

PLANNING TO PROTECT THE FLORIDA WILDLIFE CORRIDOR 3.0

CONNECTIVITY ACROSS SCALES *TOOLS & CONCEPTS FOR THE URBAN-TO-RURAL TRANSECT*

Oct. 28, 2026 | Noon to 2 p.m. Eastern



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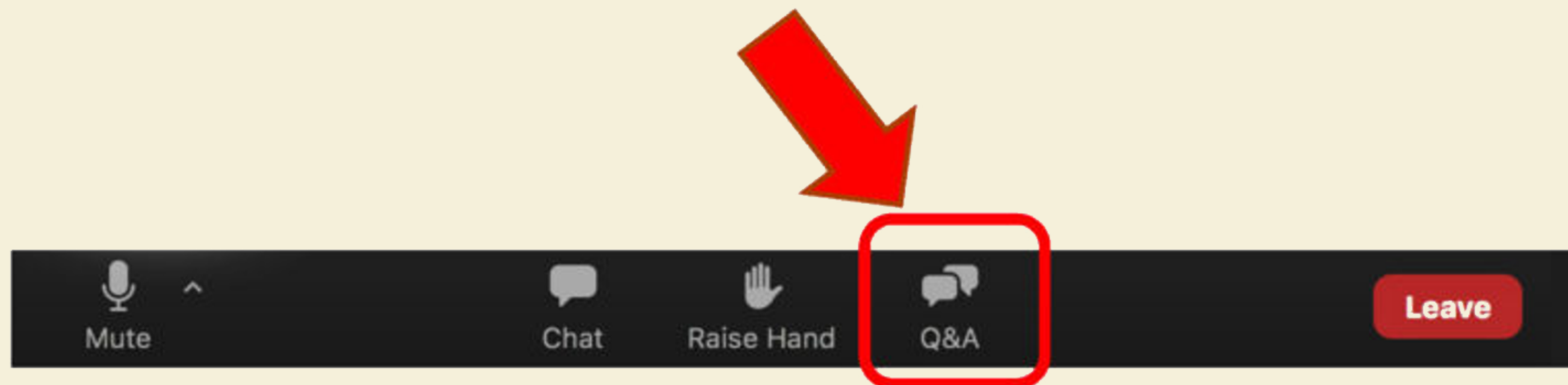
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Keep questions succinct and, if possible, indicate who your question should be directed to.



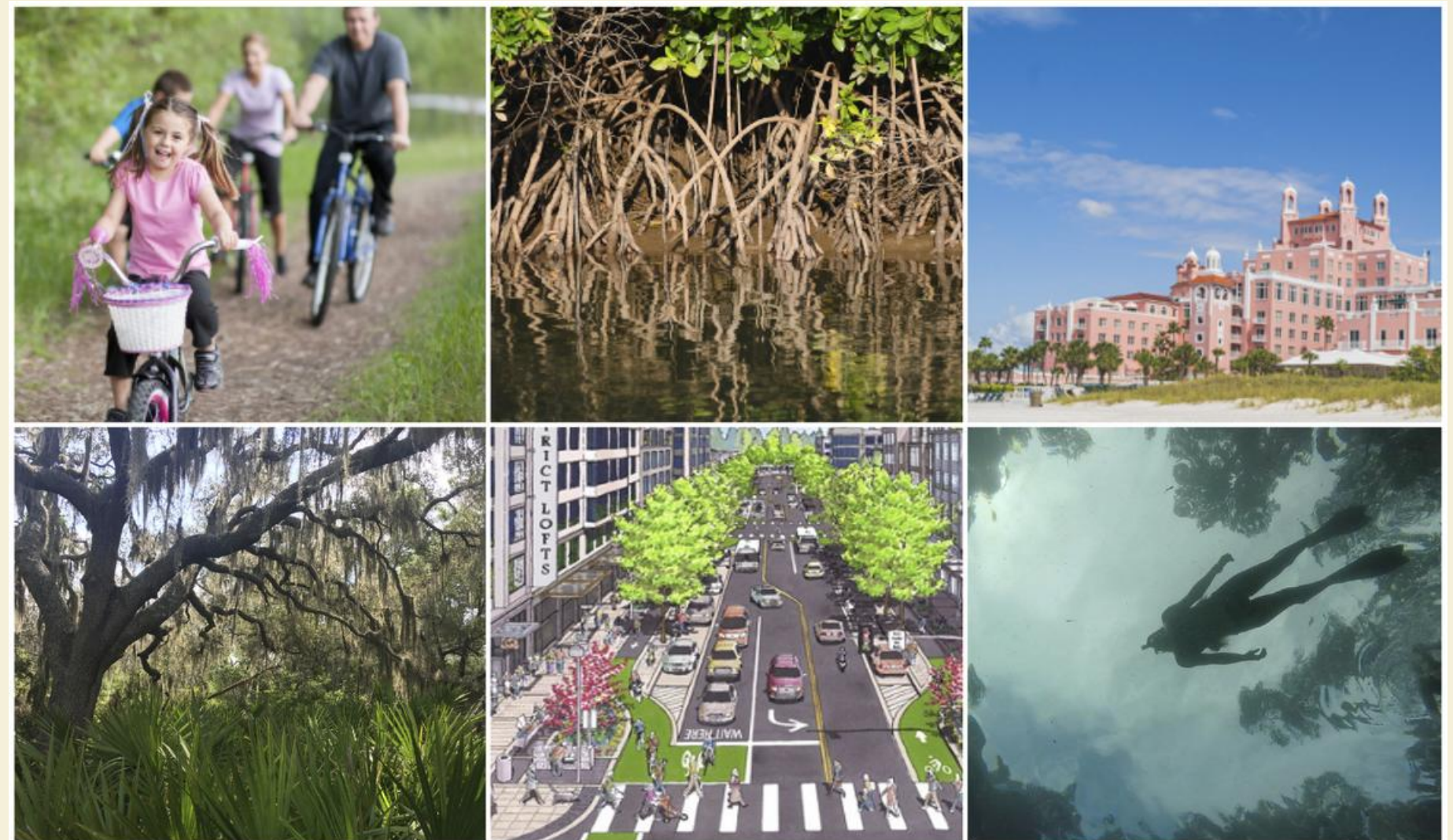


Building Better Communities, Saving Special Places

**We are Florida's leading nonprofit
advocate for sustainable communities**

**Work with citizens, community and
state leaders, conservation and
business groups**

**Educate, advocate and negotiate to
protect Florida's high quality of life**



PLANNING TO PROTECT THE FLORIDA WILDLIFE CORRIDOR 3.0



Payment for Ecosystem Services: *A Conservation Tool for Florida's Future*

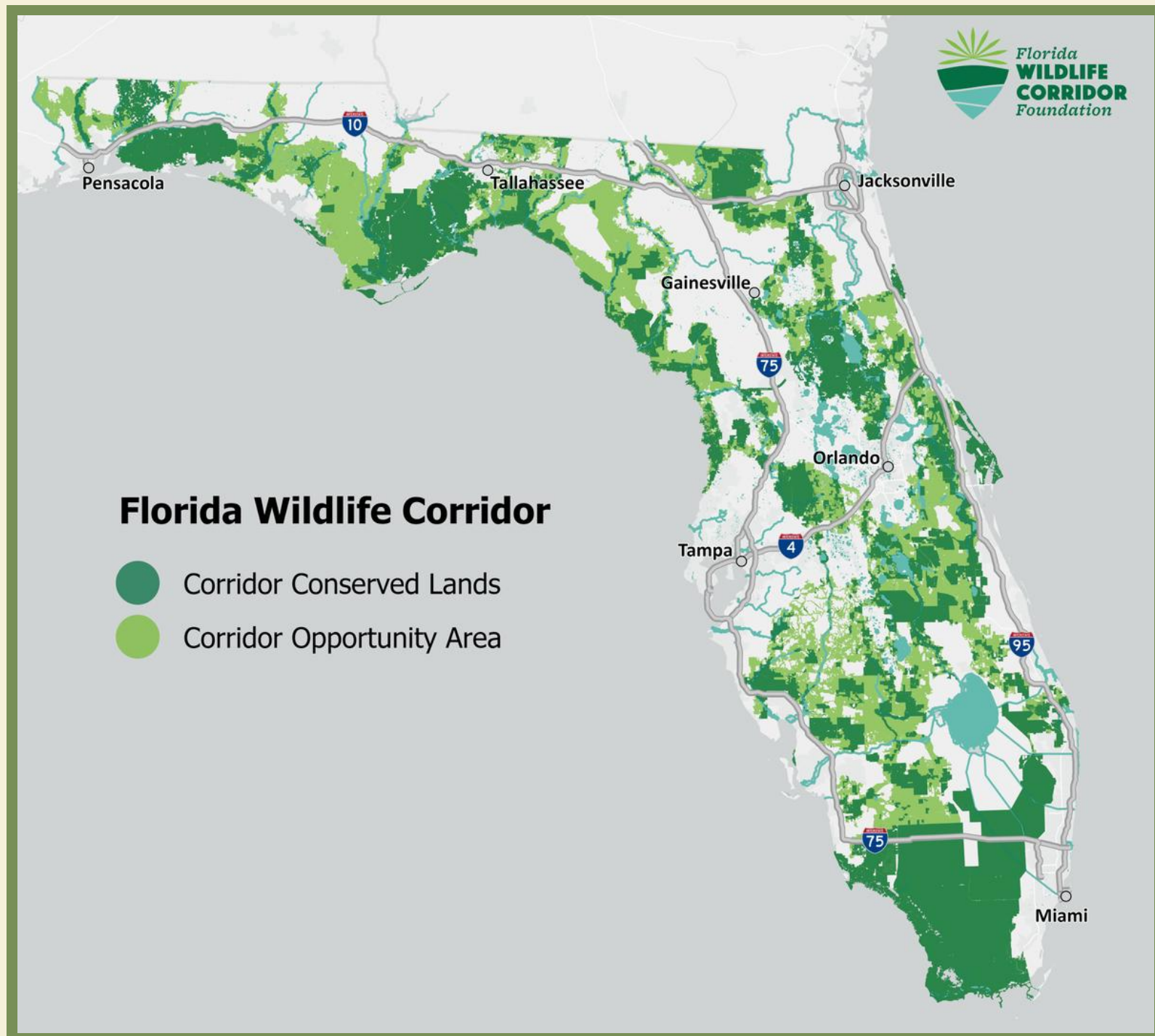


Beyond the Corridor: Transect Planning and Connectivity



Connectivity Across Scales: *Tools and Concepts for the Urban-to-Rural Transect*

The Florida Wildlife Corridor



**10 Million Acres Protected,
8 Million Acres of Opportunity**

**A vast network of forests, rivers, ranches,
and farms that connect the Everglades to
the Georgia and Alabama borders. It's 18
million acres of life-sustaining land and
water where wildlife can still roam freely
and people can hike, paddle, and thrive.**

UF | Center for Landscape Conservation Planning UNIVERSITY *of* FLORIDA

Established in 2010 to provide an official forum within the University of Florida's College of Design, Construction and Planning for conducting applied research on the relationship between conservation, green infrastructure, and land use.

Affiliated with the Department of Landscape Architecture, forming a bridge between the disciplines of design, planning and wildlife conservation, and providing applied learning opportunities for students.

Results of the Center's research are used to influence public policy through education and direct involvement in the application of relevant science, technology, sound planning principles, and state-of-the-art methods of conservation analysis, planning and management.





Florida
**WILDLIFE
CORRIDOR**
Foundation

The Florida Wildlife Corridor Foundation exists to champion the vision of a statewide network of nearly 18 million acres of connected lands and water supporting wildlife and people.





Live Wildly seeks to balance smart growth, a robust economy, and a connected, resilient landscape so that everyone can Live Wildly for generations to come.



Other Partners



The Florida Conservation Group focuses on the conservation of Florida's natural and agricultural lands with the goal of advancing science-based land protection in the state of Florida.

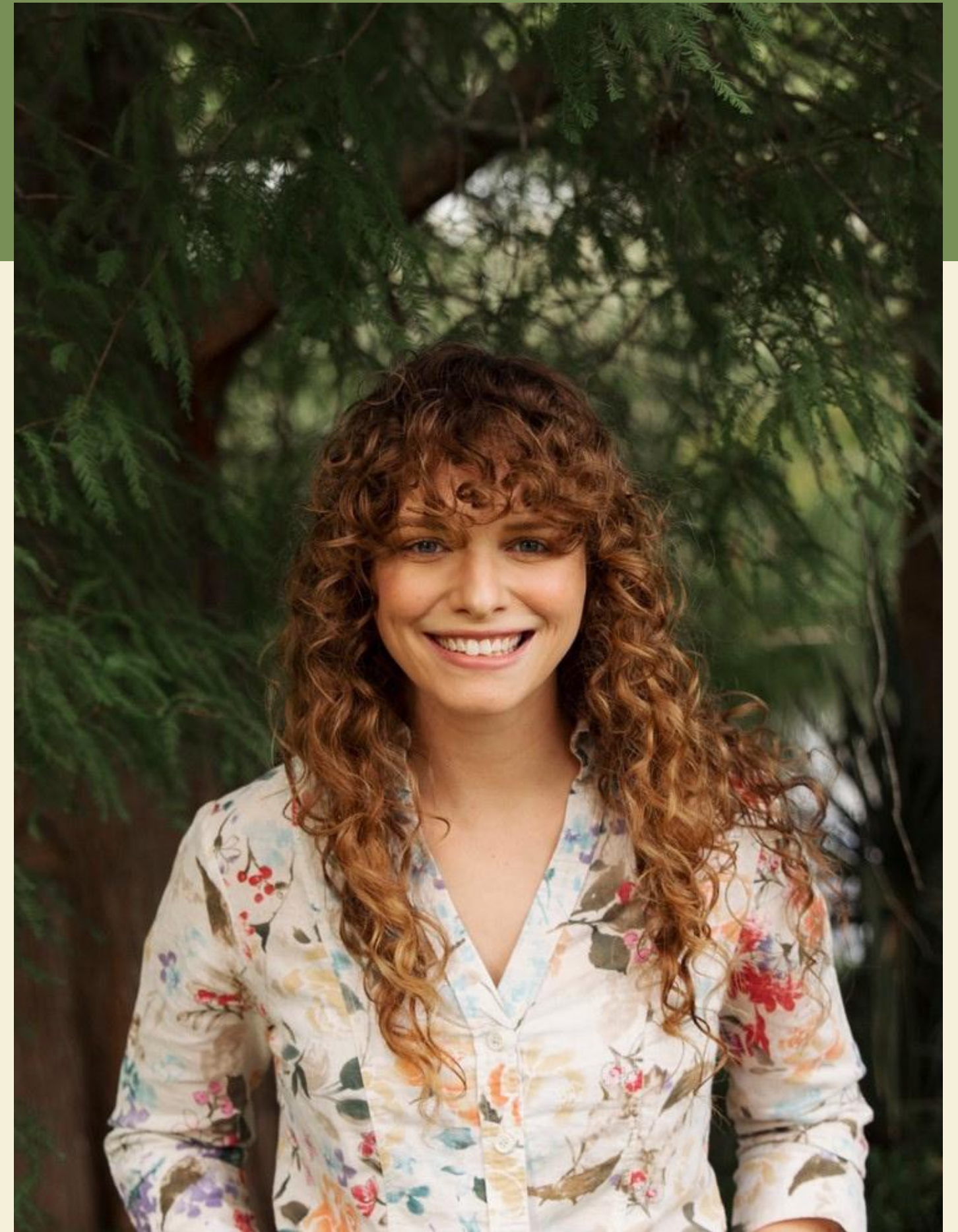


Isabella Guttuso Browne

UF Center for Landscape Conservation Planning

Isabella Guttuso Browne is the Urban and Recreational Green Infrastructure Coordinator and Landscape Designer at the University of Florida Center for Landscape Conservation Planning.

