







SIC Webinar: **Biodiversity Data** Resources for Supporting SFI Conservation Objectives

Welcome and Introductions

Speakers:



Dr. Healy Hamilton Chief Scientist Sustainable Forestry Initiative



Chad Leatherwood Senior Sustainability Transformation Manager Weyerhaeuser





Rickie White Conservation Applications Strategist NatureServe





CONTINUING EDUCATION CREDITS

Society of American Foresters

1.5 credits, Category 1

SFI will submit participation list



Canadian Institute of Forestry

1.5 credits

Self report









SESSIONS

MAY 20-23, 2025



WHAT'S NEXT?:
FOREST PRODUCTS
INNOVATION TO
ADVANCE
SUSTAINABILITY

FORESTS IN 4D: DUE DILIGENCE, DEFORESTATION, AND DEGRADATION



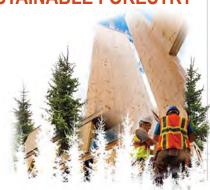
MAGNIFICENT MAPS: HOW SPATIAL DATA AND TECHNOLOGY ARE TRANSFORMING FOREST CONSERVATION



SFI @ 30 YEARS: CELBRATING THE PAST, LOOKING TO THE FUTURE



DRIVING DEMAND: HOW MARKETS PROMOTE SUSTAINABLE FORESTRY



GENERATION "TREE":
FUTURE FOREST
WORKFORCE
OPPORTUNITIES



PLANTING THE SEED:
PARTNERSHIPS TO GROW
FOREST LITERACY



WHERE THE SIDEWALK STARTS: PATHWAYS TO URBAN FOREST SUSTAINABILITY



MEASURE THIS!: THE
VALUE OF SFI IN GLOBAL
REPORTING
FRAMEWORKS



Webinar Objectives

- Describe SFI's work to grow the availability, understanding, and application of biodiversity data and tools that support certified organizations meet the conservation objectives of the FM and FS standards
 - oldentifying FECV, T & E species, ecologically important sites, old growth forests
 - Managing for conservation values
 - Avoiding controversial sources
 - Measuring and reporting on nature metrics
- To share new and emerging relevant datasets, and the expanding capabilities of existing tools
- To receive feedback from SICs on the scope, scale, and most useful outputs
- To inspire more biodiversity data collection, analysis, and reporting



Webinar Overview

1:00 - 1:10 Welcome, Intros, Objectives

1:10 - 1:50 **Part 1**: Biodiversity data & SFI Standards: Description and progress report for SFI/NatureServe/Weyerhaeuser biodiversity project tasks

 Compilation of biodiversity data, tools, and training materials

- 2. Gap analysis of data for identifying FECV species and communities
- 3. Improving biodiversity data in fiber sourcing through identification of **Unique Landscape Features**

1:50-2:00 Part 2: Mill fiber sourcing example

2:00-2:30 Q&A, Discussion and Feedback

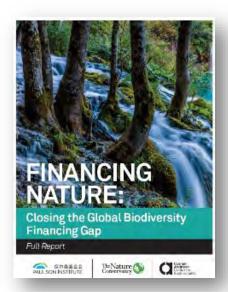
IDENTIFIED AREAS ON SFI-CERTIFIED FORESTS (NEW!)

89%

of SFI-certified organizations (125 out of 141) reported having forests critical to threatened and endangered species and/or special sites or ecologically important non-forest ecosystems on their forest land.

| 4.4 Please select the following areas that have been identified on your land: | TOTAL COUNT OF ORGANIZATIONS SELECTING AREA TYPE | |
|---|--|--|
| Rare, ecologically important, non-native species that are becoming rare | 45% | |
| FECV | 52% | |
| Old growth forests | 48% | |
| Forest critical to threatened and endangered species | 74% | |
| Special sites or ecologically important non-forest ecosystems | 74% | |
| Easements | 53% SUSTAINA | |

BUSINESS AND FINANCE SECTORS ARE INCREASINGLY SEEKING TO ACCOUNT FOR NATURE





Investors push 10,000 companies to disclose environmental data to CDP



A World Bank Group paper on private finance for biodiversity and ecosystem services

INVESTING IN NATURE:
FINANCING CONSERVATION
AND NATURE-BASED
SOLUTIONS

Biodiversity: Finance and the Economic and Business Case for Action

The Post-2020 Global Biodiversity Framework and What it Means for Business





Part 1: Biodiversity Data & SFI Standards

1. Compilation of biodiversity data, tools, and training materials/presentations

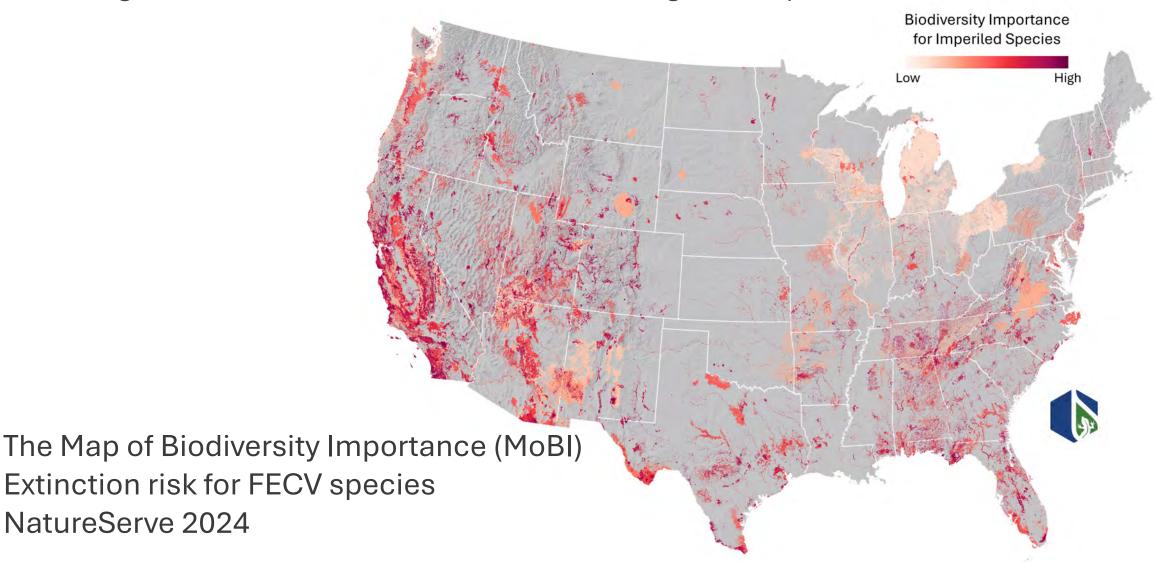
How to access data and information focused on identifying, managing, and sustaining sites of conservation importance as described in the FM and FS standards, including:

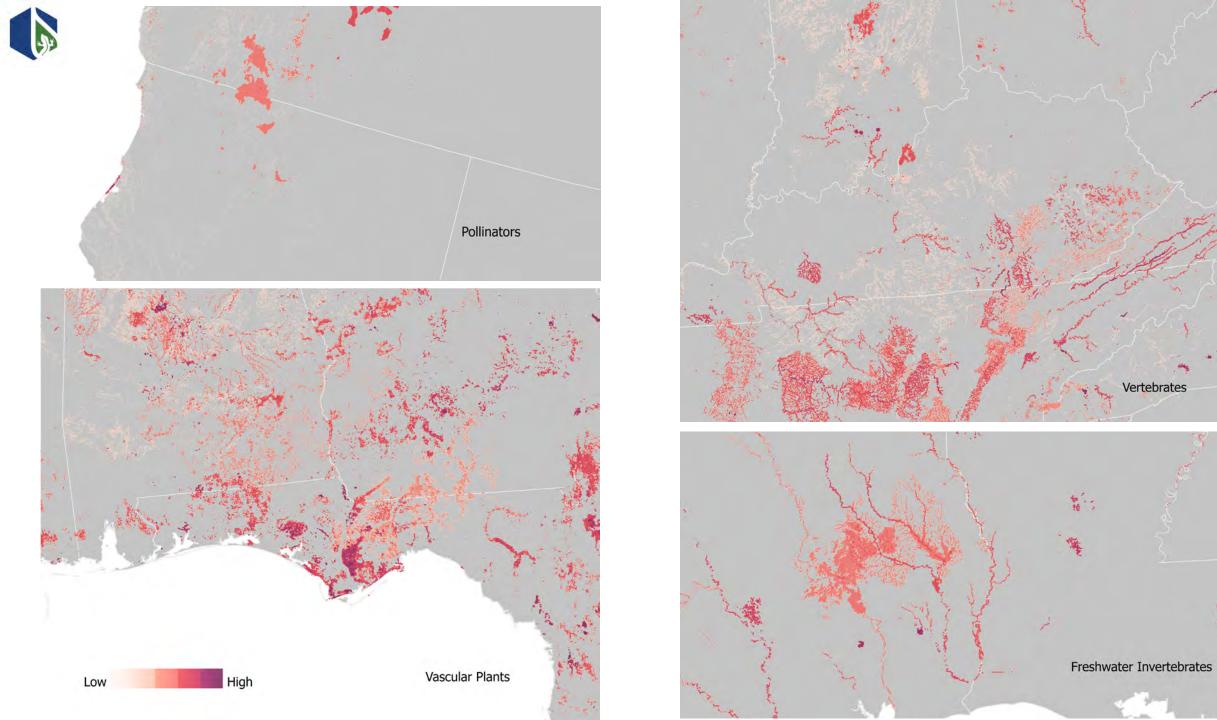
- FECV
- Threatened and Endangered Species
- Old growth forests
- Key Biodiversity Areas
- and other ecologically important sites

