or 2.6 sq km.</p>		<p><b>Minimum:</b> a "Yes" that at least one species is known there (or a "Not Known")</p>

# Current Uses: NEPAssist

U.S. ENVIRONMENTAL PROTECTION AGENCY

## NEPAssist



Contact Us Search:  All EPA  This Area

You are here: [EPA Home](#) » [NEPAssist Home](#)



Area of digitized polygon	78.53 sq mi
<b>Places</b>	
Within 1000 meters of a hospital?	58
Within 1000 meters of a school?	58
Within 1000 meters of a church?	58
Within 500 meters of a Congressional District?	103
Is study area within endangered species area at the County level?	103

A web-based application that:

- Draws environmental data dynamically
- **Raises important environmental issues at the earliest stages of project development**



NatureServe

Contact Us Search:  All EPA  This Area

You are here: [EPA Home](#) » [NEPAssist Home](#)

Results for 0 meters from study area

Study area type: polygon

Total area of study area plus buffer: 185.26 sq km / 71.53 sq mi

Modify question by entering a new buffer distance and unit for the selected study area:

Common Name	Name Scientific Name	Taxonomy		Conservation Status	
		Species Group (Broad)	Species Group (Fine)	NatureServe Global Status	U.S. Endangered Species Act Status
<a href="#">Florida Panther</a> Display full report	<i>Puma concolor coryi</i>	Animals, Vertebrates	Carnivores	T1 - Critically Imperiled	LE: Listed endangered
<a href="#">Eastern Indigo Snake</a> Display full report	<i>Drymarchon couperi</i>	Animals, Vertebrates	Snakes	G3 - Vulnerable	LT: Listed threatened
<a href="#">Cape Sable Sparrow</a> Display full report	<i>Ammodramus maritimus mirabilis</i>	Animals, Vertebrates	Perching Birds	T1 - Critically Imperiled	LE: Listed endangered
<a href="#">Mangrove Gambusia</a> Display full report	<i>Gambusia rhizophorae</i>	Animals, Vertebrates	Bony Fishes	G3 - Vulnerable	
<a href="#">Bartram's Hairstreak</a> Display full report	<i>Strymon acis bartrami</i>	Animals, Invertebrates	Butterflies and Moths	T1 - Critically Imperiled	C: Candidate
<a href="#">Everglades Key Pencil-flower</a> Display full report	<i>Stylosanthes calcicola</i>	Plants, Vascular	Pea Family	G3 - Vulnerable	
<a href="#">Small Prescottia</a> Display full report	<i>Prescotia oligantha</i>	Plants, Vascular	Orchid Family	G4 - Apparently Secure	
<a href="#">Holly-leaf Fern</a> Display full report	<i>Lomariopsis kunzeana</i>	Plants, Vascular		G3 - Vulnerable	
<a href="#">Bahama Sachsia</a> Display full report	<i>Sachsia polycephala</i>	Plants, Vascular	Aster Family	G2 - Imperiled	
<a href="#">Myrtle-of-the-river</a> Display full report	<i>Calyptanthes zuzygium</i>	Plants, Vascular	Myrtle Family	G4 - Apparently Secure	
Florida Gamanrass	<i>Trinsacum floridanum</i>	Plants, Vascular	Grass Family	G2 - Imperiled	

# Current Uses: Emergency Response

EnviroMapper for EOC - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://134.67.221.114/era/em4er.asp

## Emergency Response Analyzer

Jan 17, 2008 12:07

ER Events

From: To: High-light Zoom To Show Time Scale Print

New Geography

Find ER Site List Site

Zoom In Zoom Out 2X Recenter Identify

Select a feature

- Air emissions
- City Boundaries
- Congress'l Districts
- Countries
- Daycare centers
- ER Sites
- FEMA Region HQ
- Federal lands
- Fire stations
- Hazardous waste
- Highways
- Hospitals
- Landfill
- Multi-activities
- NOAA ESI
- RCRA TSD
- RMP
- Railroads
- Schools
- Sections boundary
- Streams
- Streets
- Superfund
- Townships boundary
- Toxic releases
- Water bodies
- Water dischargers
- ZIP Codes

Endangered Species

There is no OSC site in the time period you specified.