Her work focuses on applied research, planning, and design strategies that protect and connect green infrastructure networks across urban and rural scales. She contributes to projects in community and conservation planning, landscape resilience, and sustainable recreation, with an emphasis on translating science into actionable planning and design solutions. Isabella obtained her Master's in Landscape Architecture from the University of Florida.



Sarah Lockhart

UF Center for Landscape Conservation Planning

Sarah Lockhart is the Networking and Communications Analyst at the University of Florida's Center for Landscape Conservation Planning and a PhD candidate in Interdisciplinary Ecology.

Her work integrates landscape-scale conservation planning, spatial decision support, and science communication to advance more inclusive and effective approaches to conservation decision-making across academic, governmental, and nonprofit sectors.



Michael O'Brien

UF Center for Landscape Conservation Planning

Michael O'Brien is the GIS manager at the University of Florida Center for Landscape Conservation Planning.

Trained in landscape architecture and GIS, he has worked in the public and private sectors and has more than fifteen years of experience in conservation GIS.

He has contributed to projects like the Florida Ecological Greenways Network, Rural and Family Lands Protection Program GIS scoring, and the Florida Ecological Connectivity Planning Viewer.



Dr. Tom Hctor

UF Center for Landscape Conservation Planning

Dr. Thomas Hctor is the director of the Center for Landscape Conservation Planning at the University of Florida.

He is an expert on GIS applications for identifying conservation priorities and implementation actions for maintaining biodiversity and ecosystem services including focal species habitat modeling, reserve design, wildlife corridors, recommendations for expanding protected lands to address climate change impacts, and conservation strategies for ensuring effective conservation in a future with continuing conflicts with land use change and habitat loss. He has served as principal or co-principal investigator on many regional-scale conservation analysis and planning projects in Florida and the U.S.

He has an undergraduate degree in History and Science from Harvard University and a Masters and Ph.D. in Conservation Biology and Landscape Ecology from the University of Florida.



Connectivity Across Scales: Tools and Concepts for the Urban-to-Rural Transect

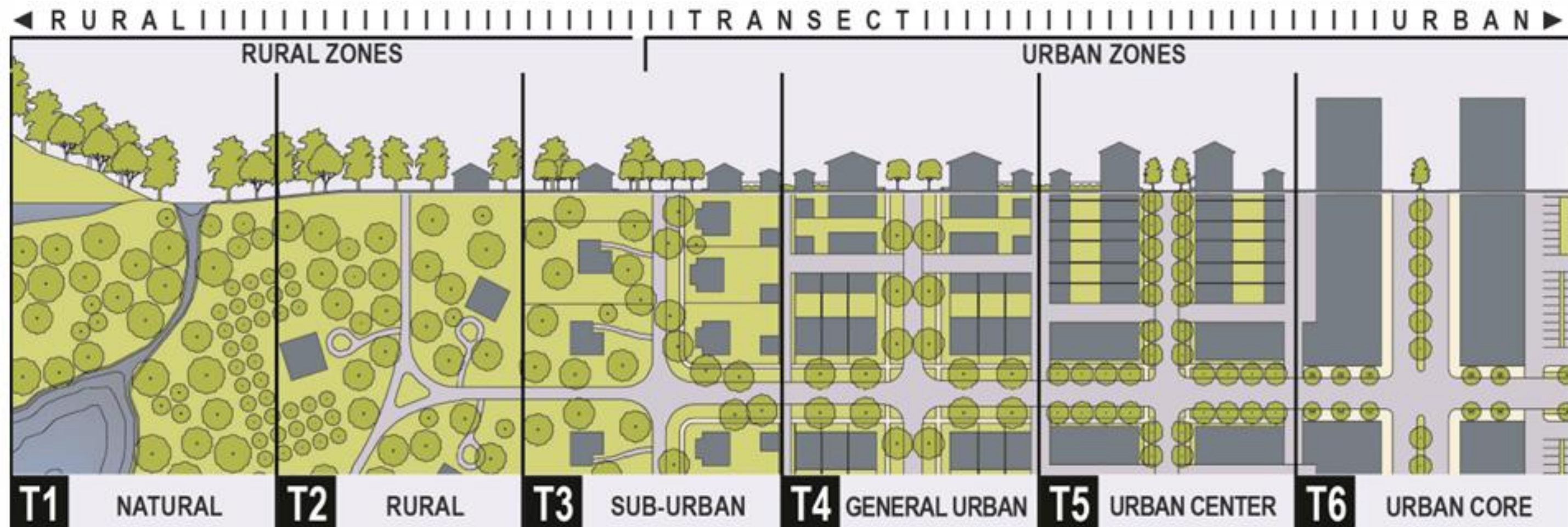
Part 1 | *Science, Design, and the Transect: Protecting the FEGN, Florida Wildlife Corridor, and Other Green Networks*

Isabella Guttuso Browne | UF Center for Landscape Conservation Planning

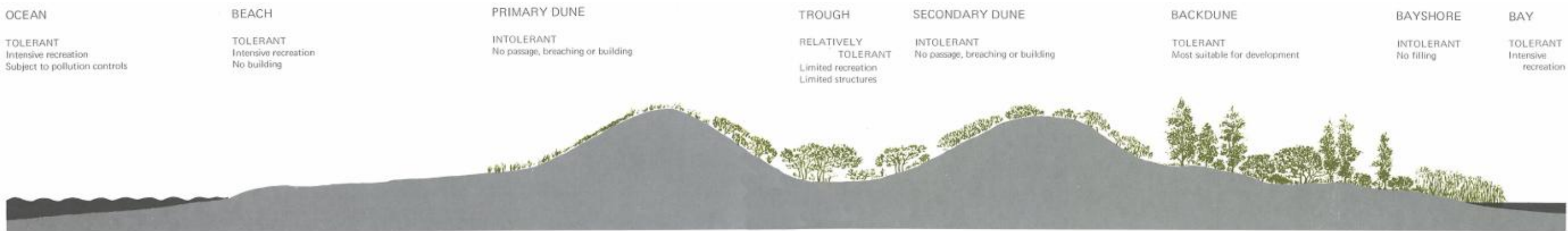


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The Rural to Urban Transect



The Rural to Urban Transect



The Natural Transect

The Rural to Urban Transect: From a Concept to Code

T1	T-1 NATURAL consists of lands approximating or reverting to a wilderness condition, including lands unsuitable for settlement due to topography, hydrology or vegetation.	Building Type: Building Placement: Frontage Types: Building Height: Open Space:	Natural landscape with some agricultural use Not applicable Not applicable Not applicable Farms, parks, greenways
T2	T-2 RURAL consists of sparsely settled lands in open or cultivated states. These include woodland, agricultural land, grassland, and irrigable desert. Typical buildings are farmhouses, agricultural buildings, cabins, and villas.	Building Type: Building Placement: Frontage Types: Building Height: Open Space:	Primarily agricultural with woodland & wetland and scattered buildings Variable setbacks Not applicable 1- to 2-story Parks, greenways
T3	T-3 SUB-URBAN consists of low density residential areas, adjacent to higher zones that some mixed use. Home occupations and outbuildings are allowed. Planting is naturalistic and setbacks are relatively deep. Blocks may be large and the roads irregular to accommodate natural conditions.	Building Type: Building Placement: Frontage Types: Building Height: Open Space:	Lawns, and landscaped yards surrounding detached single-family houses; pedestrians occasionally Large and variable front and side yard setbacks Porches, fences, naturalistic tree planting 1- to 2-story with some 3-story Parks, greenways
T4	T-4 GENERAL URBAN consists of a mixed use but primarily residential urban fabric. It may have a wide range of building types: single, sideyard, and rowhouses. Setbacks and landscaping are variable. Streets with curbs and sidewalks define medium-sized blocks.	Building Type: Building Placement: Frontage Types: Building Height: Open Space:	Mix of houses, townhouses & small apartment buildings, with scattered commercial activity; balance between landscape and buildings; presence of pedestrians Shallow to medium front and side yard setbacks Porches, fences, dooryards 2- to 3-story with a few taller mixed use buildings Squares, greens
T5	T-5 URBAN CENTER consists of higher density mixed use building that accommodate retail, offices, rowhouses and apartments. It has a tight network of streets, with wide sidewalks, steady street tree planting and buildings set close to the sidewalks.	Building Type: Building Placement: Frontage Types: Building Height: Open Space:	Shops mixed with townhouses, larger apartment houses, offices, workplace, and civic buildings; predominantly attached buildings; trees within the public right-of-way; substantial pedestrian activity Shallow setbacks or none; buildings oriented to street defining a street wall Stoops, shopfronts, galleries 3- to 5-story with some variation Parks, plazas and squares, median landscaping
T6	T-6 URBAN CORE consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance. It may have larger blocks; streets have steady street tree planting and buildings are set close to wide sidewalks. Typically only large towns and cities have an Urban Core.	Building Type: Building Placement: Frontage Types: Building Height: Open Space:	Medium to high-density mixed-use buildings, entertainment, civic and cultural uses. Attached buildings forming a continuous street wall; trees within the public right-of-way; highest pedestrian and transit activity Shallow setbacks or none; buildings oriented to street, defining a street wall Stoops, dooryards, forecourts, shopfronts, galleries, and arcades 4-plus story with a few shorter buildings Parks, plazas and squares; median landscaping

SMARTCODE MODULE

Municipality

TABLE FM-2: COMMON ZONE OF DEFENSE COMMUNITY SCALE PATTERNS

a. Prohibited Pattern: Conventional Sprawl

- Conventional sprawl patterns shall not be permitted that generate redundant Zones of Defense, increased building spacing, and/or complex fire fighting situations.



b. Individual Buildings, Compounds, Farmsteads, Agricultural / Stewardship, Proto-Hamlets:

- Zones of Defense shall be provided around single structures.
- Multiple structures shall be clustered per this Table, items b, c, and d.
- Common Zones of Defense shall be provided around clusters of multiple structures.
- Structures shall be located close enough to public Thoroughfares for direct fire fighting access.
- Zones of Defense shall be contiguous with public Thoroughfares.
- Multiple buildings and compounds under separate ownership shall be located in close proximity to each other to reduce the total quantity of individual Zones of Defense and to initiate development patterns that favor emergent CLD development. In such cases, Zones of Defense may overlap.



c. CLD with Common Zone of Defense:

- For CLD Community Unit types, Common Zones of Defense shall be provided to isolate development from Fire Hazard Severity Zones. See Section 3.3.X.
- Common Zones of Defense shall provide adequate isolation from likely wildfire threats via distance, Fuel Treatment and fire fighting access, such that resulting development shall be regulated by this Code and the local Building Codes and shall not require more restrictive regulation in response to proximity to Fire Hazard Severity Area.



d. Common Zone of Defense at Edge of TND; Agrarian Urban Interface (AUI):

- For TND Community Unit types, Common Zones of Defense shall isolate development from Fire Hazard Severity Zones.
- Common Zones of Defense shall extend between relevant edges of TND and the Fire Hazard Severity Zone.
- WUI shall be converted to AUI, thus separating wildland fire fighting requirements from urban fire fighting requirements.
- Farmsteads and related agrarian compounds may occur within the Agrarian Urban Interface per item b. above.



FIRE MITIGATION IN THE WILDLAND URBAN INTERFACE SMARTCODE MODULE

PREPARED BY DRILLING TERRACES ARCHITECTURE, MARTIN DRILLING

To create fire it is to require one of the following:
presence of the fuels, the manager fire is to prevent
one of the following sets of human beings. That, de-
scribed, is the definition and necessary process to under-
stand fire.