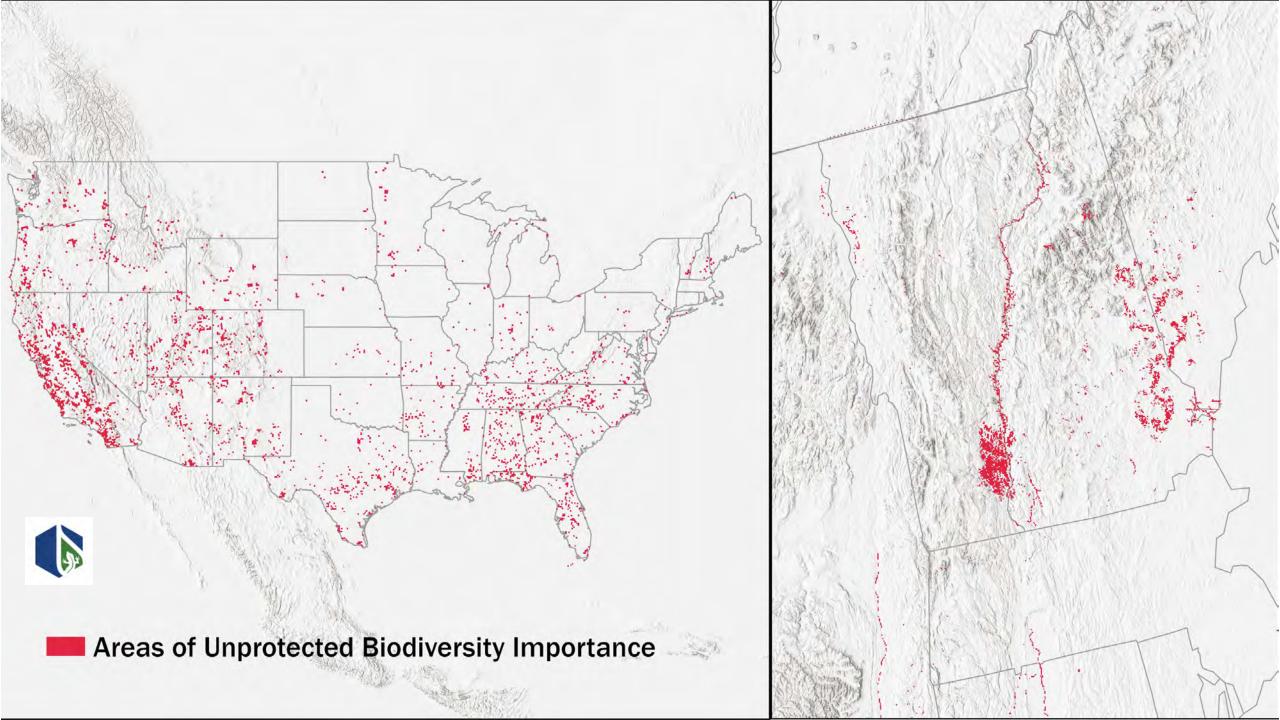


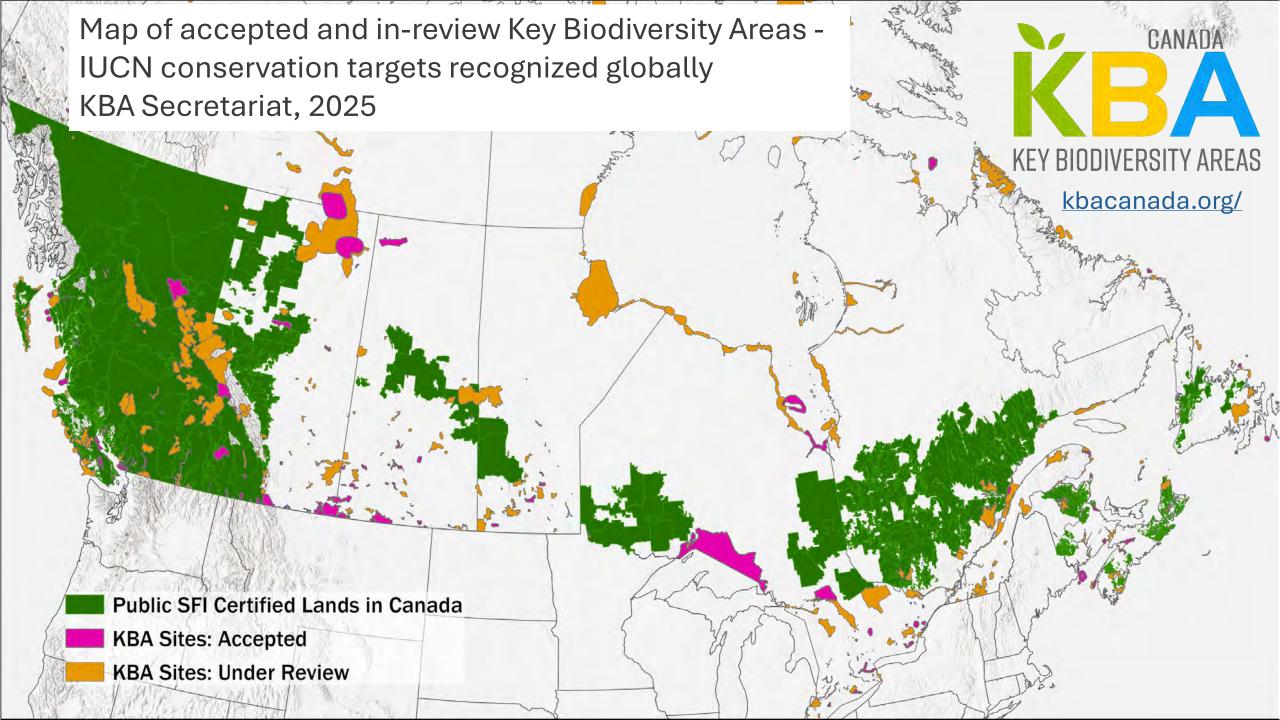
Performance Measure 4.1. Certified Organizations shall conserve biological diversity.

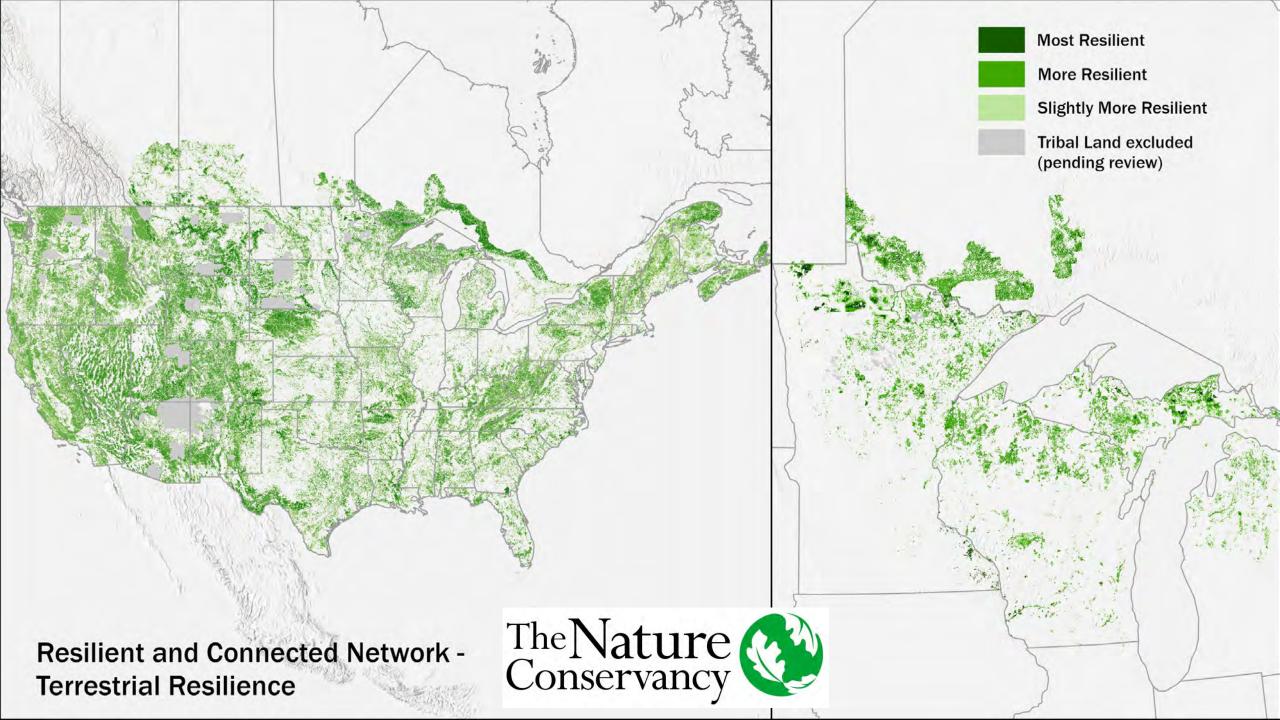
Indicators: 1. *Program* to incorporate the *conservation* of *biological diversity*, including *native* species, *wildlife habitats* and ecological community types at *stand* and *landscape* levels, through the use of *best scientific information* including the incorporation of research results.









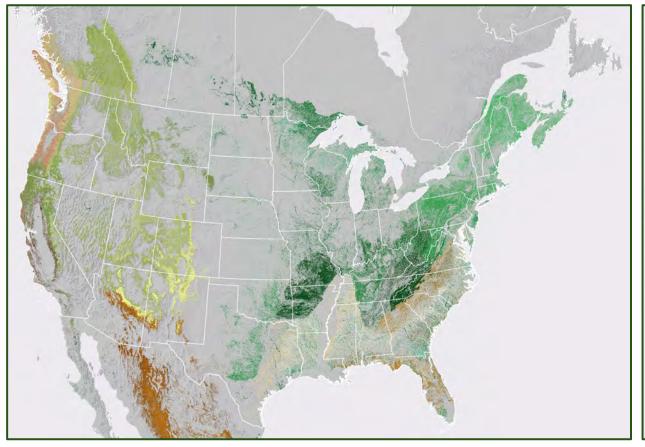


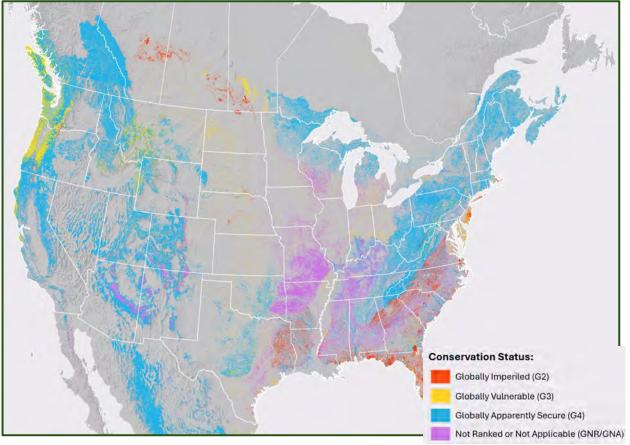
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Forest and Woodland "Groups"
International Vegetation Classification (IVC)

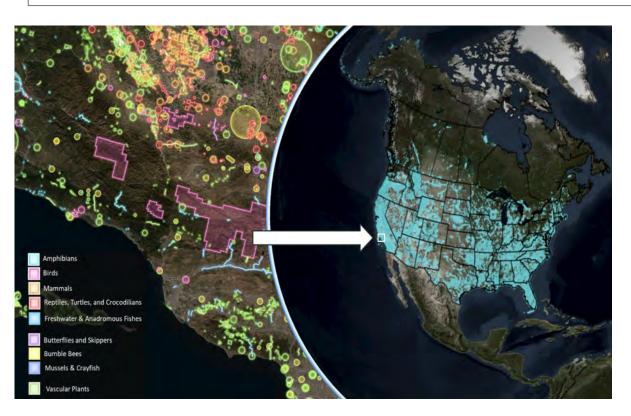
Conservation Status Assessment, in progress IVC "Group" level





Performance Measure 4.2. Certified Organizations shall protect threatened and endangered species, critically imperiled and imperiled species (Forests with Exceptional Conservation Values), and natural communities, and old-growth forests.

Indicator 2. *Program* to locate and *protect* known sites of flora and fauna associated with viable occurrences of *critically imperiled* and *imperiled* species and ecological communities, defined as *Forests with Exceptional Conservation Value*.



Element Occurrence: an area significant to the conservation of a species or ecological community