Map Features Legend

- ER Sites
- Cities
- Streets
- Major roads
- Local streets
- Townships boundary
- BLM Alternate
- N/A
- Sections boundary
- BLM Alternate
- Countries
- Countries

Refresh Map

# Next Steps: Our Own Interface

The screenshot displays the NatureServe Explorer website. At the top left is the logo with the text "NatureServe EXPLORER". To the right, it says "An Online Encyclopedia of Life" and "NatureServe". A navigation bar contains links for "Search", "About Us", "About the Data", "Local Programs", and "Help". Below the navigation bar is a topographic map of a region with a creek labeled "Baselder Creek". On the left side of the map, there is a photograph of a pond with lily pads and pink flowers. A "Highlights" section on the left contains the text: "February 2009 Data Refresh! NatureServe Explorer species and ecological community data updated February 6, 2009." A search results panel is overlaid on the map, showing a tree view: "Animals, Vertebrates" (expanded) -> "Birds" (selected) [  Entire group selected ] [ Search Now ]. Under "Birds", there are several categories with checkboxes: "Wading Birds" (checked), "Waterfowl" (checked), "Raptors" (unchecked), "Shorebirds" (checked), "Perching Birds" (unchecked), and "Other Birds" (unchecked). On the right side of the interface, a "Choose Criteria" panel is visible, titled "Federal statuses under the U.S. Endangered Species Act". It lists several criteria with checkboxes: "Listed Endangered" (checked), "Listed Threatened" (checked), "Proposed for Delisting" (unchecked), "Proposed Endangered" (checked), "Proposed Threatened" (checked), "Candidate" (checked), "Special Concern" (unchecked), "Essential or Non-Essential Experimental Population" (unchecked), and "No U.S. Federal Status" (unchecked). Below the list are buttons for "Select All", "Select None", and "submit".

## Highlights

### February 2009 Data Refresh!

NatureServe Explorer species and ecological community data updated February 6, 2009.

#### ↑ Animals, Vertebrates

→ **Birds** [  Entire group selected ] [Search Now](#)

↓  Wading Birds

↓  Waterfowl

↓  Raptors

↓  Shorebirds

↓  Perching Birds

↓  Other Birds

## Choose Criteria

### Federal statuses under the U.S. Endangered Species Act

- Listed Endangered
- Listed Threatened
- Proposed for Delisting
- Proposed Endangered
- Proposed Threatened
- Candidate
- Special Concern
- Essential or Non-Essential Experimental Population
- No U.S. Federal Status

[Select All](#)

[Select None](#)

[submit](#)

# Next Steps: Interface



*Dendroica chrysoparia* (Sclater and Salvin, 1860)

- Golden-cheeked Warbler -

A member of the Perching Birds group in the Parulidae family.

Basic description : A small songbird (warbler).



© Public Domain

**Habitat comments :** BREEDING: Old-growth and mature regrowth Ashe juniper-oak woodlands in limestone hills and canyons, 180 to 520 meters elevation (summarized in Ladd and Gass 1999). Edges and open mosaics of Ashe juniper-scrub oak association in broken terrain in canyons and slopes; closed canopy stands with plenty of old junipers and a sufficient proportion of deciduous oaks in the canopy (Sexton 1992); occupied sites contain junipers at least 40 years old. May occupy habitat patches as small as perhaps 50 ha (larger if close to urban areas) (Sexton 1992). NESTING: Nests usually in upright fork of mature juniper, about 1.5-9 m above ground. Depends on sloughed juniper bark for nesting material. Both males and females tend to return to the same territory to breed.

NON-BREEDING: In migration and winter, occurs mainly in montane pine or pine-oak association (Vidal et al. 1994); recently recorded also in broadleaf associations in lower montane wet and tropical forest (Vannini, in Collar et al. 1992). In Honduras and Guatemala, found primarily above 1300 m in pine-oak forest (Rappole et al. 1999). Dominant pine species was coote (PINUS OCCARPA) and dominant oaks were "encino" oaks (QUERCUS SAPOTIFOLIA, Q. ELIPTICA, Q. ELONGATA, and Q. CORTESII) (Rappole et al. 1999).

Global status : G2

Global status last reviewed : 12/03/1996

Global status reasons : Small breeding range in central Texas; vulnerable to habitat alteration; threats include urbanization, juniper eradication, and cowbird parasitism.

IUCN Red List category : EN - Endangered

US ESA status : LE: Listed endangered



References : References for information cited in this report are available at <http://www.natureserve.org/explorer>

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# How Can This Meet Your Needs? (And Meet Our Goal?)

NatureServe's goal is to *make biodiversity a mainstream consideration* in all significant conservation and natural resource management decisions by making it simple for conservationists, government agencies, corporations, and landowners to access and use high-quality biodiversity information.

---NatureServe's Strategic Plan 2007-2011



# Discussion

When this service is available, which of your needs would it meet?

What would make it more useful ?

Are the spatial scales you can query useful?

How important is the future development of an interface and advanced search criteria to you?

Would you be interested in other *types* of data being served, e.g:

- Where at-risk species might be based on predictive models that locate appropriate habitat?
- Or where very rare natural communities are located?

**What can we do to improve the tool for you?**