Source: Peter
Lynch

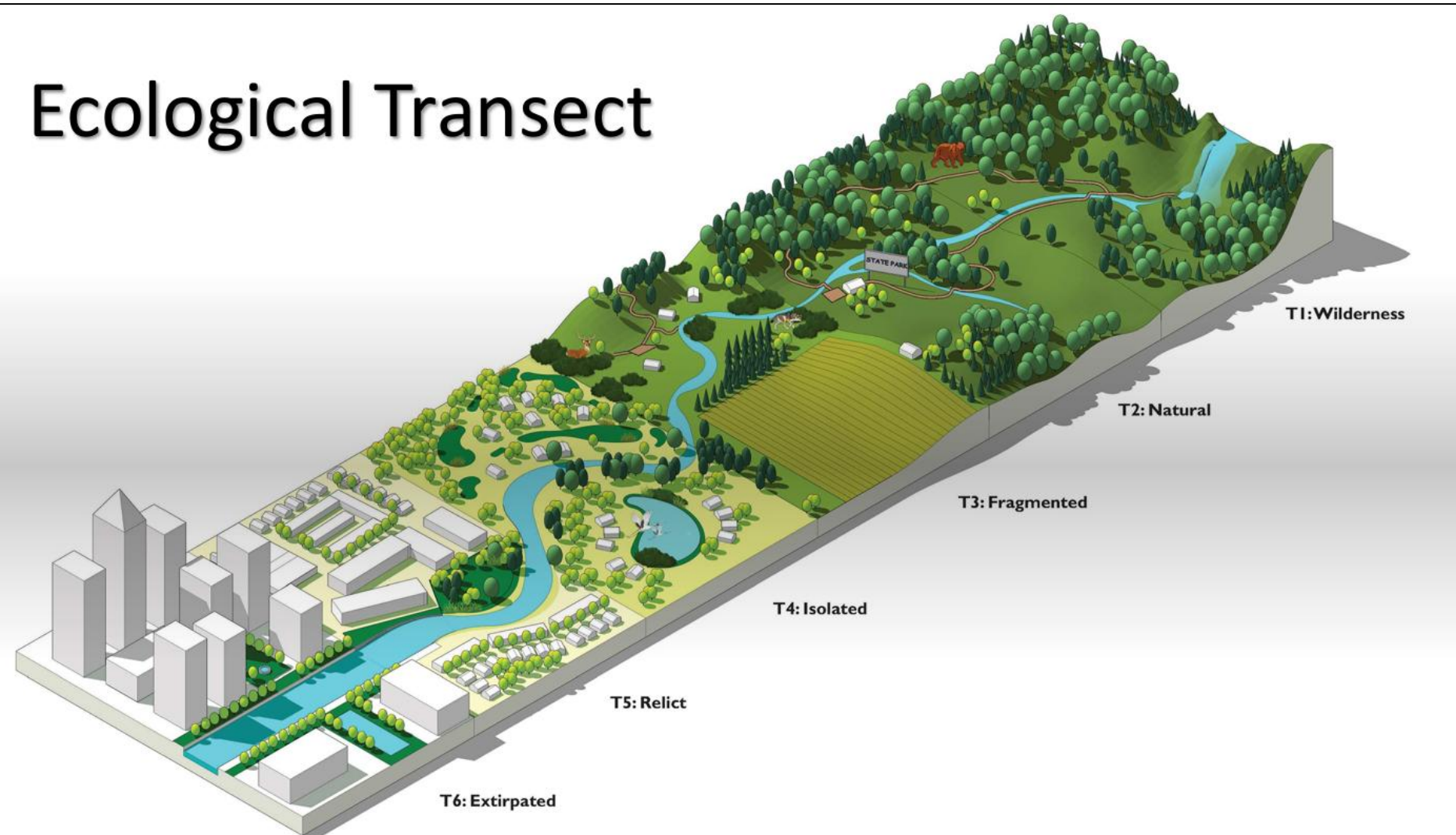
SMARTCODE
v 9.2

The primary goal of the **rural-to-urban transect** is to organize human settlements along a continuous gradient from wilderness to dense city centers, replacing fragmented, single-use sprawl zoning with context-sensitive design

Common transect violations:

- uniform standards regardless of context
- failure to calibrate locally
- ***urban development in rural areas***
- ***fragmentation and loss of connectivity due to sprawling development***

Ecological Transect



A biocentric complement to the Rural-to-Urban Transect

Flip the context to Biocentric:

T1: **Wilderness** (Rural Preserve)

T2: **Natural** (Rural Reserves)

T3: **Fragmented** (Sub-Urban)

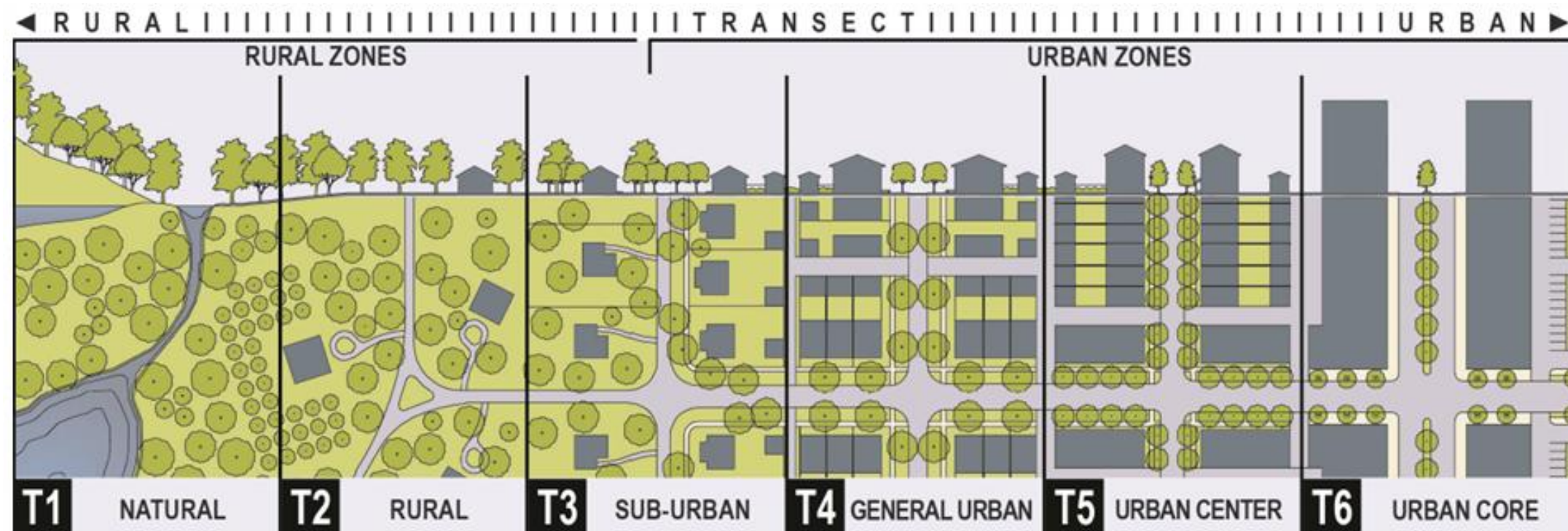
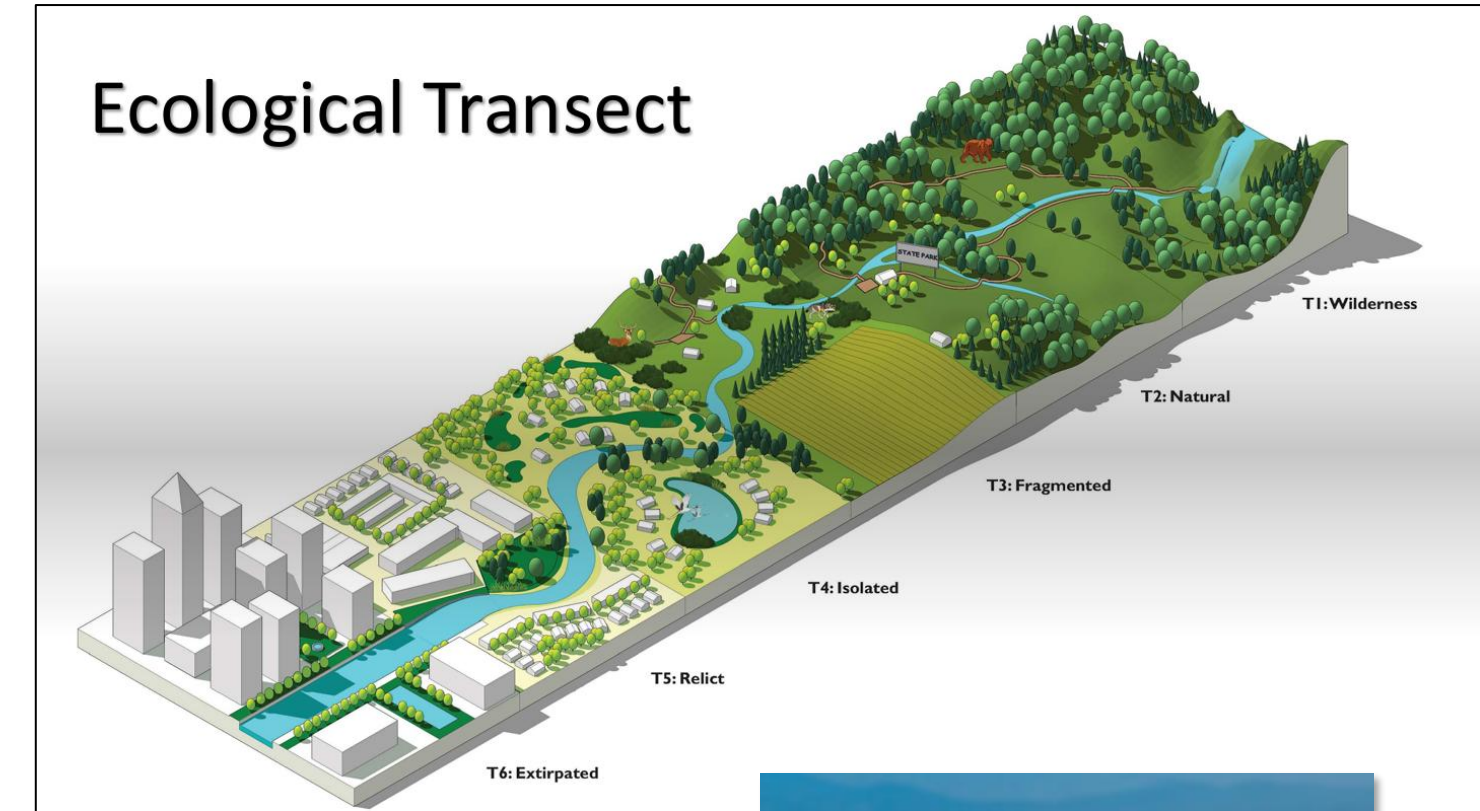
T4: **Isolated** (General Urban)

T5: **Relict** (Urban Center)

T6: **Extirpated** (Urban Core)

Protocol for each location on the Ecological Transect

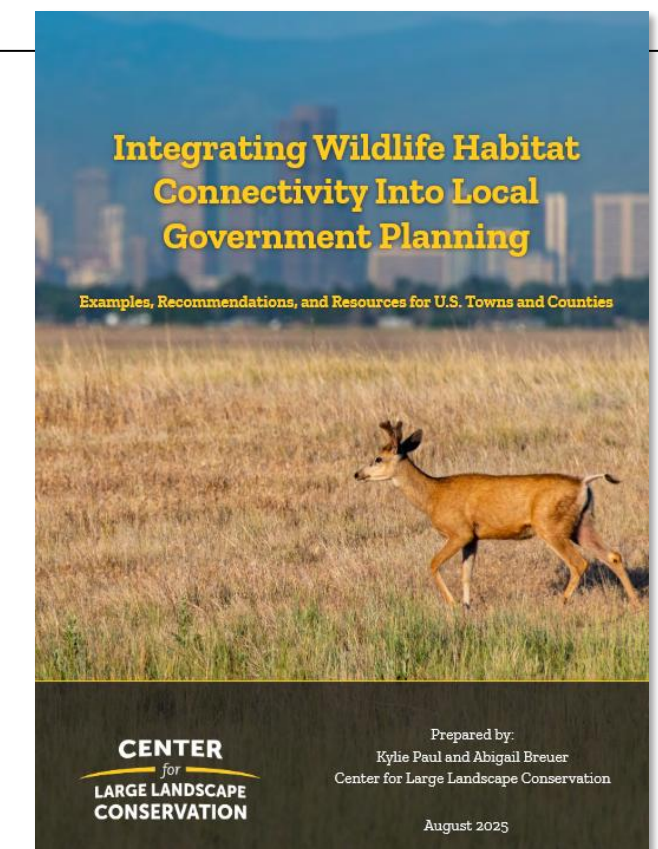
- Biodiversity characteristics
- Resource objectives
- Design considerations
- Comp Plan/Land Development Code concepts



The two transects share a convergent environmental purpose:

Minimize the human footprint to maximize the conservation of natural resources.