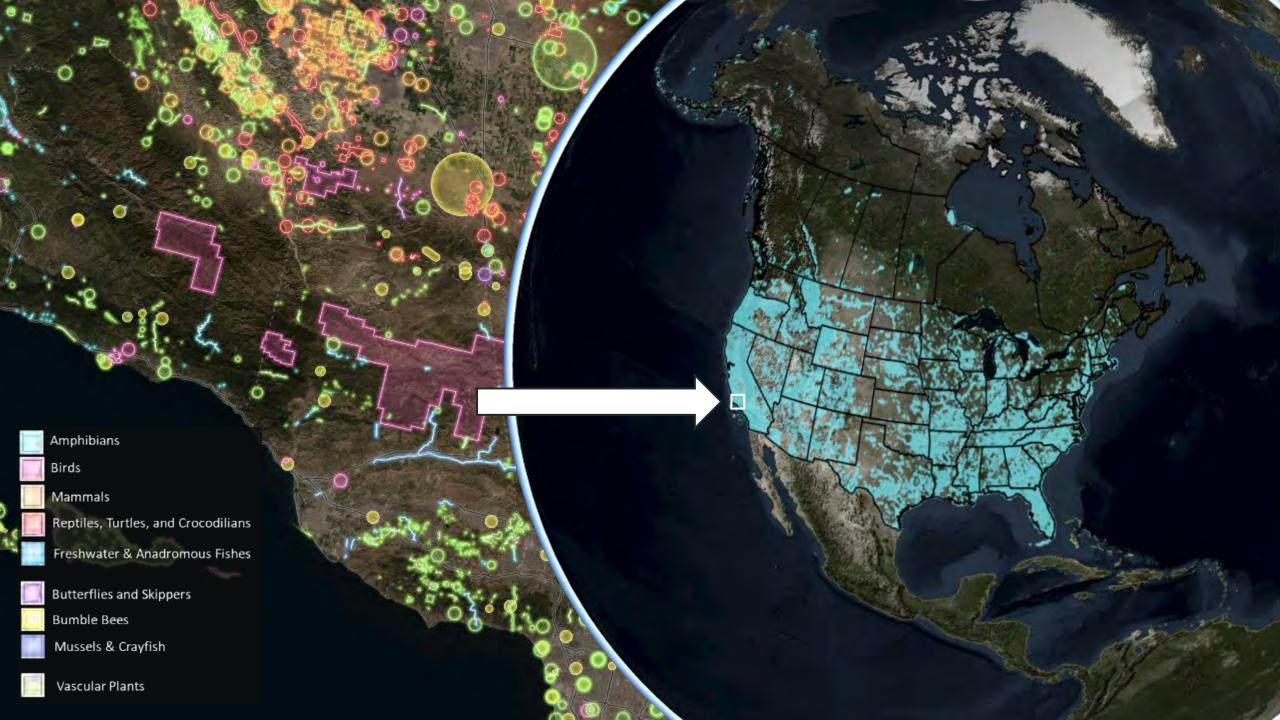




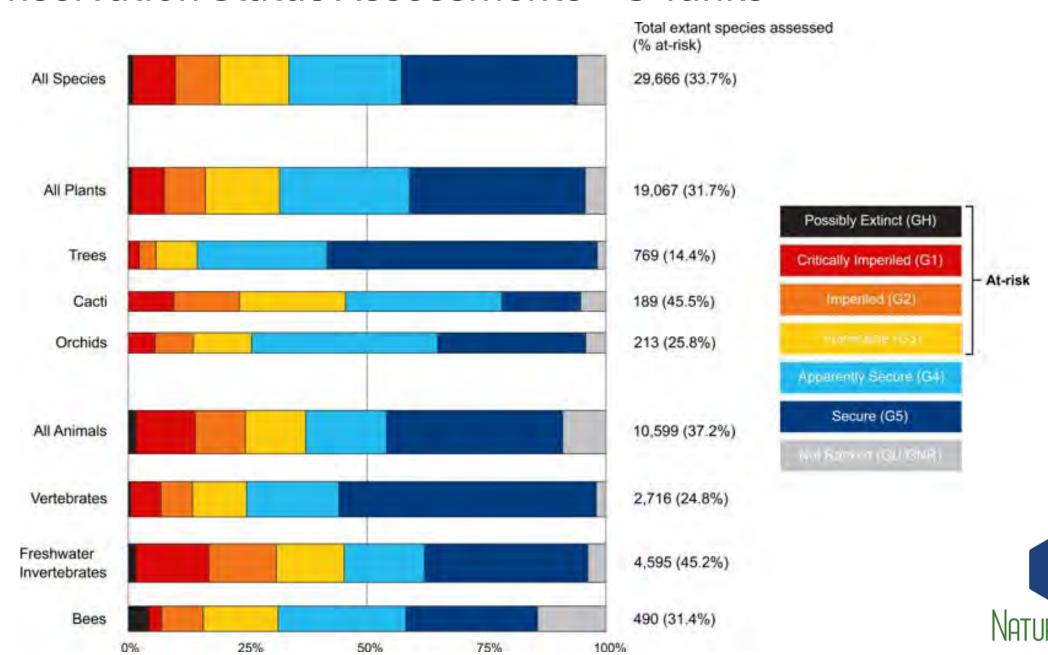
Natural Heritage Program



B.C. Conservation Data Centre



Conservation Status Assessments - G-ranks





On Guard for Them:



Species of Global Conservation Concern in Canada
—Summary Report

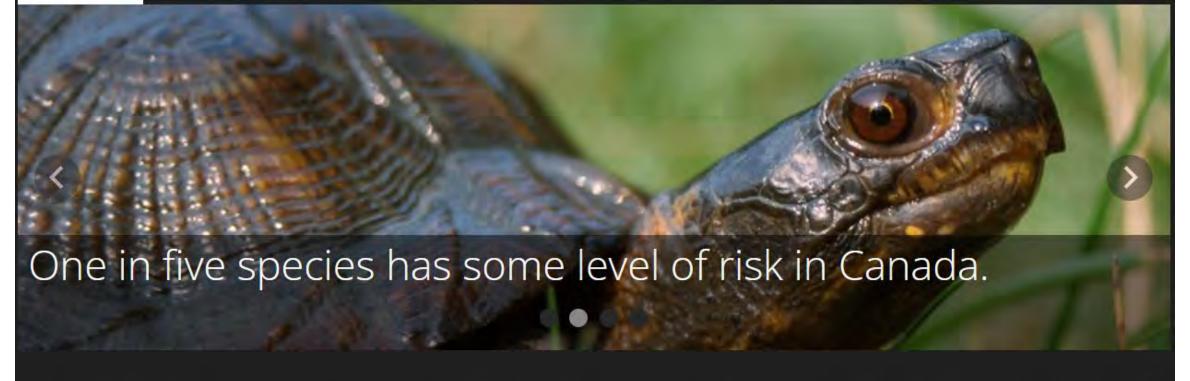
April 2017

www.wildspecies.ca Home

Reports

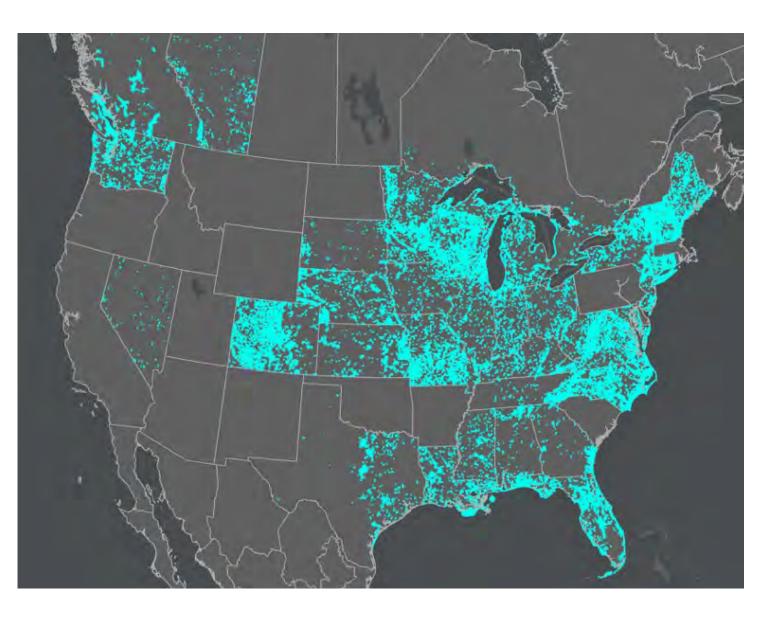
Species Search Tool

Common Names

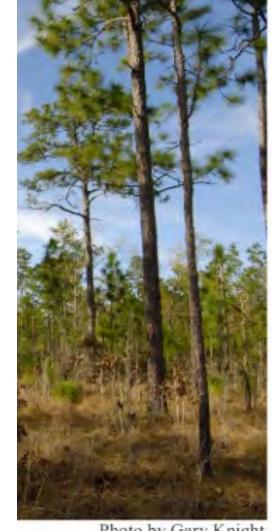


Wild Species: The General Status of Species in Canada

Data for FECV communities







Scientific Name:

Photo by Gary Knight

Pinus palustris / Quercus laevis Xeric Woodland Group

Common Name:

Longleaf Pine / Turkey Oak Xeric Woodland Group

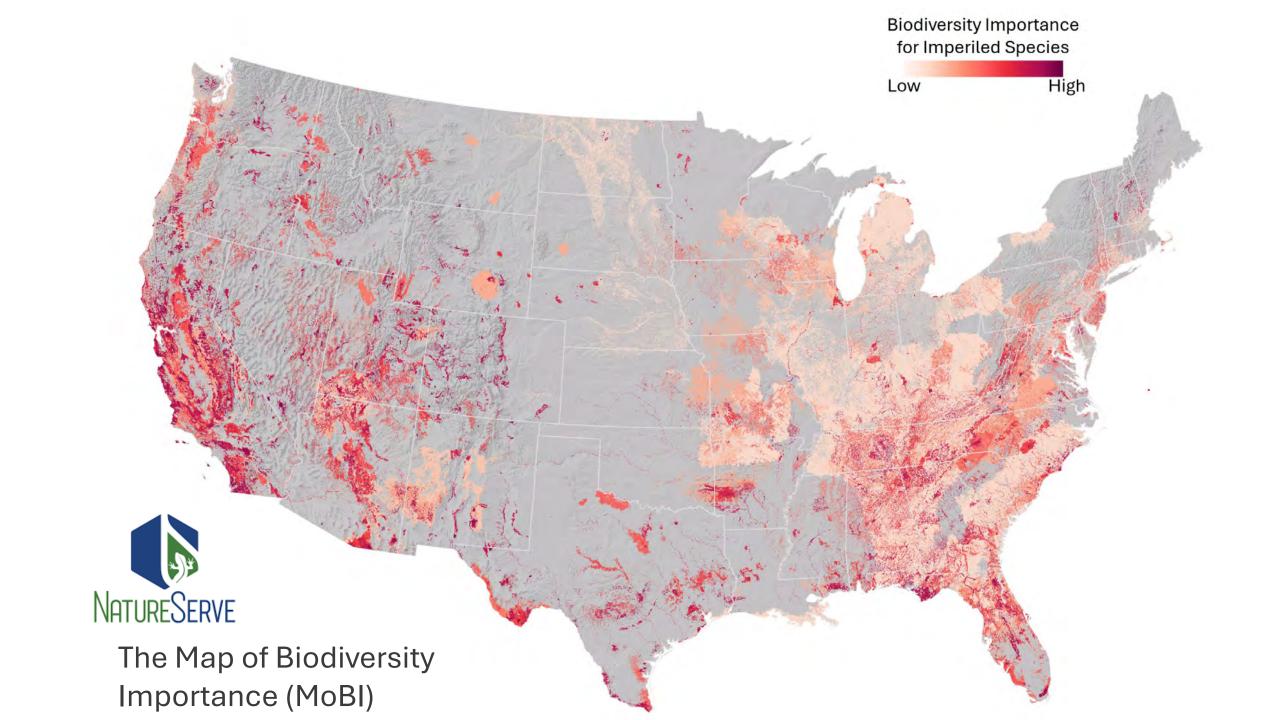
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2. Gap analysis of Network EO data

- 1) Summarizing accessibility of EO data from Natural Heritage Programs and Conservation Data Centres (member programs)
- 2) Member program data completeness and currency of EO data for G1 & G2 Species
- 3) Member program data completeness and currency of EO data for G1 & G2 Ecological Communities



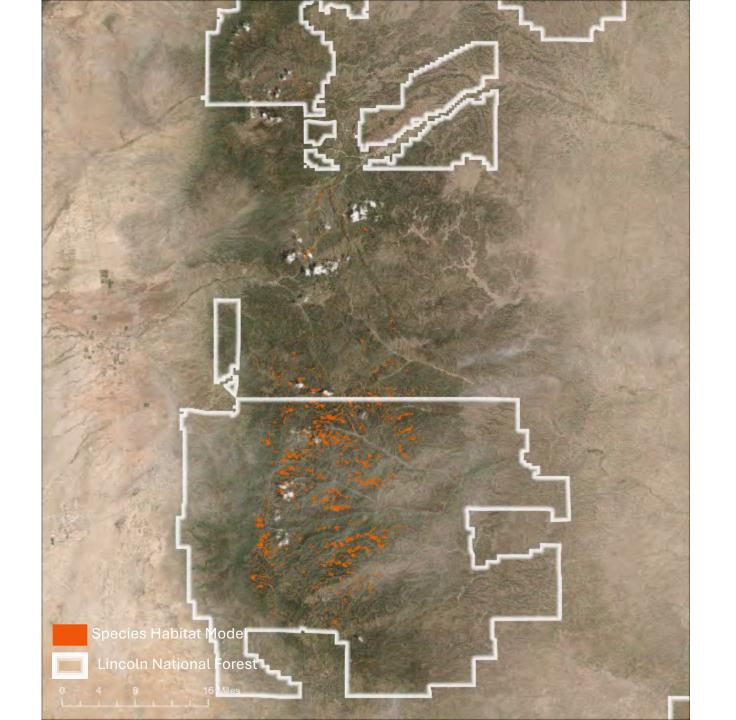








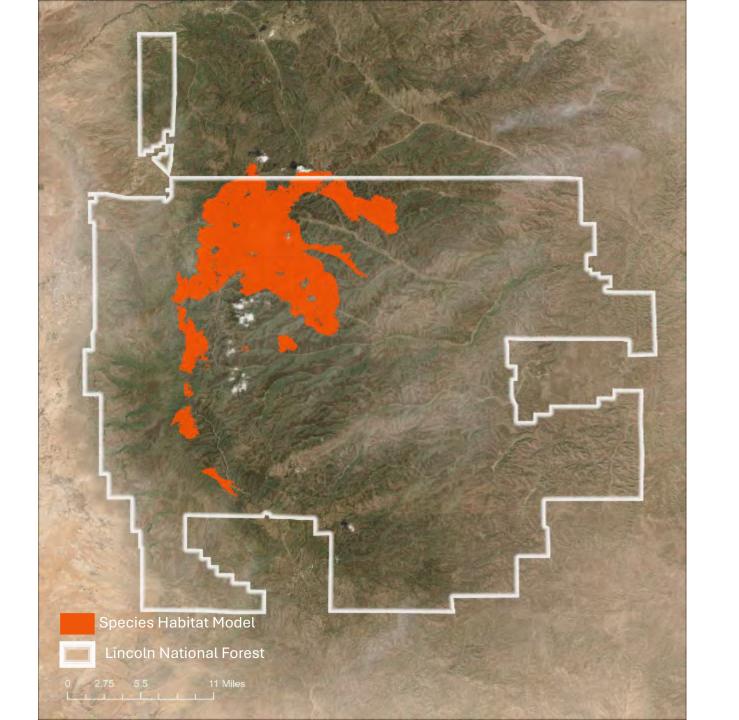






Bombus cockerelli
Cockerell's Bumble Bee
G1 – Globally Critically
Imperiled
Photo by Bob Barber