- Reduce the fragmentation of natural areas caused by sprawl
- Create better-connected communities for people
- Protect connected natural areas that benefit both wildlife and people

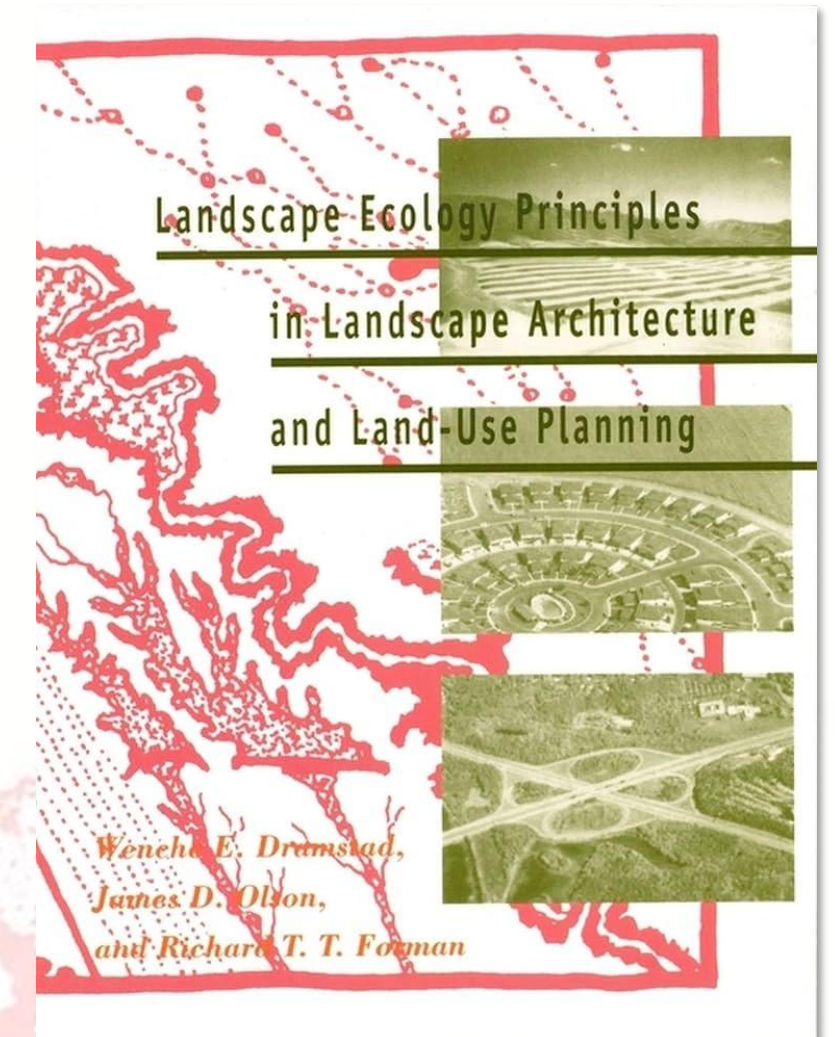


Science Underpinning of Transect: Landscape Ecology

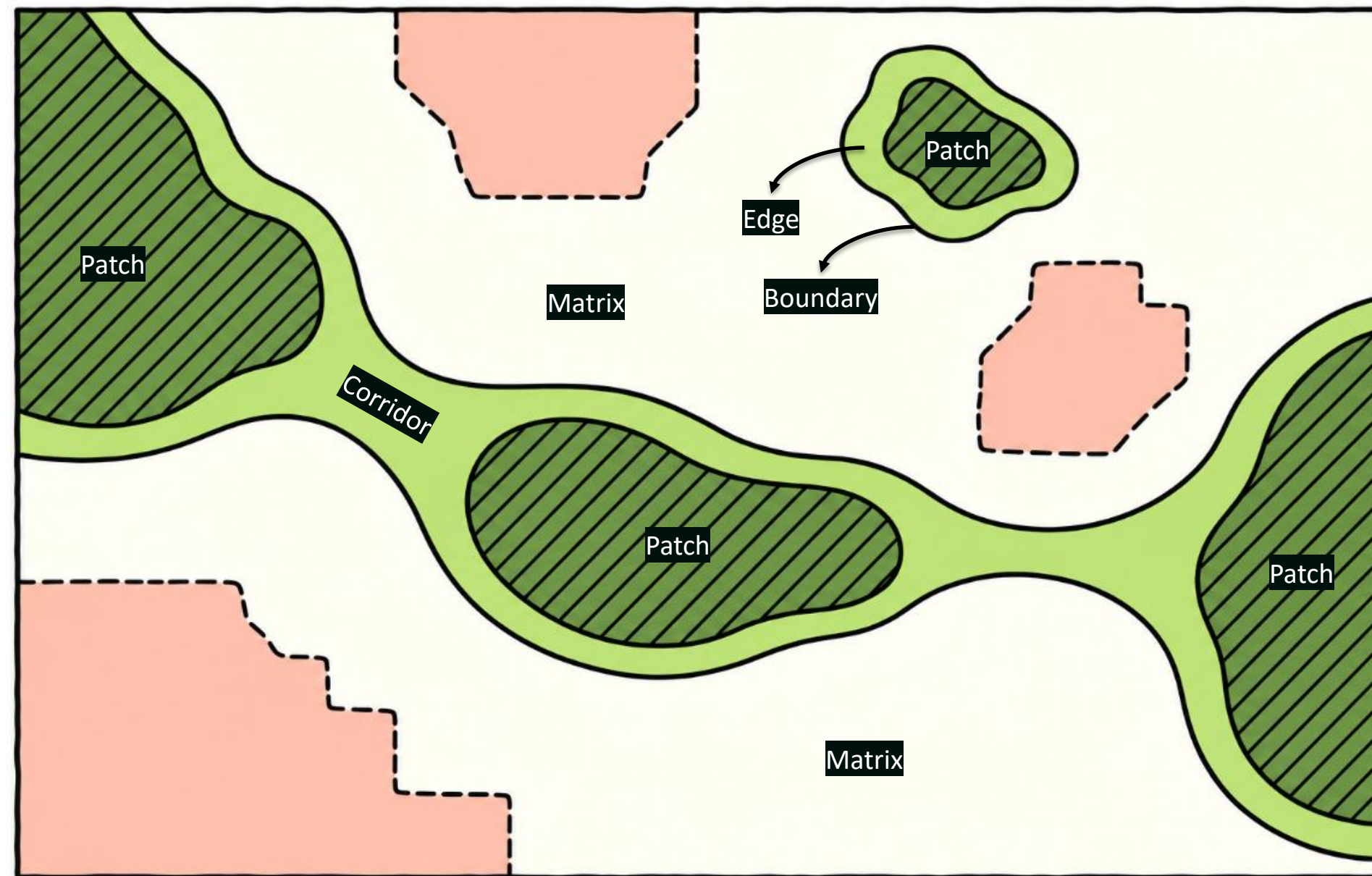
Landscape ecology is the study of how the spatial arrangement of land (patches, corridors, matrix, mosaics) influences ecological processes such as species movement, water flow, and habitat quality

(Dramstad et al., 1996)

Understanding these principles can help guide planners to maintain ecological integrity, reduce fragmentation, and ensure connectivity between habitats, even in highly modified landscapes.



Patch-Corridor-Matrix (PCM) Model



Component Definitions

Patch: A natural area or block of habitat that differs from its surroundings, made up of an interior and an edge. Key characteristics include a patch's size and shape, the number of patches, and where they are located in relation to other patches and within the matrix.

Edge: The outer portion of a patch along a boundary, where outside impacts are greatest, known as "edge effects."

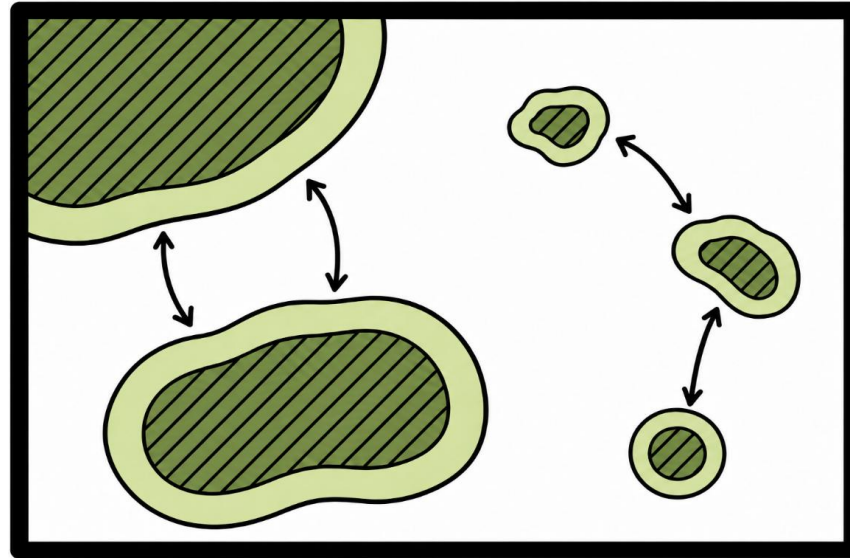
Boundary: The zone where two different land types meet, formed by the edges of each.

Corridor: A linear connection that allows species, water, and ecological processes to move between patches.

Matrix: The dominant land cover(s) surrounding patches and corridors, which influences how well they function.

Source: Dramstad, W.E., Olson, J.D., & Forman, R.T.T. (1996). Landscape Ecology Principles in Landscape Architecture and Land-Use Planning. Washington, DC: Island Press.

Size Considerations



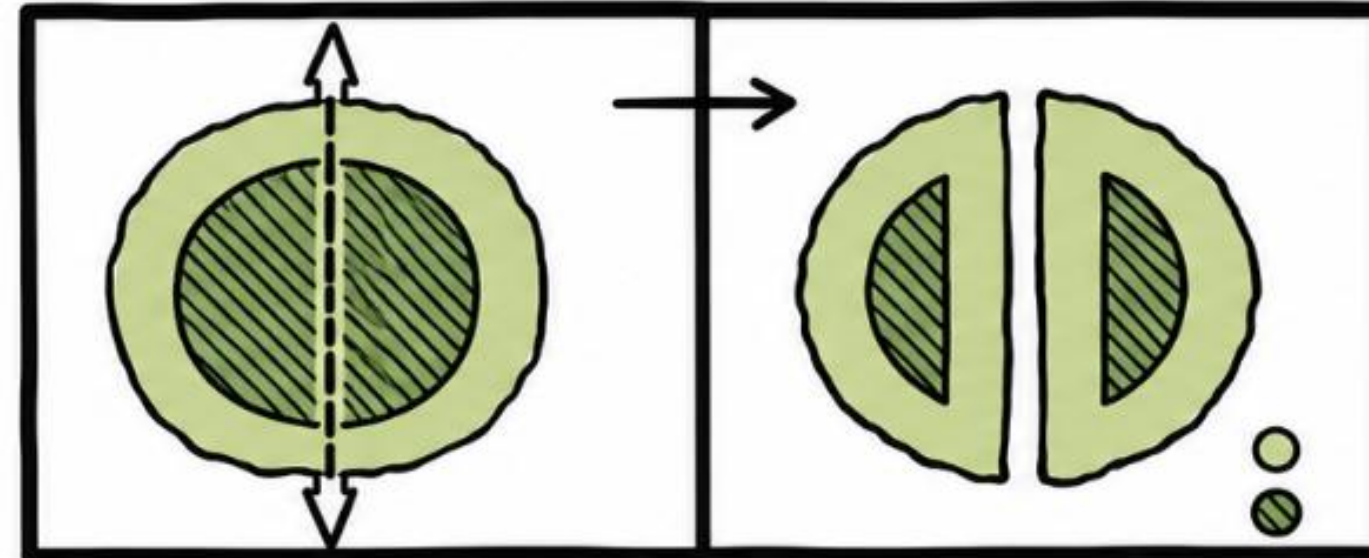
Large Patch Benefits

- Protect aquifers and stream networks
- Support interior species and wide-ranging wildlife
- Provide core habitat, escape cover, and climate resilience

Small Patch Benefits

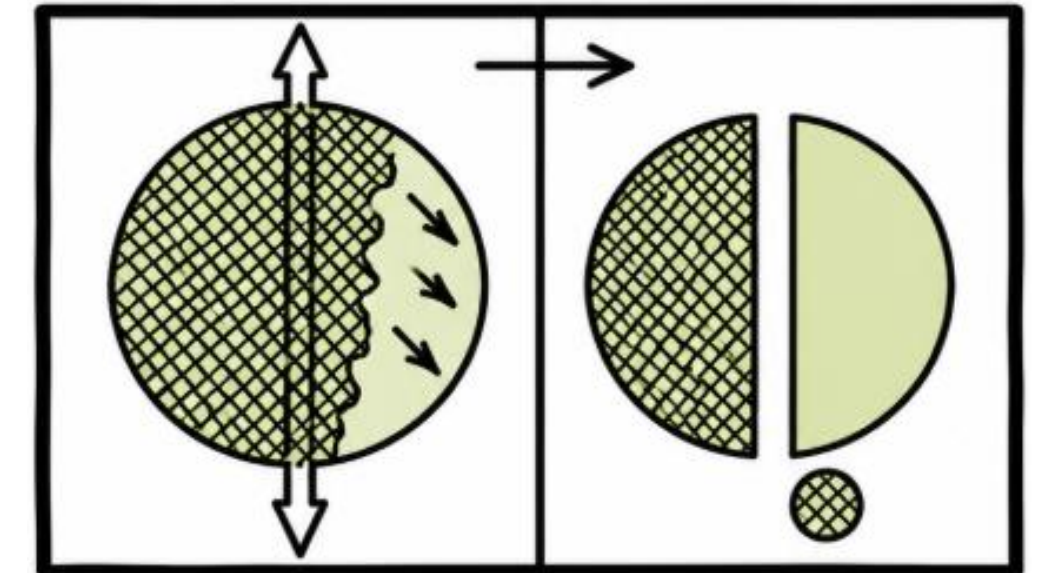
- Support smaller populations and supplemental habitat
- Provide stepping stones through developed landscapes
- Improve species movement and connectivity

Large patches provide more (and often compounding) ecological benefits, while small patches can support habitat connectivity and complement larger networks.



Edge vs. Interior Habitat

- Fragmentation increases edge habitat while reducing interior habitat
- Reduces populations and diversity of interior species
- Interior species are often of greater conservation importance

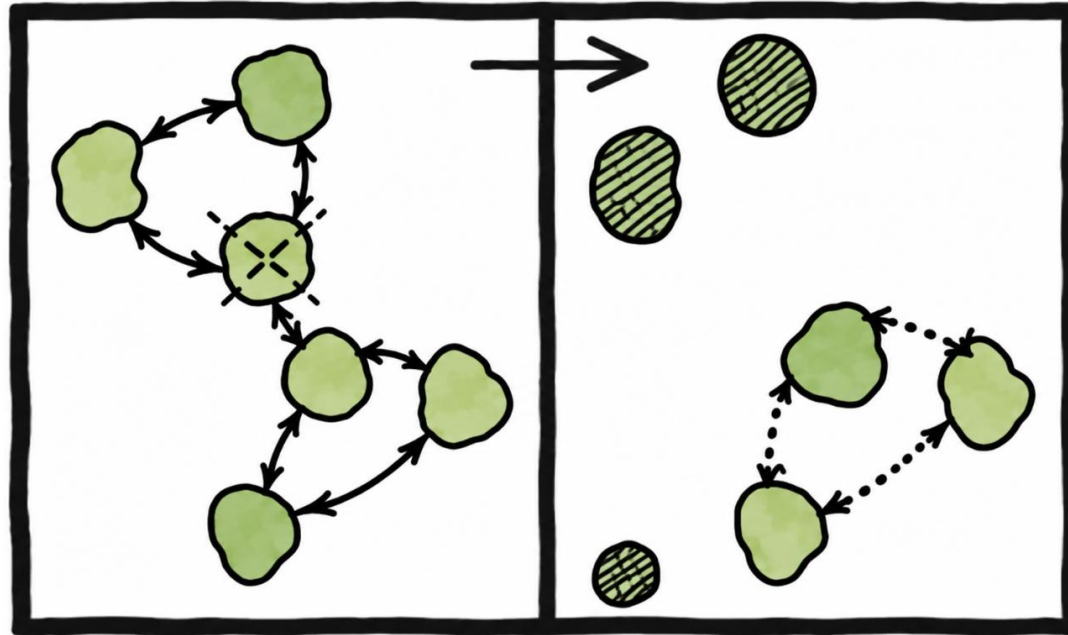


Disturbance & Patch Connectivity

- Fragmentation creates barriers that limit natural disturbances
- Fire and flooding maintain ecological structure and function
- Fragmentation disrupts these essential ecological processes

Patch: A natural area or block of habitat that differs from its surroundings, made up of an interior and an edge. Key characteristics include a patch's size and shape, the number of patches, and where they are located in relation to other patches and within the matrix.

Patches: Amount, Location

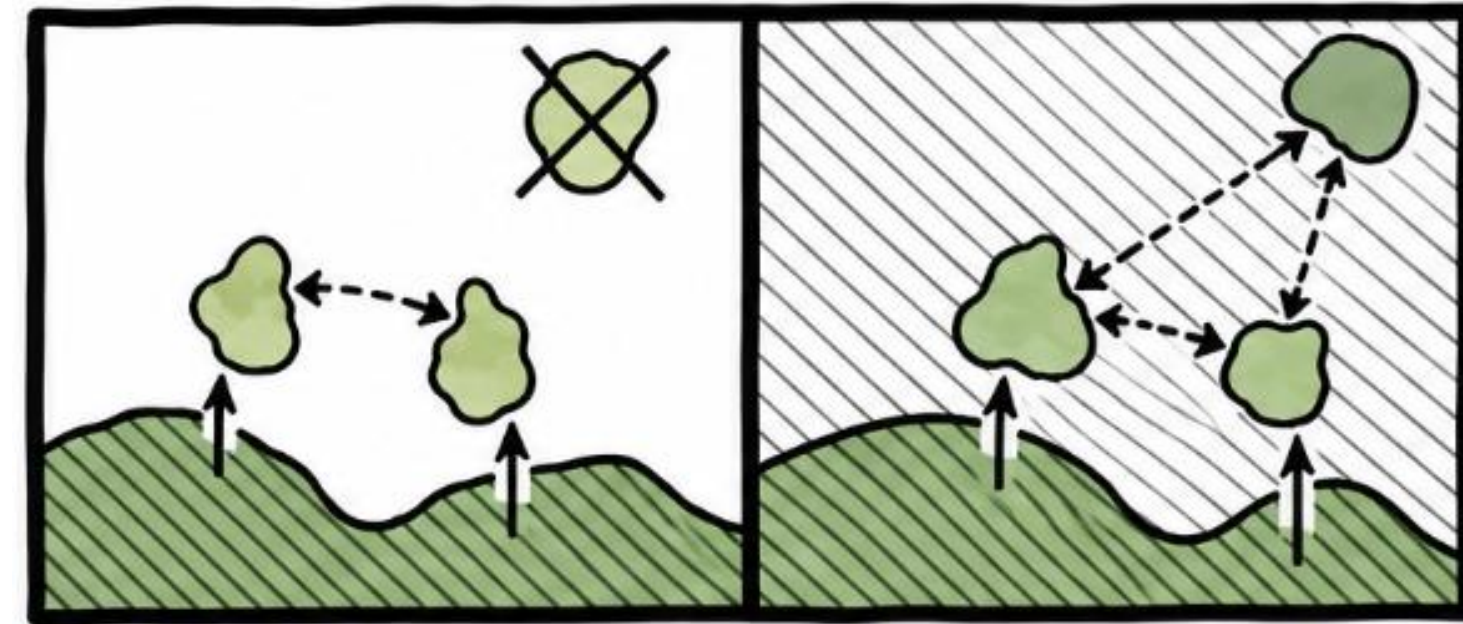


Habitat Loss

- Losing a patch reduces available habitat
- Can decrease species populations and overall diversity

Metapopulation Dynamics

- Losing a patch weakens the larger habitat network
- Reduces connectivity and opportunities for recolonization
- Increases the risk of local extinctions, especially in isolated patches



Number & Arrangement of Patches

- Several large patches can support greater species diversity across a landscape
- Where large patches are absent, clusters of smaller patches can function collectively as habitat

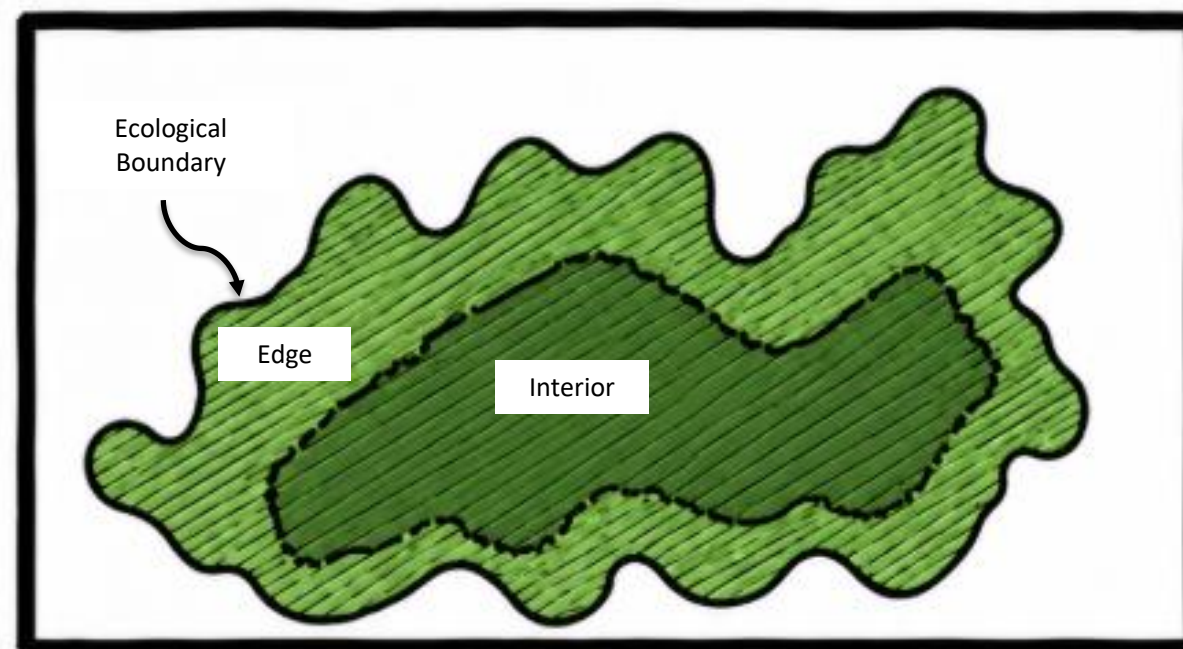
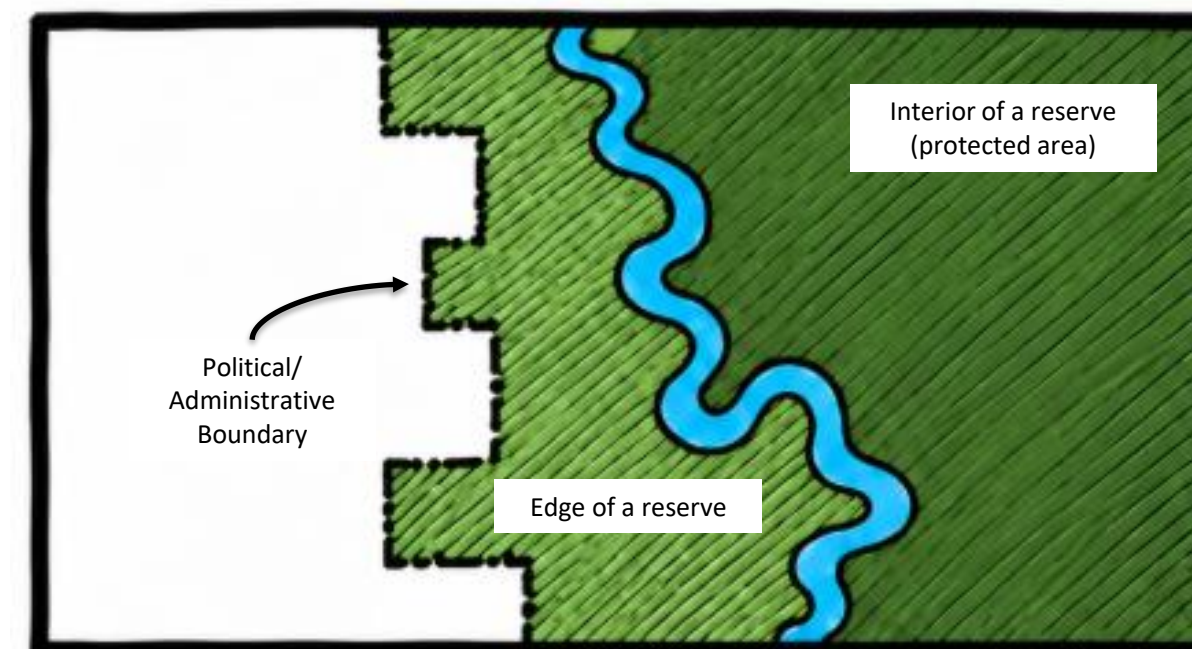
Patch Connectivity & Conservation

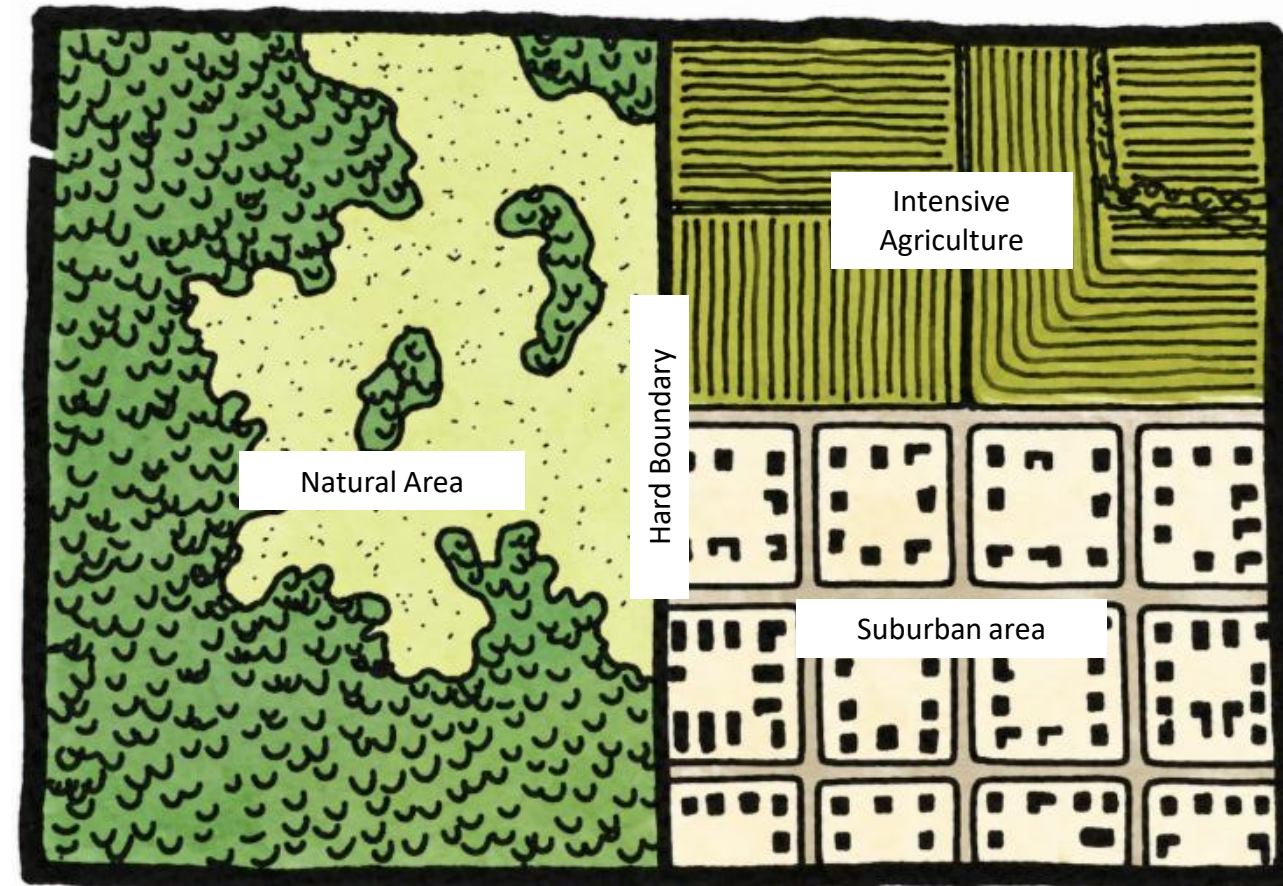
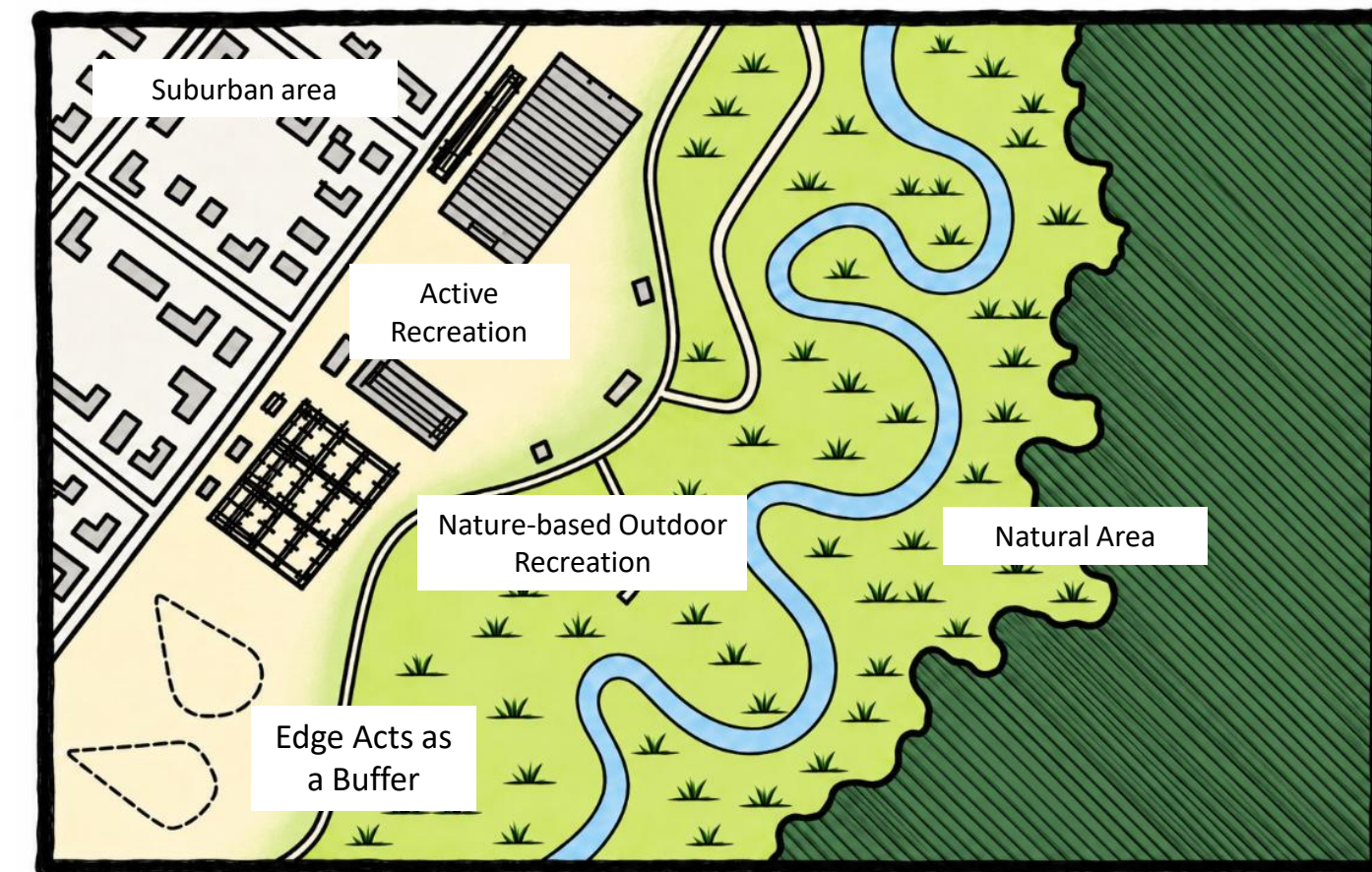
- Connected patches support species movement and recolonization, reducing local extinction risk
- Connectivity depends on patch proximity and the surrounding landscape
- Conservation priorities should consider each patch's contribution to the larger network and presence of rare or threatened species