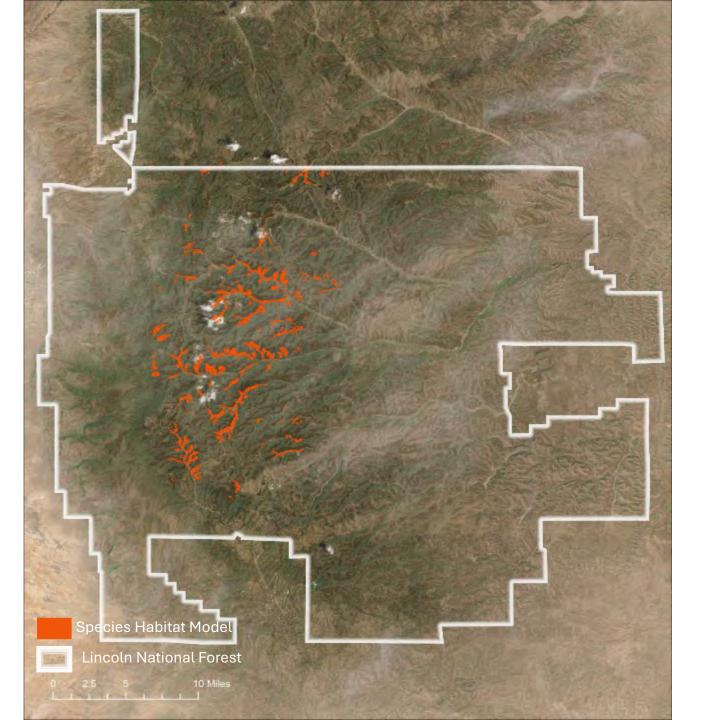






Lesquerella aurea
Golden Bladderpod
G2 – Globally Imperiled
ESA - Endangered
Photo - Smithsonian
Institute



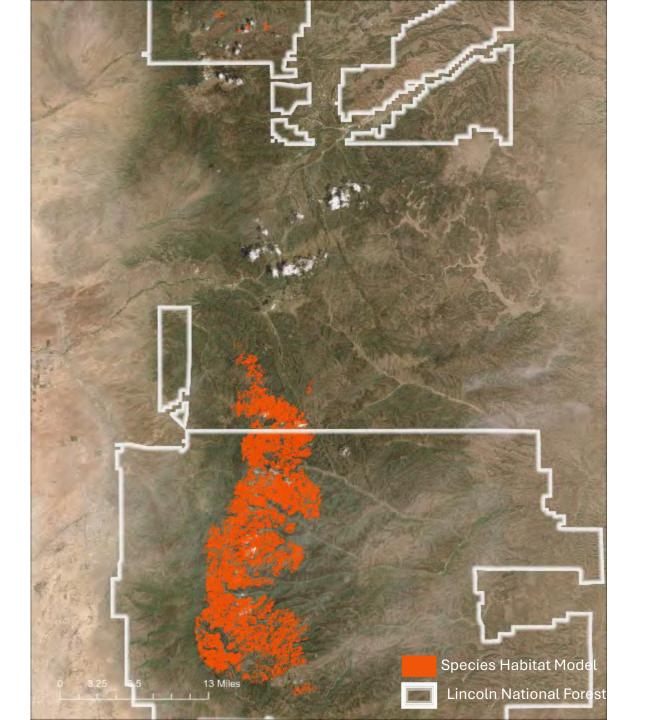




Cirsium vinaceum

Sacramento Mountain Thistle
G1 – Globally Critically Imperiled
ESA - Threatened
Photo - Heather Hollis

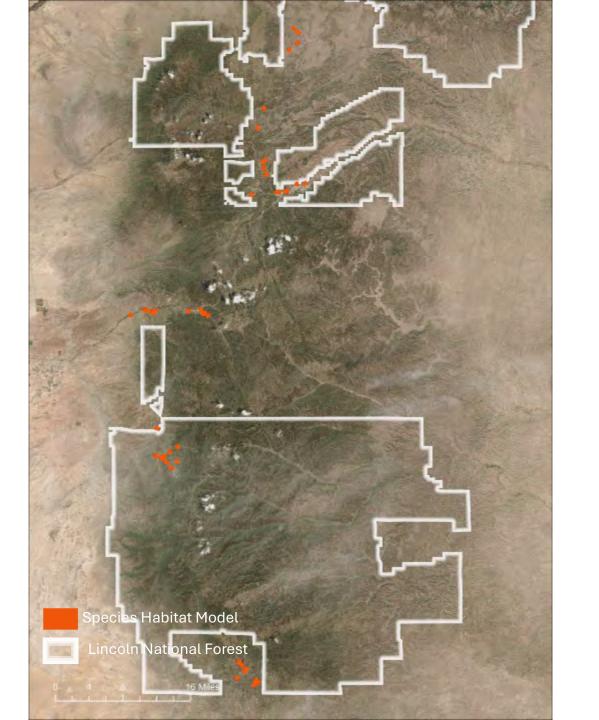


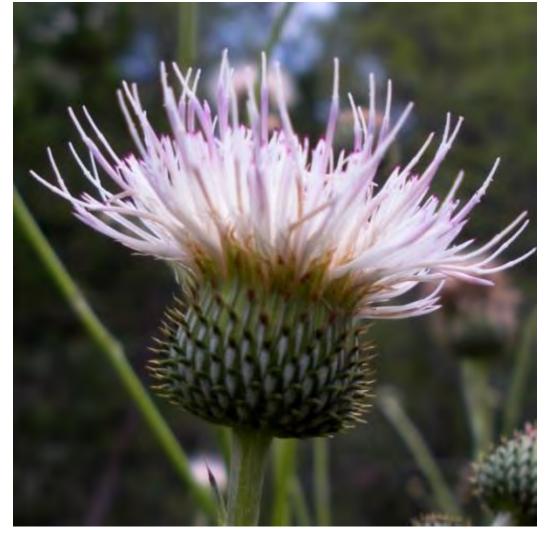




Hedeoma pulcherrima
White Mountain False
Pennyroyal G2 - Globally
Imperiled - Robert Sivinski

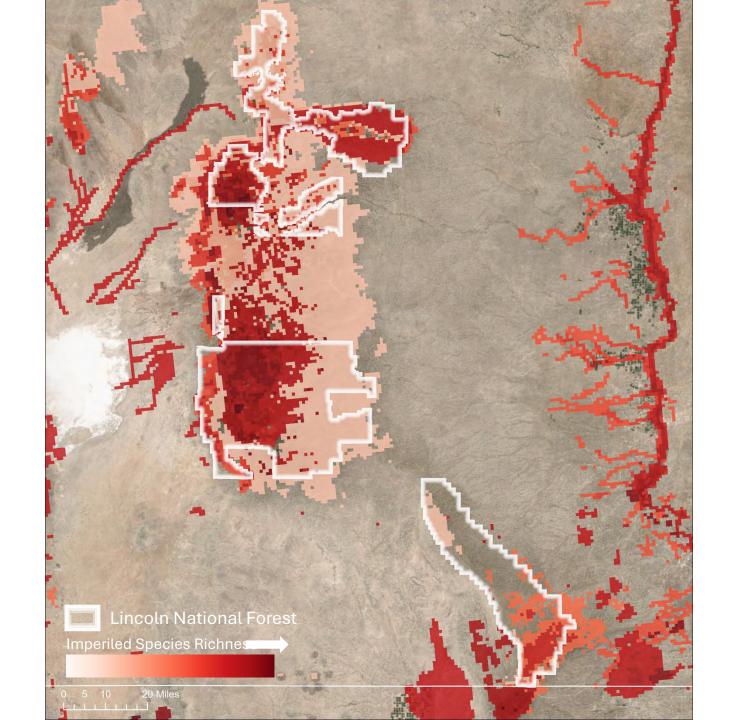






Cirsium wrightii
Wright's Marsh Thistle
G2 – Globally Imperiled
ESA – Proposed Threatened
Photo - Tyler Johnson

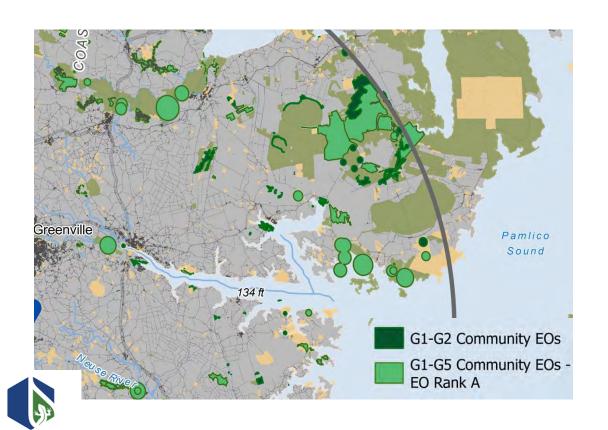




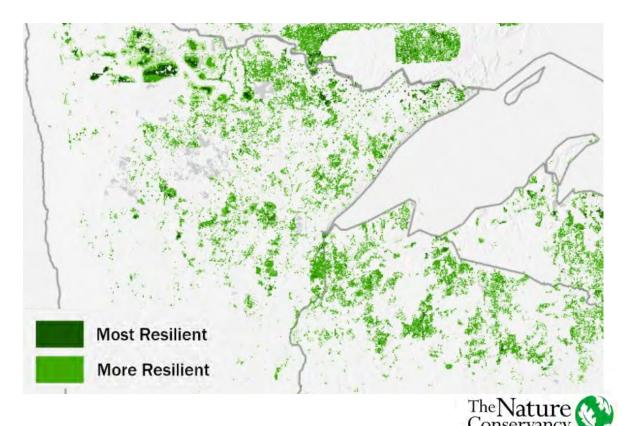


Performance Measure 4.3. *Certified Organizations* shall manage to *protect ecologically important* sites in a manner that takes into account their unique qualities. Indicators:

- 1. Use of information such as existing NatureServe or natural heritage data or expert advice in identifying or selecting *ecologically important* sites for *protection*.
- 2. Appropriate mapping, cataloging and management of identified ecologically important sites.