Edges and Boundaries

Edge: The outer portion of a patch where environmental conditions differ significantly from the patch interior, creating a distinct transition zone between adjacent habitats or land uses.

Boundary: The line or zone that separates one area from another and defines the limits of a patch. Boundaries may be ecological, political, or administrative and may or may not coincide with the natural ecological edge.





Boundaries don't always match edges:

Political or administrative boundaries often differ from ecological edges, so land just outside a preserve can affect what happens inside it.

Natural vs. human made edges:

Natural edges tend to be curvilinear, complex, and soft; human made edges (boundaries) are often straight, simple, and abrupt.

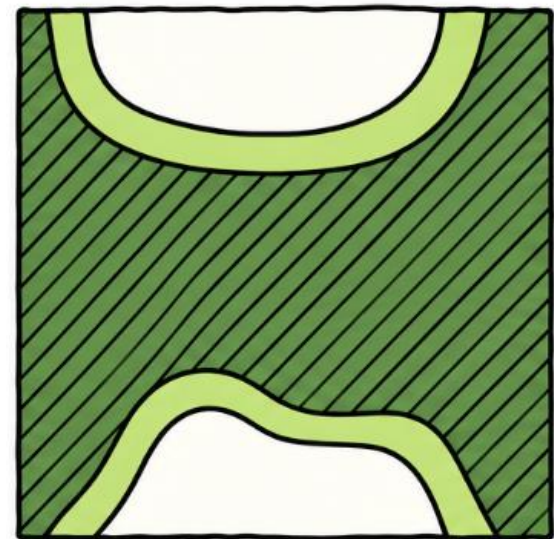
Buffers manage edge effects: Wider, structurally diverse, transitional edges act as buffers and filters, protecting sensitive patches from outside pressures before they reach the patch interior. Needed buffer widths vary widely by species and setting, from tens of feet to more than a mile for some wetland wildlife..

Edges shape movement:

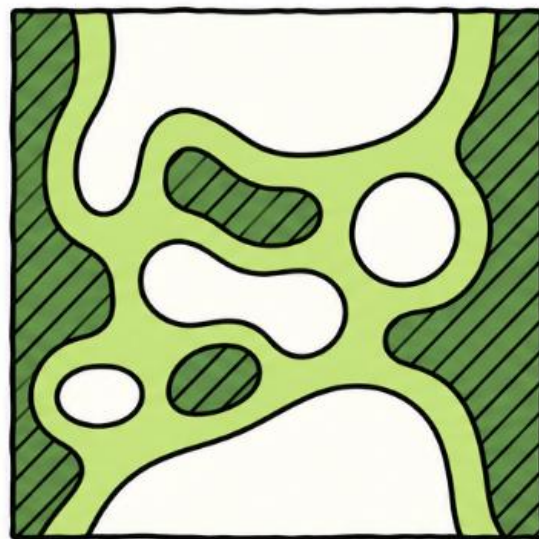
Hard, abrupt edges tend to channel wildlife along the boundary, while softer, gradual transitions allow movement across it.

Corridor: A linear connection that allows species, water, and ecological processes to move between patches.

Corridor Networks: From Most Connected to Most Fragmented



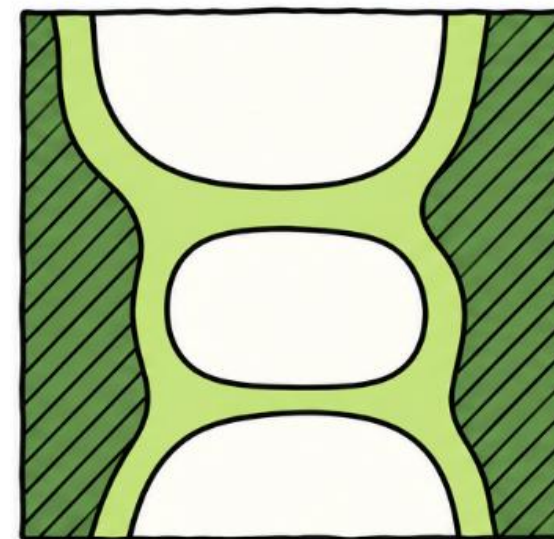
Core habitat within a wide corridor



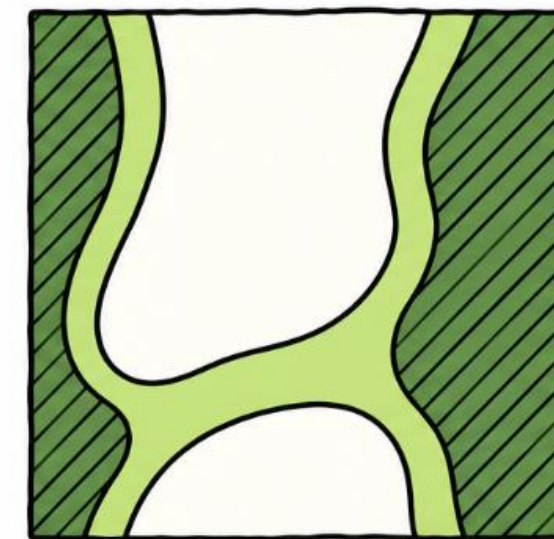
More patches and redundancy further improve connectivity



Larger, connected patches in the corridor allow wildlife to linger in corridor



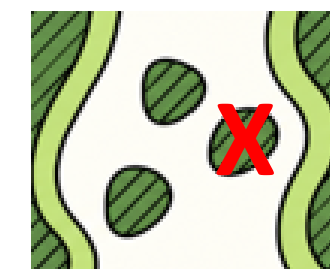
Redundancy provides additional options



Small corridor provides basic connectivity



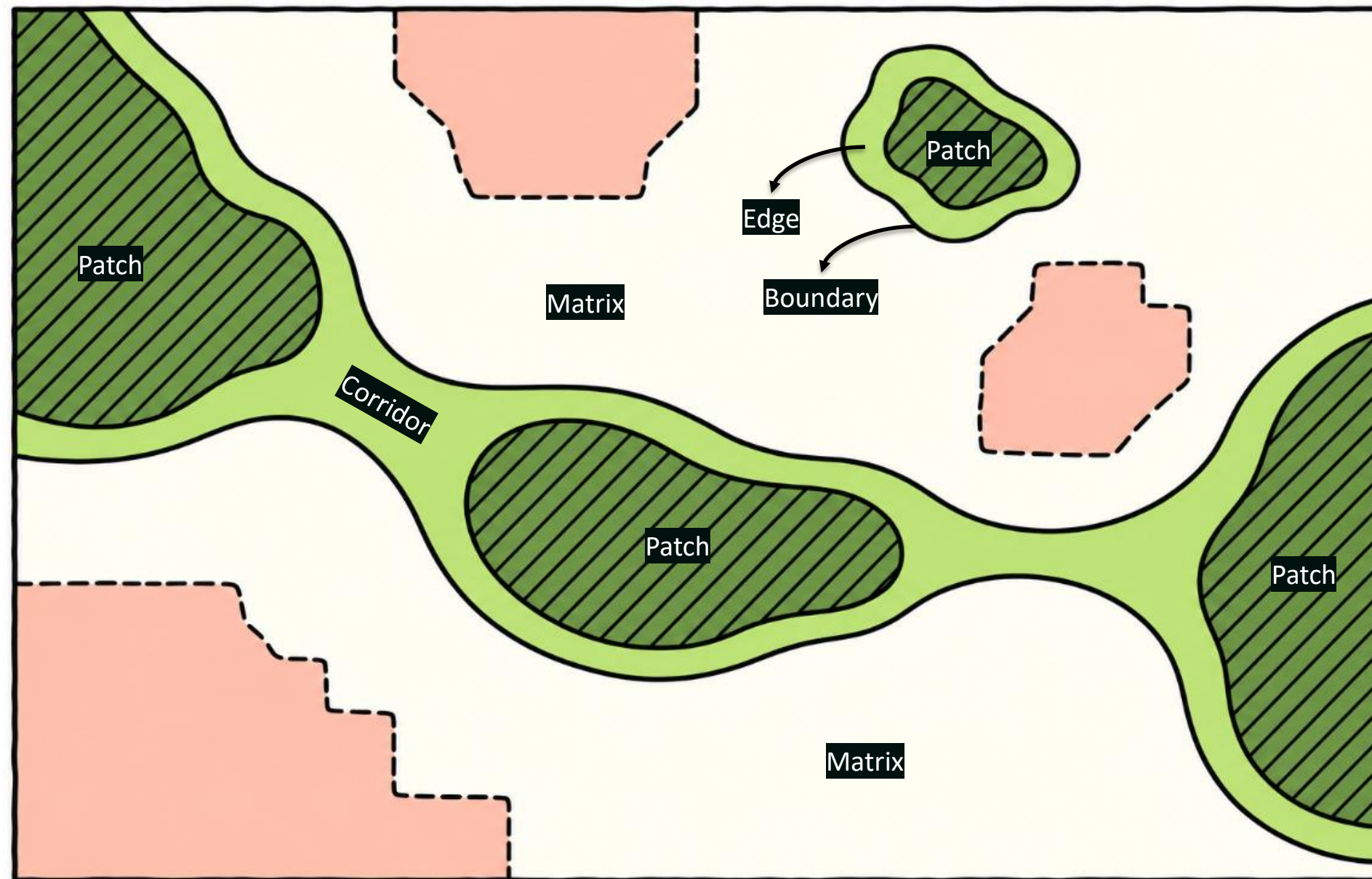
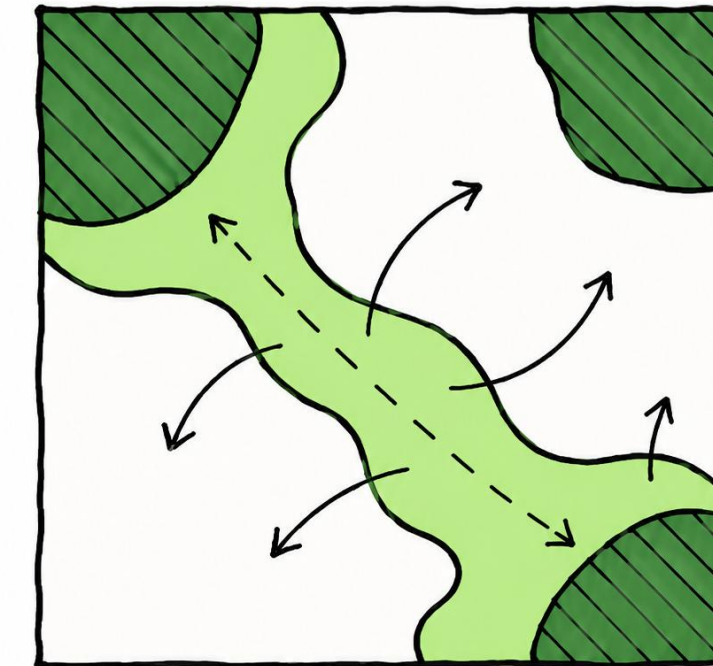
Break in corridor prevents direct connectivity, but “stepping stones” of small patches provide intermediate connectivity between a corridor and no corridor



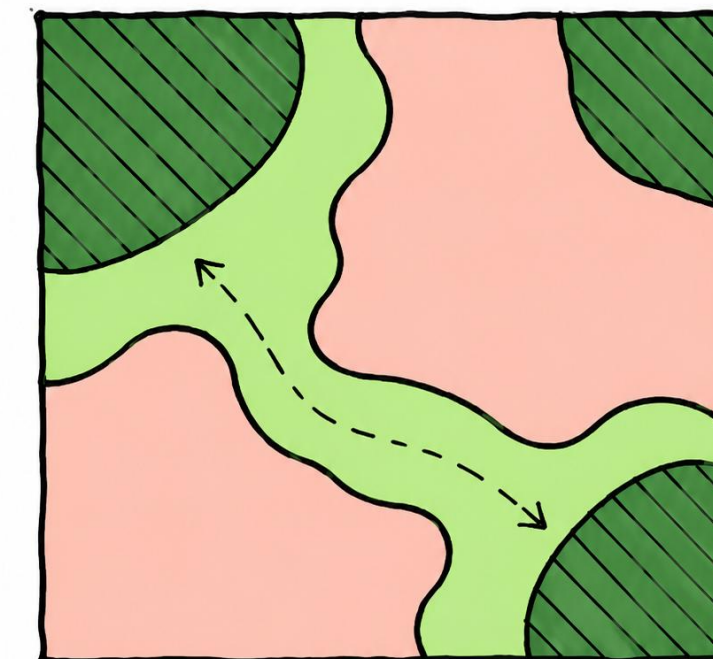
Loss of one of these patches can be significant for inhibiting wildlife movement

Matrix

Matrix: The dominant land cover(s) surrounding patches and corridors, which influences how well they function.



More suitable matrix: Rural lands, farmlands, timberlands, and ranches. More permeable, allowing wildlife movement, water infiltration, and natural processes like fire, and acting as a buffer that reduces edge effects on patches and corridors.



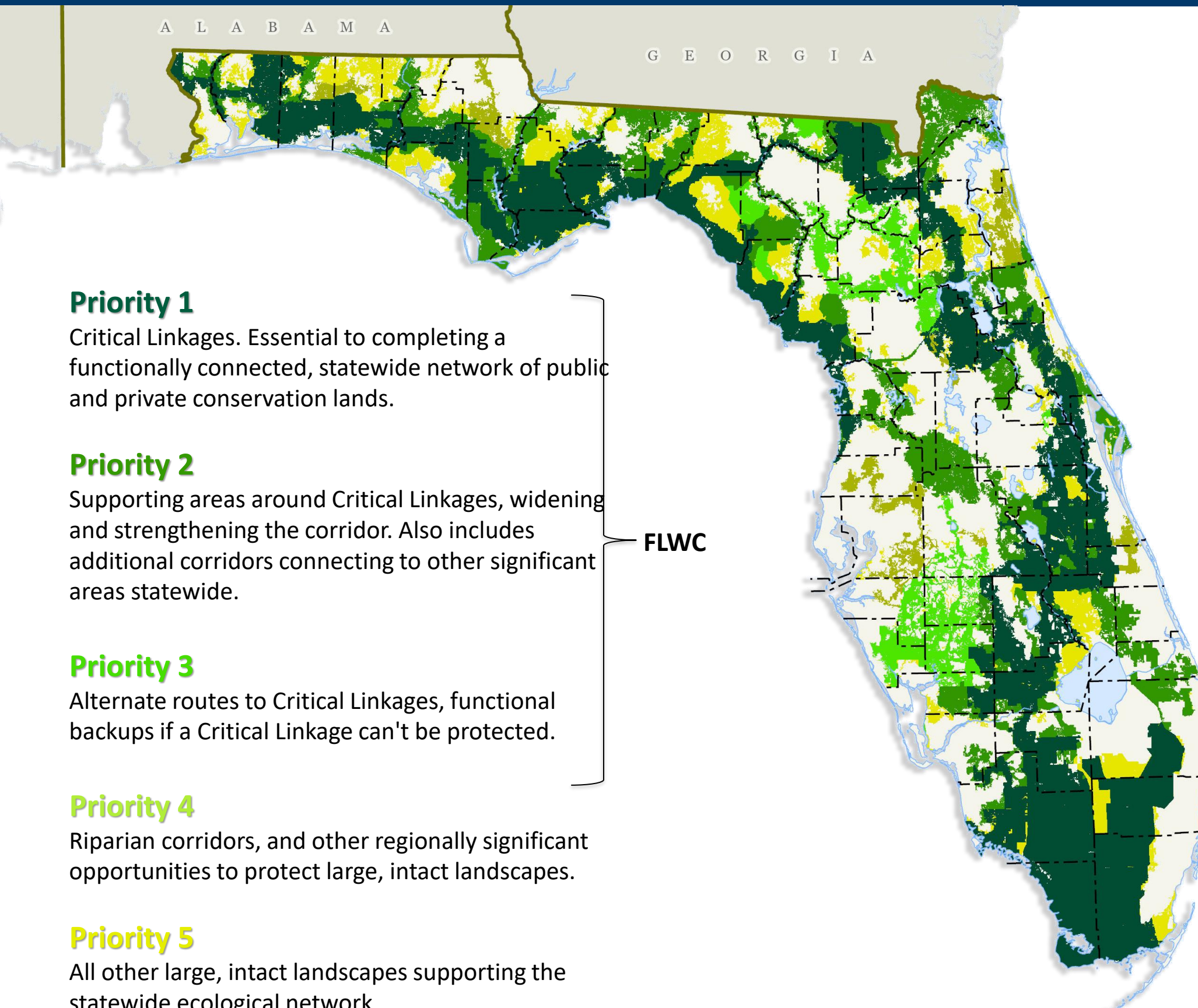
Less suitable matrix: Human-dominated, urban development. Can weaken how patches and corridors function by increasing edge effects, especially without adequate buffers.

Connecting Landscape Ecology, the FEGN and Florida Wildlife Corridor, and Transect Planning

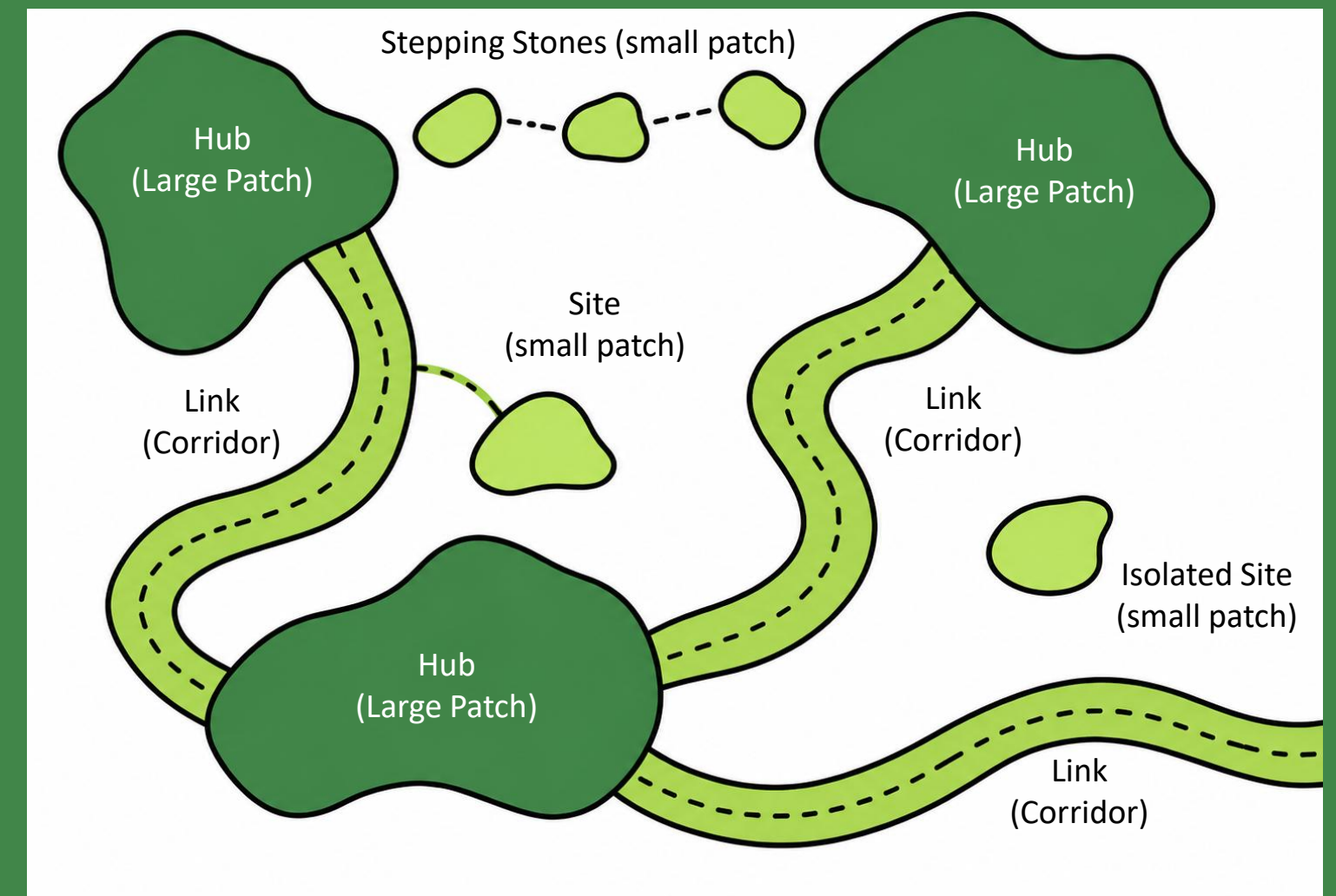


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The Florida Ecological Network (FEGN) and Florida Wildlife Corridor (FLWC)



Statewide Green Network (FEGN) Components:



- **Hubs (Large Patches):** Protected or unprotected Priority Ecological Areas of 5,000+ acres.
- **Links (Corridors):** Natural and working lands connecting hubs, many not yet protected.
- **Sites (Small Patches):** Smaller natural areas that support the larger network.
- **Stepping Stones:** Small patches that provide some connectivity where corridors are broken.

The Florida Ecological Network (FEGN) and Florida Wildlife Corridor (FLWC)

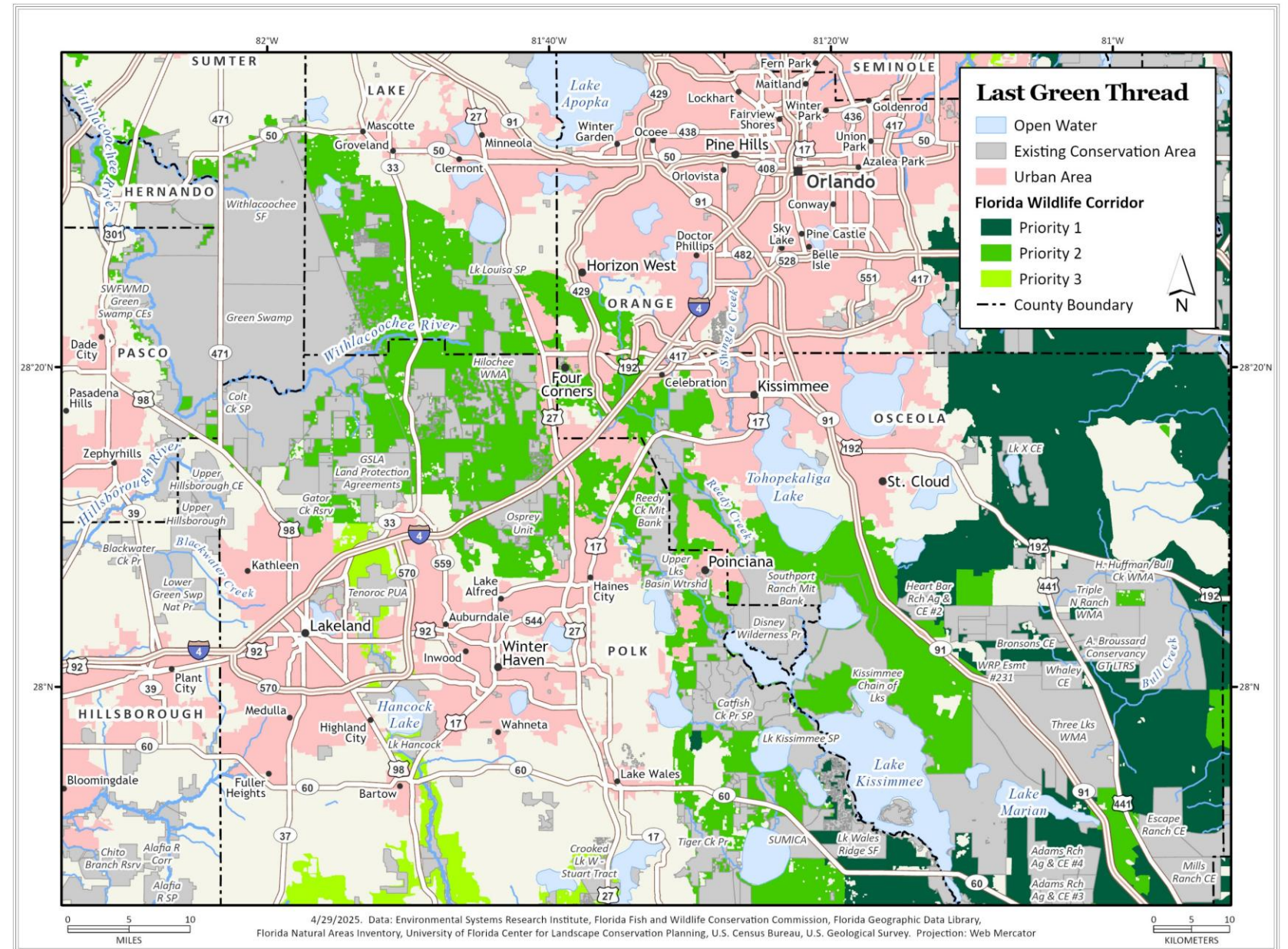
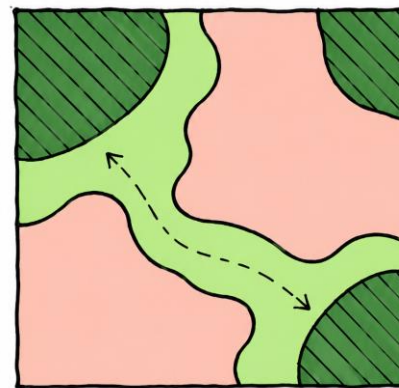
FLWC Bottlenecks: Strategic focal areas *essential for closing gaps* in the Florida Wildlife Corridor (Priorities 1–3)