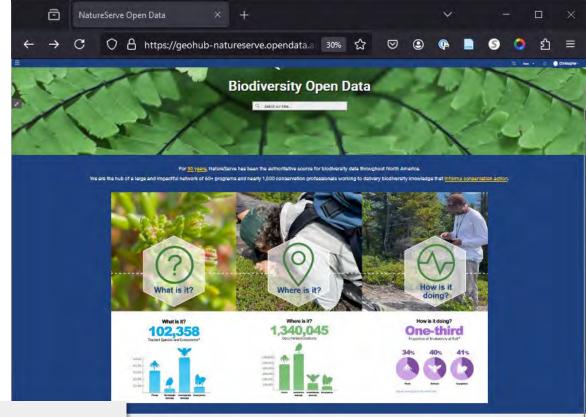
NatureServe

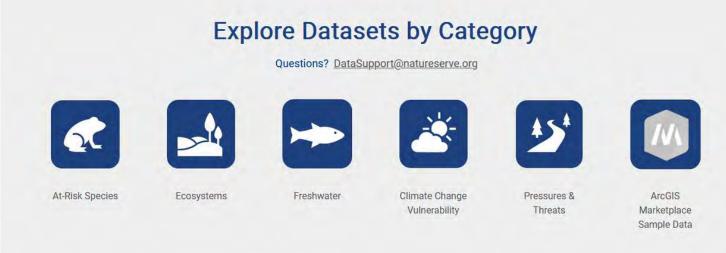




Open Data Hub

- Freely available data resources and gateway for more information about other data and tools.
- https://geohubnatureserve.opendata.arcgi s.com/







Explore Recent Projects

Species Habitat Model Dashboard



Filter by species characteristics

Select taxonomic group

No taxonomic group selected

Select Rounded G-Rank
No Rounded G-Rank selected

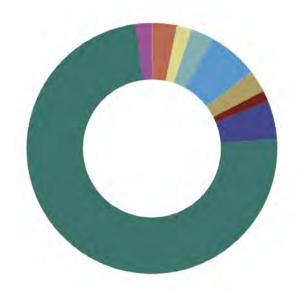
Select ESA status
No ESA status selected

Select SGCN status No SGCN status selected Select distribution

No distribution selected

Number of Models by Taxonomic Group

(can include multiple models per species)



Amphibians

80 species
Birds

49 species

Crustaceans

75 species
Fishes

4 163 species

* 72 species
Fungi & Lichens

↓ 1 species

Mammals

Mam

34 species

₹ 126 species

1,872 species

₱ 53 species

| Element Global ID | Scientific Name | Common Name | Ta |
|-------------------|---------------------------------|------------------------------|---------------|
| 138821 | Abies bracteata | Bristlecone Fir | Plants |
| 134469 | Abronia alpina | Ramshaw Meadows Sand-verbena | Plants |
| 155919 | Abronia ammophila | Yellowstone Sand-verbena | Plants |
| 154040 | Abronia bigelovii | Galisteo Sand-verbena | Plants |
| 159233 | Abronia macrocarpa | Large-fruit Sand-verbena | Plants |
| 150802 | Abutilon parishii | Parish's Indian-mallow | Plants |
| 135577 | Acanthomintha duttonii | San Mateo Thornmint | Plants |
| 151284 | Acanthomintha ilicifolia | San Diego Thornmint | Plants |
| 130630 | Achnatherum hendersonii | Henderson's Ricegrass | Plants |
| 153190 | Achnatherum wallowaense | Wallowa Ricegrass | Plants |
| 105033 | Acipenser brevirostrum | Shortnose Sturgeon | Fishes - Fres |
| 104257 | Acipenser oxyrinchus desotoi | Gulf Sturgeon | Fishes - Fres |
| 101214 | Acipenser oxyrinchus oxyrinchus | Atlantic Sturgeon | Fishes - Fres |
| 144453 | Acleisanthes crassifolia | Texas Trumpets | Plants |
| 160854 | Acleisanthes wrightii | Wright's Trumpets | Plants |
| 149181 | Aconitum noveboracense | Northern Wild Monkshood | Plants |

Total Models: 2,526

Click here for field definitions and background information on

By Taxonomy

By Species Status

By Model Status

By Model Confidence

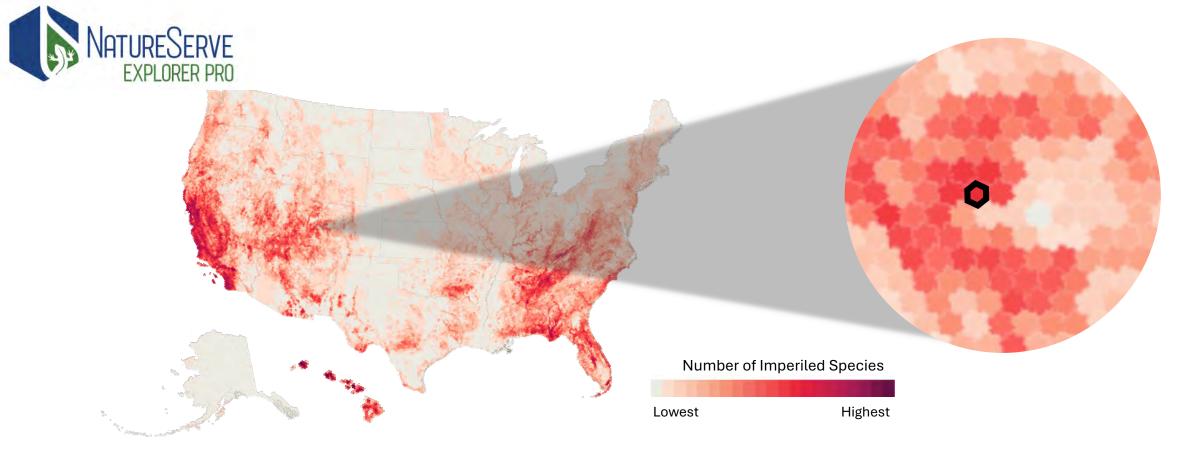
Model Summaries

Models by Species

Models by Geography

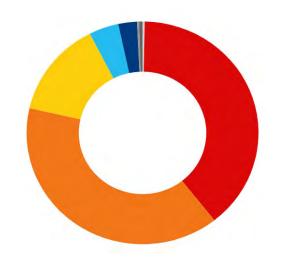
Habitat Association, Protect & Stewardship (Login)

Help



Species Occurring in Area

| Documented Species | Potential Species | | |
|--|----------------------|---------------------------|------------|
| Species | Taxa Group | NatureServe Global Status | ESA Status |
| Black-footed Ferret Mustela nigripes | Mammals | G1 - Critically Imperiled | Endangered |
| Humpback Chub Gila cypha | Fishes | G1 - Critically Imperiled | Threatened |
| Dolores River Skeletor Lygodesmia doloresen | | G1 - Critically Imperiled | None |
| Gunnison Sage-Grouse Centrocercus minimus | _ | G2 - Imperiled | Threatened |



G1/T1
255 species
G2/T2
256 species
G3/T3
91 species

Minnesota's Wildlife Action Plan 2015-2025









Environment and
Climate Change Canada
Environnement et
Changement climatique Canada



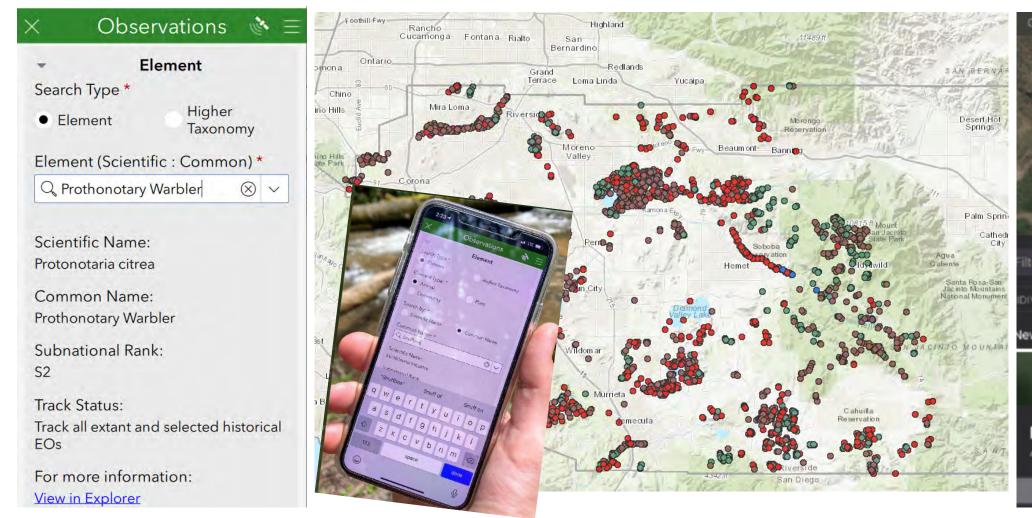


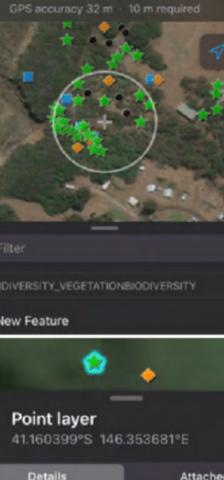




Performance Measure 4.4. *Certified Organizations* shall apply knowledge gained through research, science, technology, field experience and the results of monitoring of the effectiveness of conservation-related *programs* to manage *wildlife habitat* and contribute to the *conservation* of *biological diversity*.

Indicators: 1. Collection of information on Forests with Exceptional Conservation Value and other biodiversity-

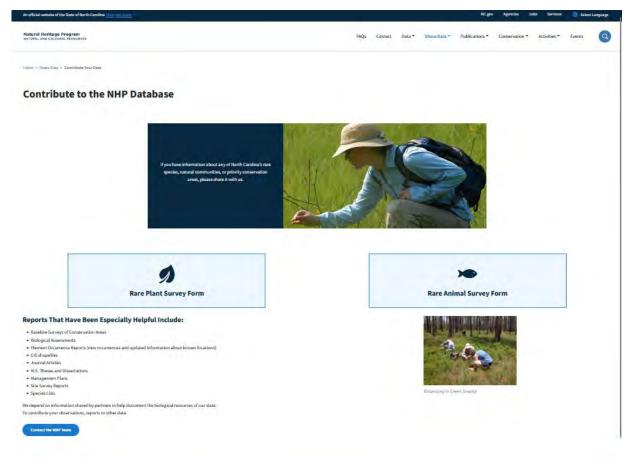






North Carolina Natural Heritage Program

Nature Research Center - 121 W. Jones Street

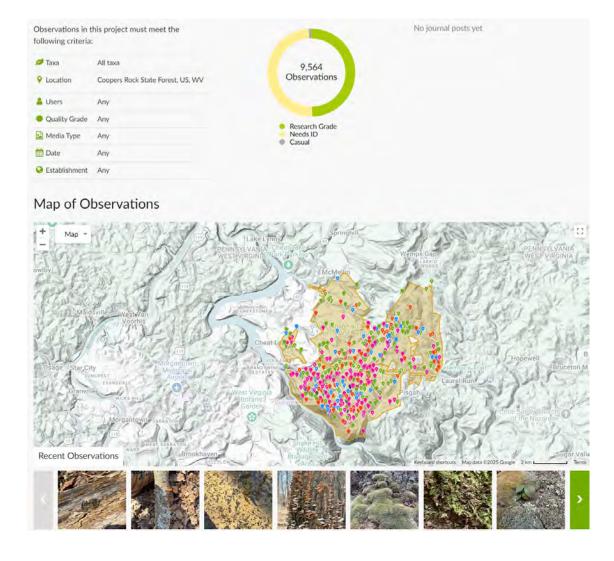


FOLLOW US

9 X 0

NATURESERVE NETWORK





3. Improving biodiversity data in fiber sourcing through identification of Unique Landscape Features



 Many FECV are associated with specific and recognizable habitat features, such as bogs, limestone karst and caves, saline prairies, etc.





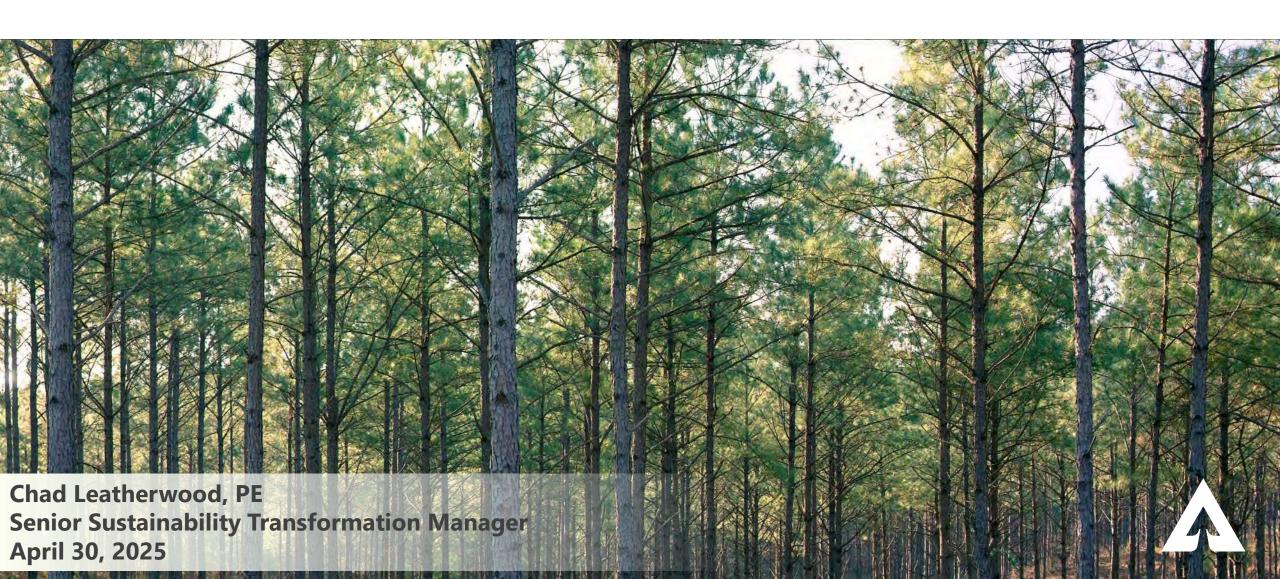
Pilot project in NC/SC to:

 Evaluate the associations between G1/G2 species and a diversity of ecological and biophysical datasets

 Develop concise easily readable reports that group identified G1/G2 species into similar habitat features for logger communication and training materials



Collaboration To Improve Data and Tools To Protect Biodiversity in Wood Procurement Programs



WHAT WE'LL COVER TODAY

SFI Fiber Sourcing Certification: What It Requires and What are the Challenges

Use Cases of the NatureServe data to Meet SFI Fiber Sourcing Requirements

Opportunities for improving access to biodiversity data and tools

KEY TAKEAWAYS:

- ✓ The SFI Fiber Sourcing Standard presents a huge opportunity to protect biodiversity in uncertified, small privately-owned forests
- ✓ NatureServe data are a key asset for companies to meet SFI Fiber Sourcing biodiversity requirements
- ✓ Unique Landscape Feature reports would enable forest product companies to better communicate species protection opportunities

SPECIFIC BIODIVERSITY REQUIREMENTS OF SFI FIBER SOURCING

- ✓ Utilizing information from organizations such as <u>NatureServe</u>, etc. **to conduct local/regional assessments**, engage with local/regional conservation efforts, and conduct training and education efforts (FS Indicator 1.1.1.a)
- ✓ Conduct an assessment of G1-G2 species & communities within a mill's wood supply area and make the assessment summary available to wood suppliers (FS Indicator 1.2.1)
- ✓ Conduct an assessment of G1-G2 species & communities on purchased stumpage tracts and use the results to promote conservation (FS Indicator 1.2.3)

CHALLENGES WITH BIODIVERSITY RELATED REQUIREMENTS

How species-habitat summaries would help

SFI REQUIREMENTS

Assess G1-G2 species & communities within a mill's wood supply area and make the assessment summary available to wood suppliers

CHALLENGES

Mill procurement areas can contain hundreds of G1-G2 species, and it can be challenging to assess and summarize this information

The target audience for this information is loggers, foresters, and landowners and not "ologists", so species-specific information may not be actionable

Assess G1-G2 species & communities on purchased stumpage tracts and use the results to promote conservation

The target audience for this information is loggers, foresters, and landowners and not "ologists", so species-specific information may not be actionable

Some purchased stumpage tracts do not trigger any G1-G2 species which might result in missed opportunities for biodiversity protection



SFI FIBER SOURCING PROGRAM

Scale offers significant opportunities to positively influence biodiversity outcomes

Facilities Certified to the SFI Fiber Sourcing Standard

- US = 411 facilities
- CAN = 145 facilities

Estimated Procurement Area of SFI Fiber Sourcing Facilities

Assuming an average 50-mile procurement radius (~70% of mill volume)

US: ~ 2,100 million acres covered by SFI Fiber Sourcing programs

CAN: ~725 million acres covered by SFI Fiber Sourcing programs



there is significant overlap of mill procurement areas

Estimated Area of Timberlands

US – 514 million acres

(US Forest Ownership and Management – Congressional Research Service 2021)

CAN – 900 million acres

(natural-resources.canada.ca)

CONSISTENT

communication from SFI Fiber Sourcing certified companies to the target audience is

ESSENTIAL

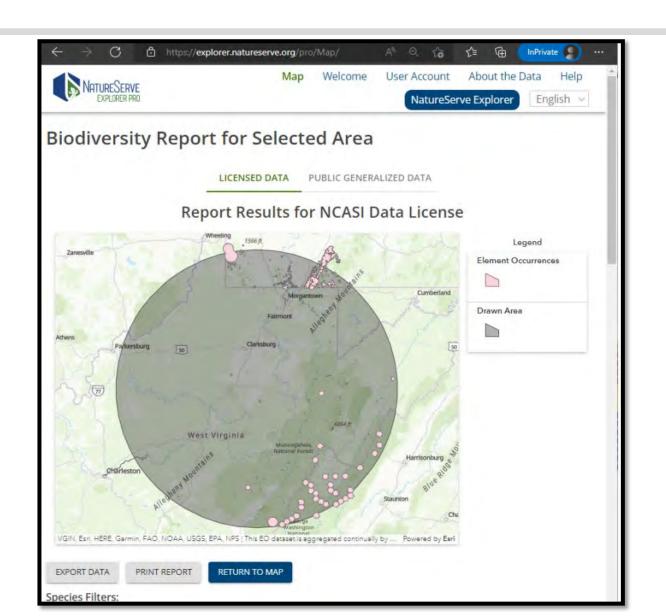
for positive impact.

WEYERHAEUSER EFFORTS TO IMPROVE BIODIVERSITY DATA ACCESS & APPLICABILITY

2022 grant: NS added a radius-based search option to better support supply-area G1-G2 assessments

2023 grant: NS conducted a strategic planning effort to evaluate opportunities to improve biodiversity data reporting to SFI certified organizations

2024 grant (with 100% match from SFI): NS is conducting a pilot project in NC/SC to assign "layman" habitat descriptions (unique landscape features) to G1/G2 species and develop a reporting concept to aggregate identified G1/G2 species based on common habitats



WHAT DO WE HOPE TO ACCOMPLISH WITH THIS PILOT PROJECT?

Create a biodiversity reporting concept based on unique landscape features in NC/SC that provides consistent, usable information for SFI certificate holders

Share reporting concept with relevant stakeholders to determine interest in this new approach

Gather feedback on new approach to improve reporting outcomes

Determine interest in moving forward with this work and potentially replicating in other states/regions

WHAT DOES THE PILOT CONCEPT LOOK LIKE?

Contains three levels of output reports

- Executive summary of results (1 page)
- Summary of 5 habitat types that contain the greatest number of G1/G2 species
- Detailed summary of all habitat types identified in an evaluation area with information on identification and mitigation options

Allocates habitats into two categories: protect and promote

- Protect: Unique habitats that can be identified during a cruise and protected during harvest operations
- Promote: Habitat outcomes from intentional forest management (open pine, long leaf pine, regular burn, etc.)

Forests of Exceptional Conservation Value (FECV) Assessment for Ayden, NC Wood Supply Area

Last updated: 4-15-25

EXECUTIVE SUMMARY



This guide describes easily identifiable unique landscape features (ULFs) that indicate habitat for important species and natural communities, or that help land managers reliably recognize these important resources NatureServe and North Carolina Natural Heritage Program have identified and described a total of eight

Within the 70 mile radius wood supply area around Ayden, NC, there are 85 imperiled species and 60 imperiled ecosystems present

For forestry purposes, ULFs can be categorized in two ways, protect and promote.

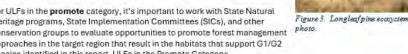
For ULFs in the protect category, it's important to evaluate the presence of these habitats on planned harvest areas and implement recommended mitigation actions to protect the G1/G2 species that prefer these habitats. ULFs in the Protect Category:

- Isolated and Seasonal Wetlands, Beaver Ponds, and Seeps

ULFs for this landscape

- Floodplains, Swamp Forests, and Sandy River Terraces
- Atlantic White Cedar Forests
- Sandhill seeps and canebrakes (and Dismal Swamp canebrakes)
- Rivers, Streams, and Streamside Management Zones

For ULFs in the promote category, it's important to work with State Natural Heritage programs, State Implementation Committees (SICs), and other conservation groups to evaluate opportunities to promote forest management approaches in the target region that result in the habitats that support G1/G2 species identified in this report. ULFs in the Promote Category



- Very wet to Moist "Open Pine" (Longleaf) Woodlands and Savannas
- Very Dry to Dry Sandy Longleaf Pine Woodlands and Oak-Pine Woodlands



PILOT CONCEPT TO MAKE INFORMATION MORE ACCESSIBLE AND ACTIONABLE

ACCESSIBLE SPECIES-HABITAT RELATIONSHIPS DATA





Gopher frog (*Lithobates capito*)

hoto: FWC - Kevin En



Wet-mesic longleaf open pine woodland

Associated Habitat Types:

Habitat

Habitat Type: Freshwater

Palustrine Habitats: TEMPORARY POOL, Riparian, HERBACEOUS WETLAND

Terrestrial Habitats: Forest - Mixed, Woodland - Hardwood, Savanna, Woodland - Conif Coodland - Mixed, Shrubland/chaparral

Associated Ecosystems (NVC Groups)

Dry-Mesic Loamy Longleaf Pine Woodland

Pond-cypress Basin Swamp

Central Interior-Appalachian Seepage Swamp

Xeric Longleaf Pine Woodland

Florida Xeric Scrub

Wet-Mesic Longleaf Pine Open Woodland

Mesic Longleaf Pine Flatwoods - Spodosol Woodland

Southern Evergreen Oak Forest

South Atlantic & Gulf Coastal Plain Pondshore

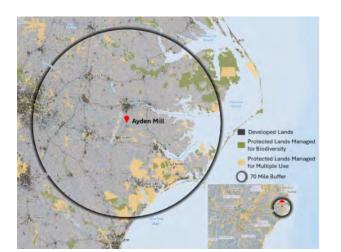


PILOT CONCEPT TO MAKE INFORMATION MORE ACCESSIBLE AND ACTIONABLE

SPECIES HABITAT SUMMARIES WITH MANAGEMENT CONSIDERATIONS







Isolated and Seasonal Wetlands, Beaver Ponds, and Seeps

19 (21%) of the imperiled species 6 (10%) of the imperiled natural communities

How to Identify:

Any small to large patch that holds standing water for a significant amount of time in the year, especially in winter. If assessing an area in summer, look for evidence of wetland plant species such as sedges to indicate areas that are likely ephemeral (temporary) wetlands that do not currently contain water.

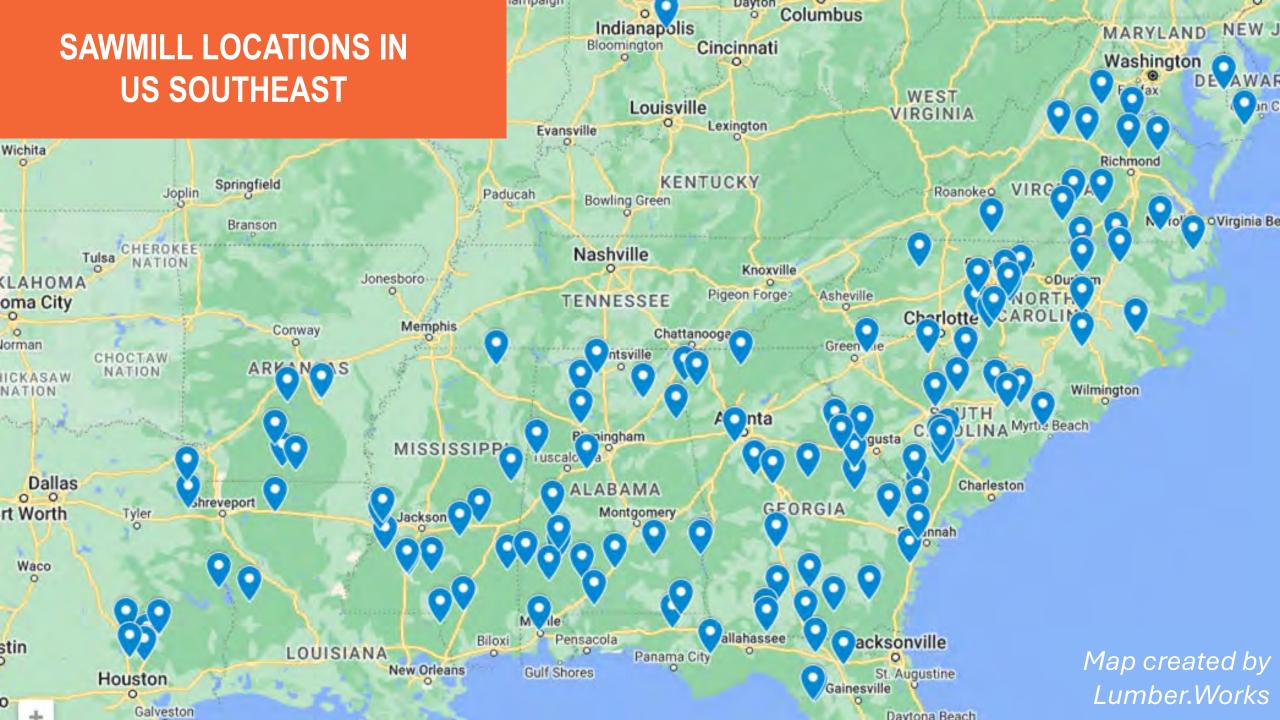
Management Considerations:

- Minimize harvest in any wetland habitats and follow North Carolina Forestry Best Management
 Practices
- Avoid and buffer. Leave space between any heavily managed area and this to ensure that both the
 wetlands and the edge habitat support diverse needs of several important species and to prevent
 damage to wetland soils and hydrology.
- Do not disrupt the water table/hydrology by ditching or draining sites on or adjacent to isolated and temporary wetlands.
- Minimize heavy soil disturbance and compaction, especially during the winter/spring wet season.

NEXT STEPS

- Develop final draft of concept report format and content
- Conduct stakeholder reviews of concept report to solicit feedback
- **Update based on stakeholder reviews**
- Conduct additional evaluation in SC to create an example for that state
- Share example reports with broader stakeholders to evaluate interest in implementing this reporting concept
- If interest exists for implementation, work on fundraising strategy to achieve

Part 2: Case Study Fiber Sourcing — Weyerhaeuser's Ayden Mill, NC



Ayden Mill Case Study

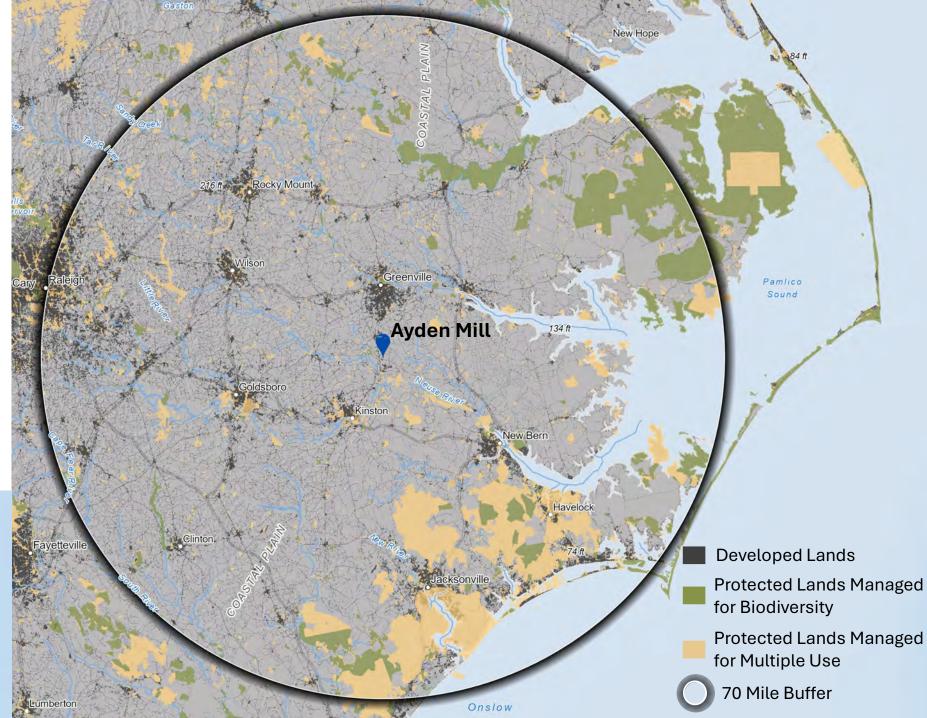
Case study focuses on Performance Measure 4.2 (FECV) and 4.3 (ecologically important sites). Information we need to consider for those performance measures include:

- Imperiled and critically imperiled species as well as federal T&E species
- Imperiled communities (ecosystems)
- High-quality community (ecosystem) examples (especially old-growth forest examples)
- Other sites deemed ecologically important

Fiber Sourcing Case Study

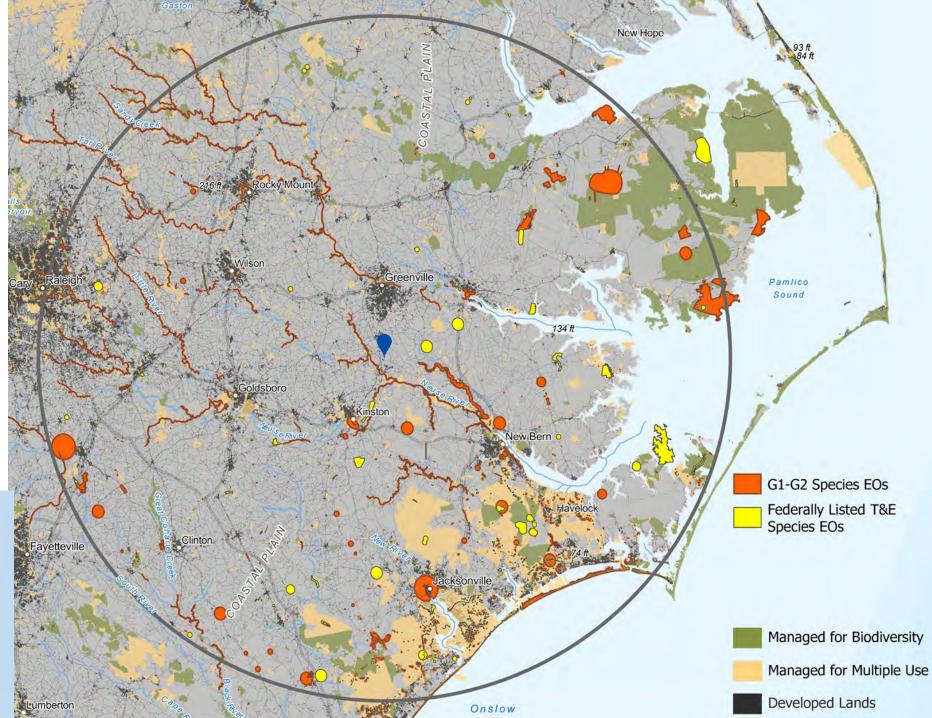
70 mile radius around Ayden, North Carolina





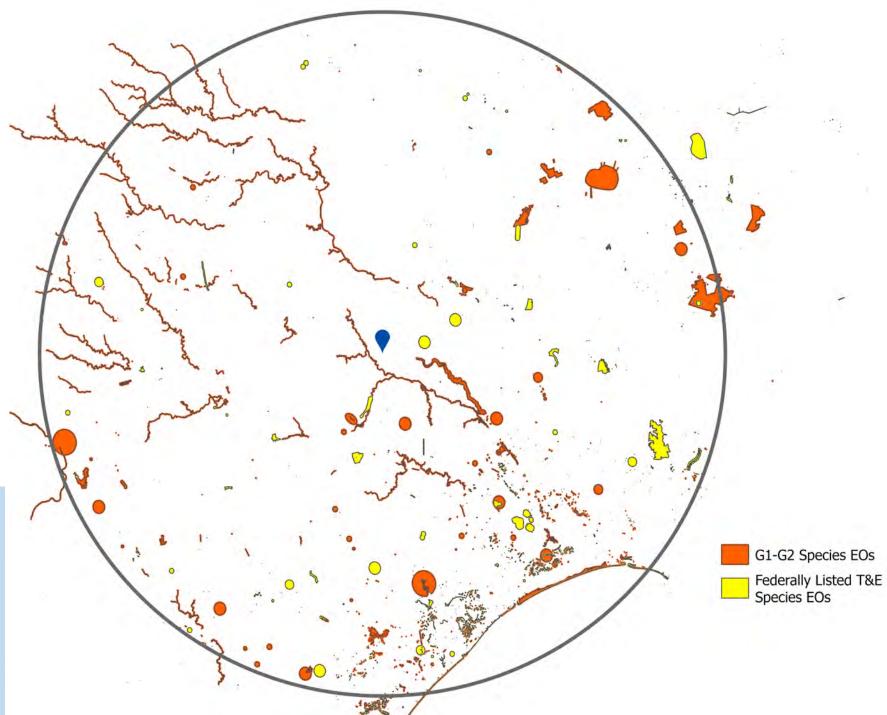
- G1-G2 species element occurrences
- ESA-listed T&E species element occurrences





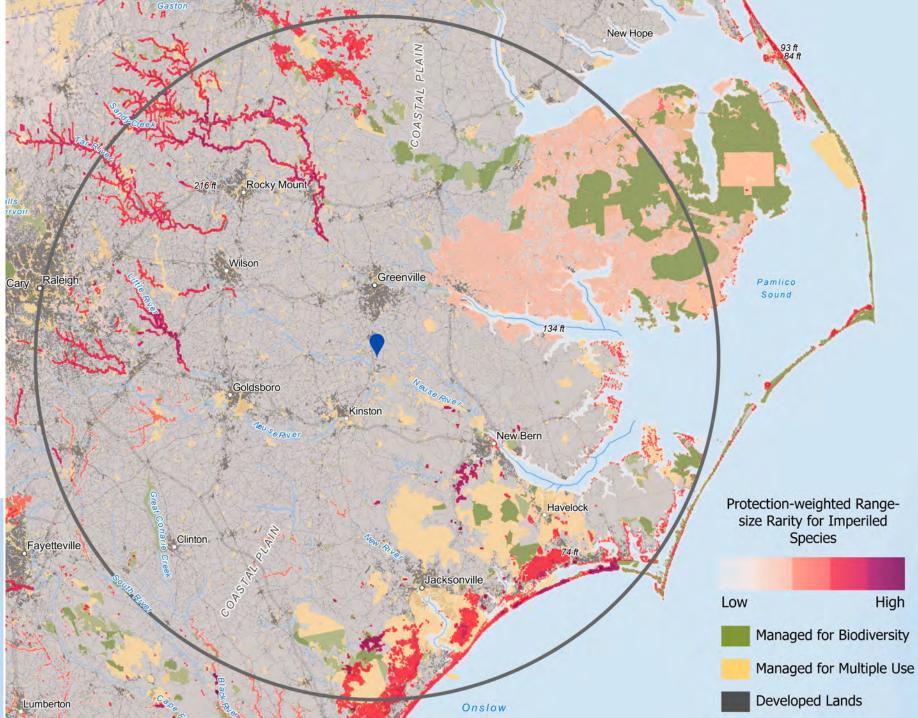
- G1-G2 species element occurrences
- ESA-listed T&E species element occurrences





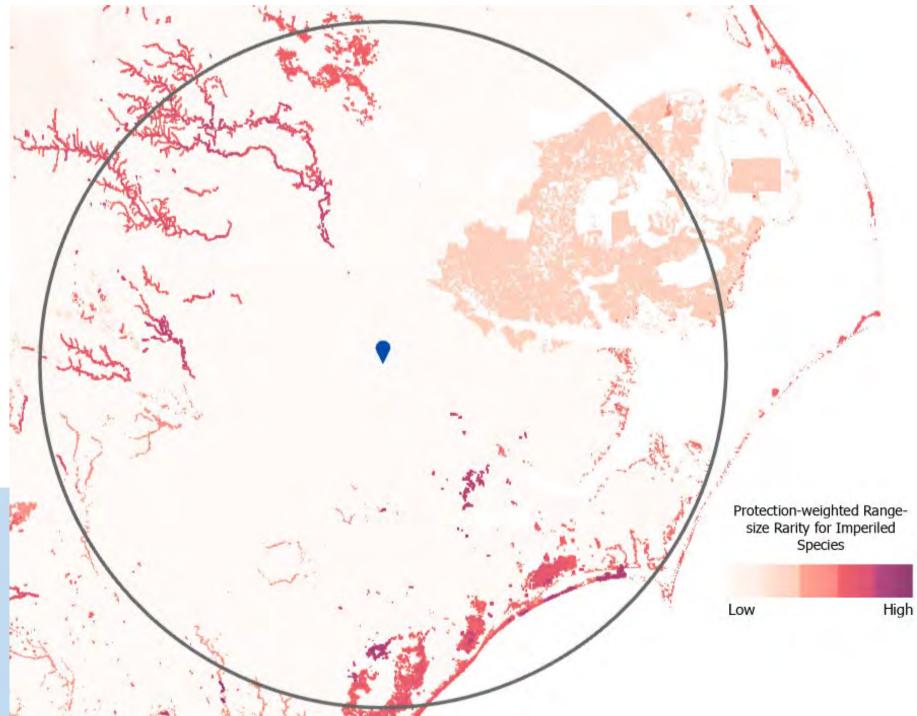
 Modeled distribution of G1-G2 species





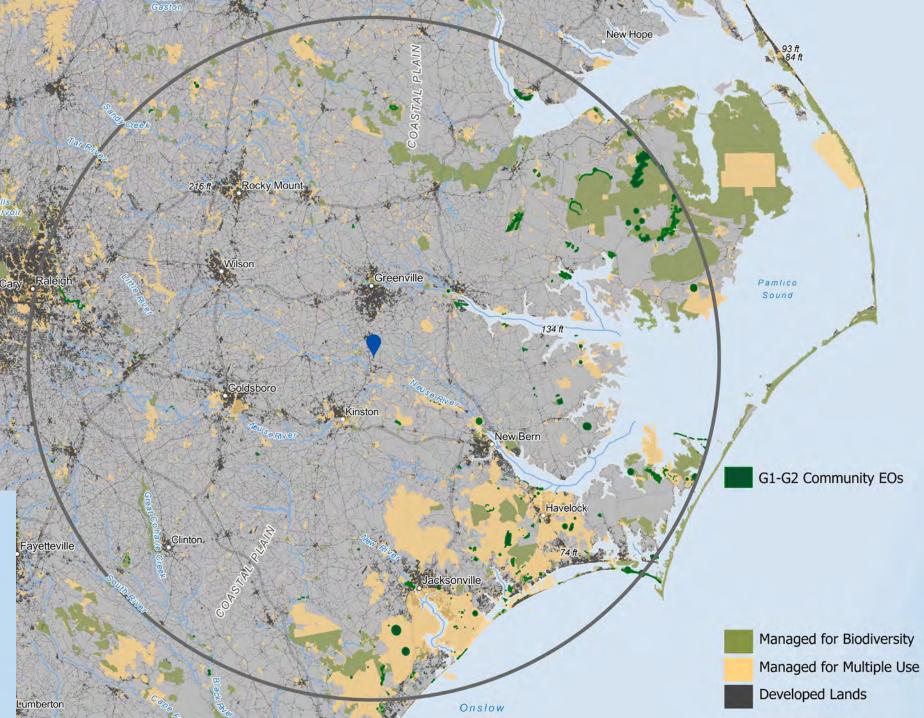
 Modelled distribution of G1-G2 species





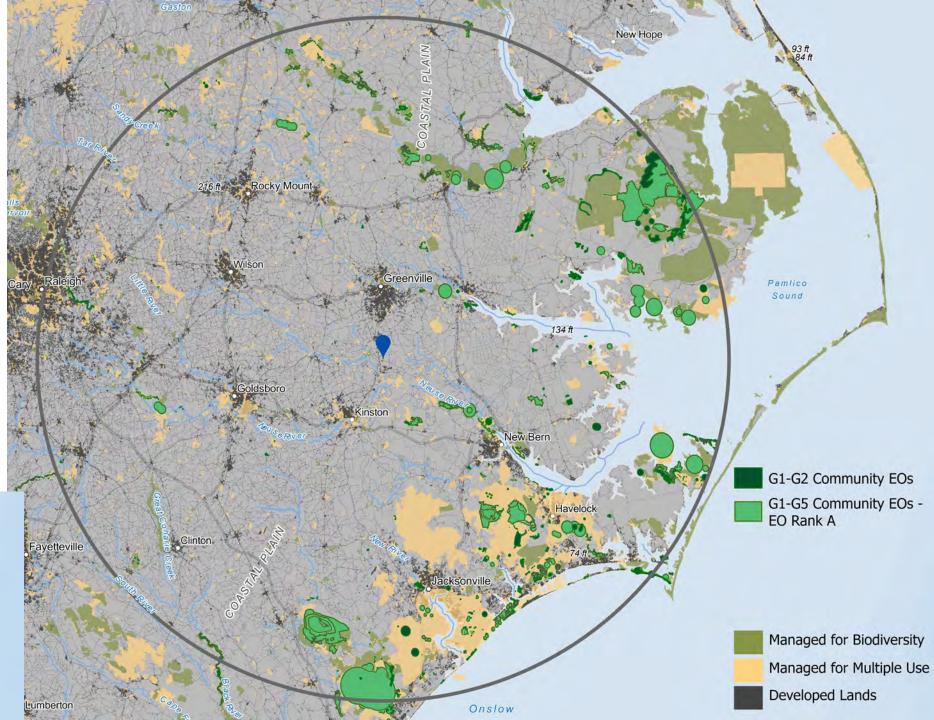
G1-G2
 community
 (ecosystem)
 element
 occurrences





- ALL A-ranked community (ecosystem) element occurrences
- Identifies areas of high ecological condition for relatively common forest types

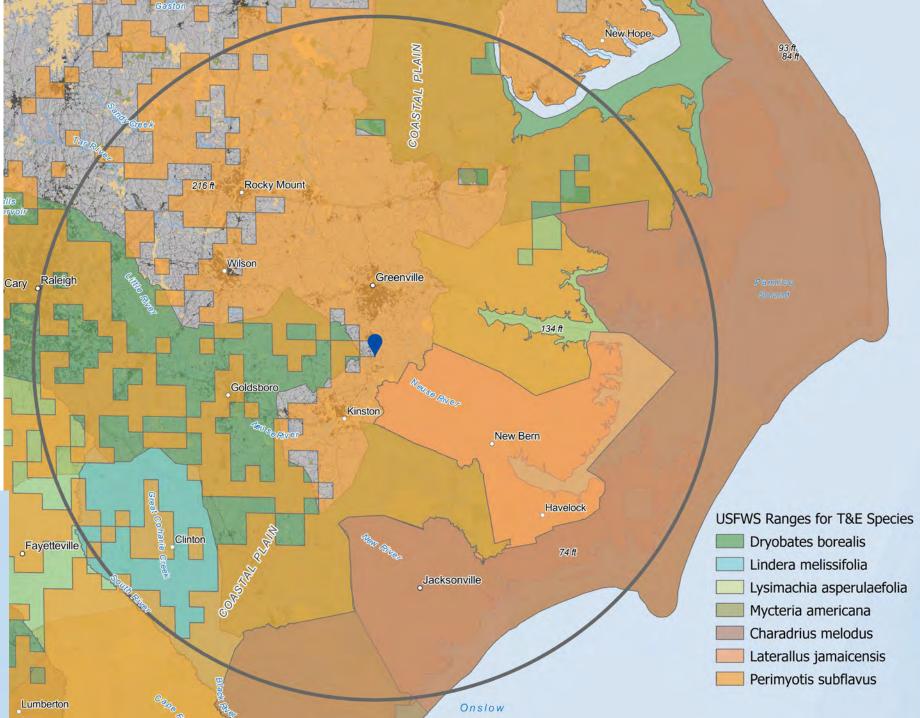




 Range maps for Federally listed
 T & E species

https://ecos.fws.gov/ecp/

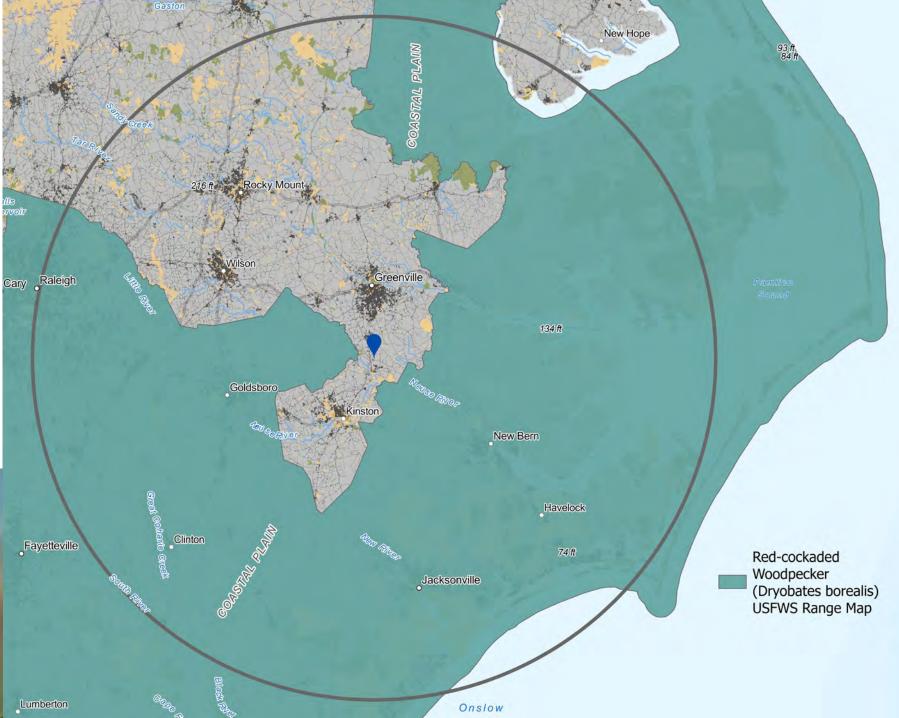




- USFWS Range map for Federally Threatened Redcockaded Woodpecker, Dryobates borealis
- NatureServe rank: G3

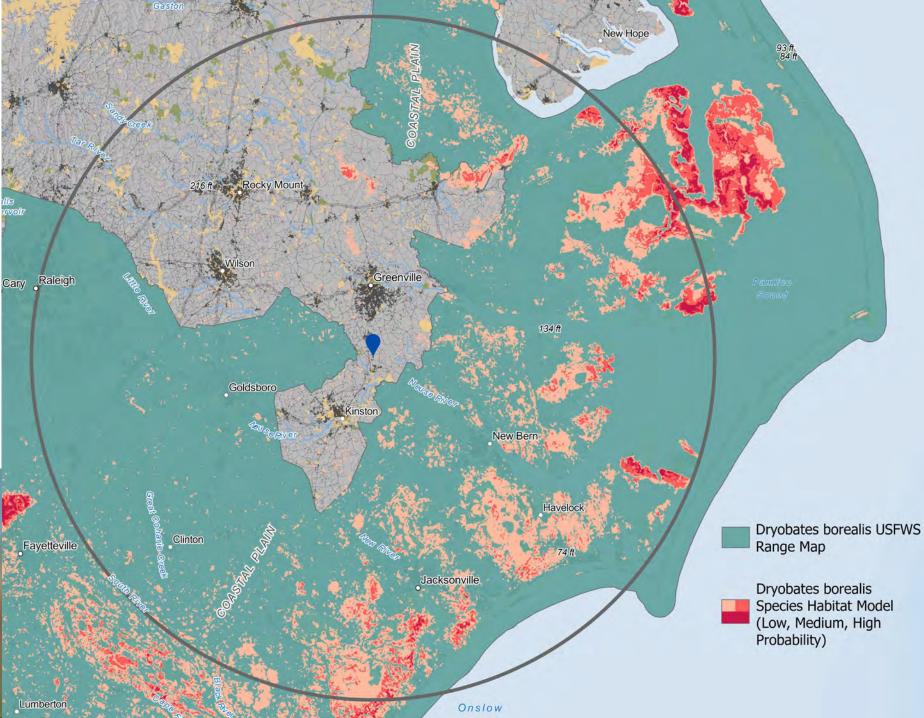
https://ecos.fws.gov/ecp/





- RCW MoBI habitat model
- USFWS Range map
- Dryobates borealis
- ESA status: Threatened
- NatureServe rank: G3





Ayden Mill Case Study Review/Take Homes

Case study focuses on Performance Measure 4.2 (FECV) and 4.3 (ecologically important sites). Information we need to consider for those performance measures include:

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- Imperiled communities (ecosystems)
- High-quality community (ecosystem) examples (especially old-growth forest examples)
- Other sites deemed ecologically important

Wrap-Up

1:00 - 1:10 Welcome, Intros, Objectives

1:10 - 1:50 **Part 1**: Biodiversity data & SFI Standards: Description and progress report for SFI/NatureServe/Weyerhaeuser biodiversity project tasks

1. Compilation of biodiversity data, tools, and training materials

2. Gap analysis of data for identifying FECV species and communities

3. Improving biodiversity data in fiber sourcing through identification of **Unique Landscape Features**

1:50-2:00 Part 2: Mill fiber sourcing example

2:00-2:30 Q&A, Discussion and Feedback

Discussion and Feedback

- 1. What content presented today resonates with you or is useful to you as SIC members (e.g., maps, case studies)?
- 2. What questions do you have related to biodiversity data/tools that SFI/NatureServe can help answer?
- 3. What can SFI and/or NatureServe do, through this collaborative project, to better help SICs coordinate on the biodiversity requirements in the Forest Management and Fiber Sourcing standards?

Be specific on tools or resources (e.g., data identification, datasets, map overlays).