Bottleneck “Pinch points”: Physically narrow connections where the corridor could be easily severed

Other Strategic areas Not always narrow, but challenged by:

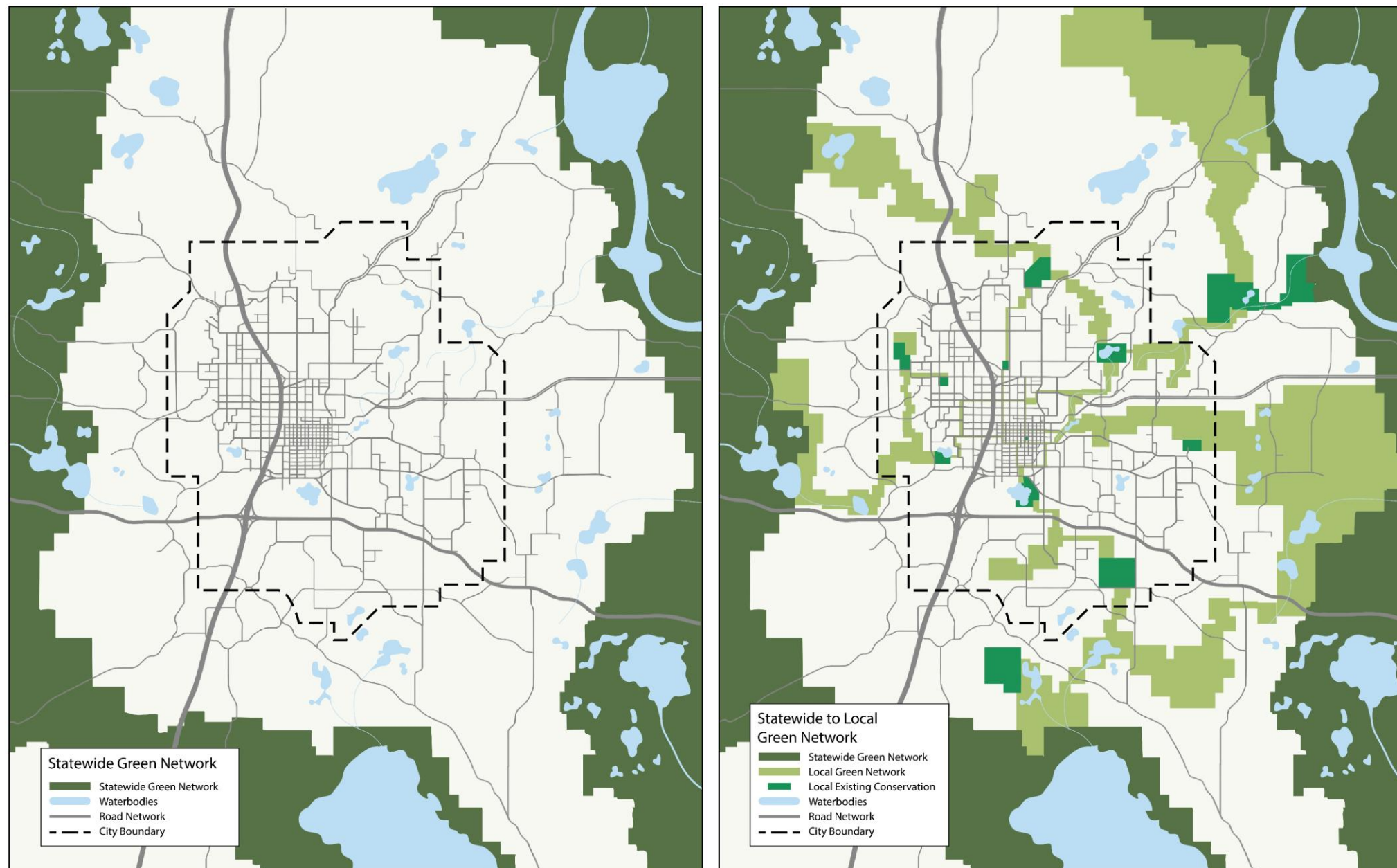
- A surrounding matrix of problematic land uses (not timber, ranch, or other agriculture)
- Small parcels under varied ownership
- Scattered development or high development pressure

~ 2.1+ million acres of **unprotected bottlenecks** within the 17.7 million acre Florida Wildlife Corridor



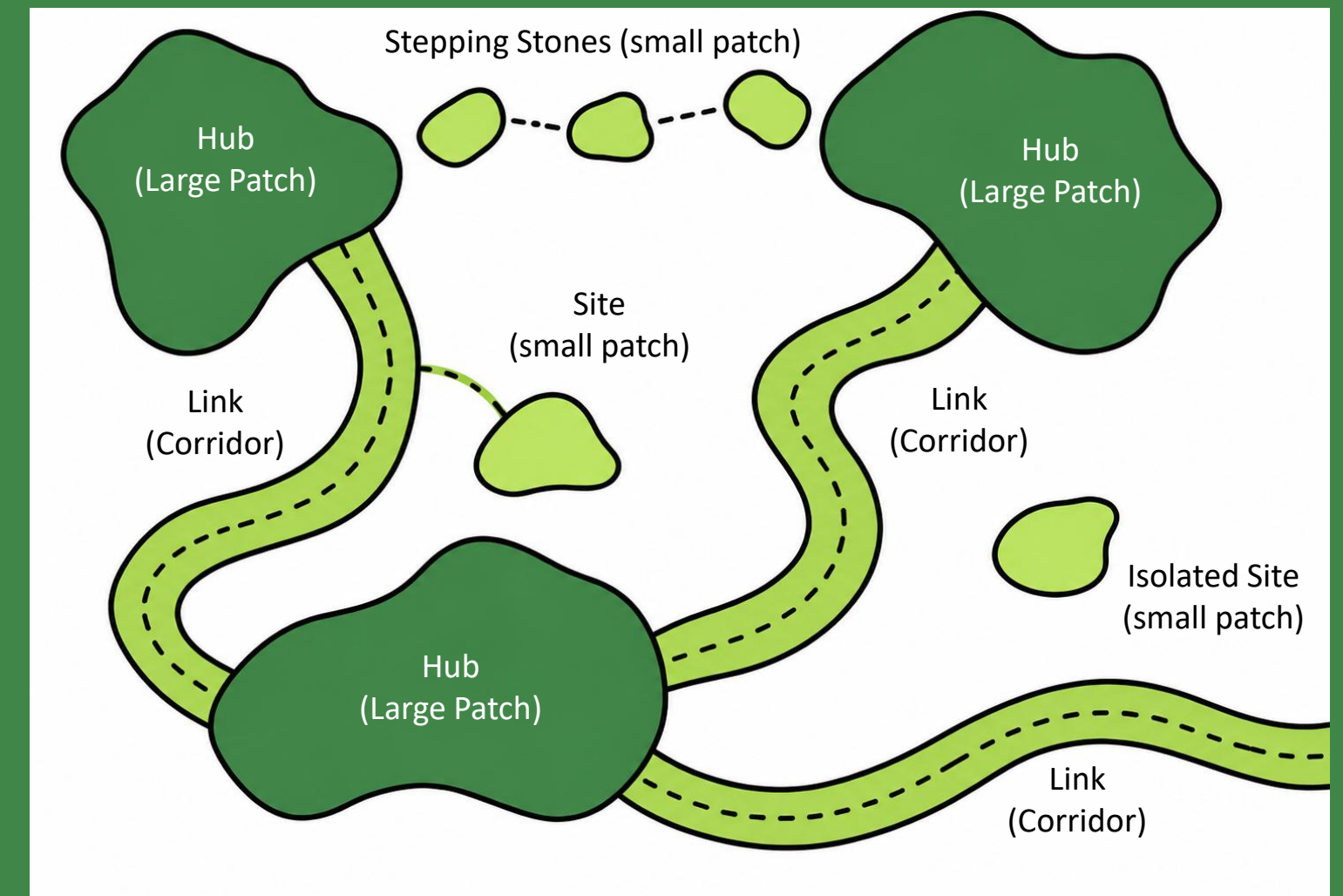
Last Green Thread bottleneck region. Connecting the Green Swamp to the headwaters of the Everglades, this narrow linkage in central Florida is surrounded by existing and in-progress development that creates a less suitable matrix for a well-connected corridor. *Map developed by UF CLCP for the Last Green Thread Mind the Gaps workshop, hosted by the Florida Wildlife Corridor Foundation to convene regional partners around solutions for critical strategic areas in the corridor.*

Connectivity doesn't end at the boundaries of the FEGN or the Florida Wildlife Corridor!



Conceptual diagram of a local green network and its connections to the larger, statewide network (like the FEGN and FLWC)

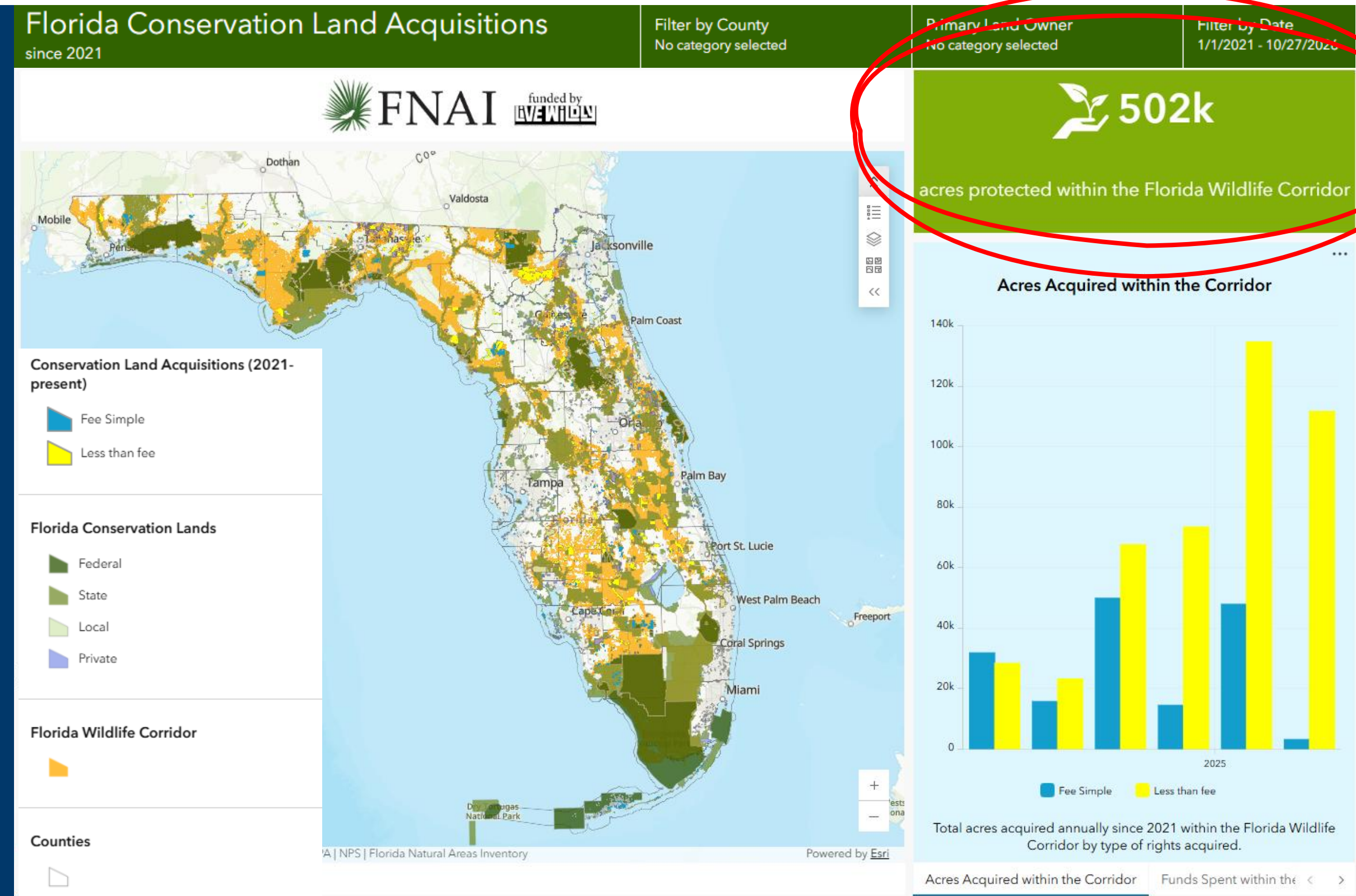
Local Green Network Components:

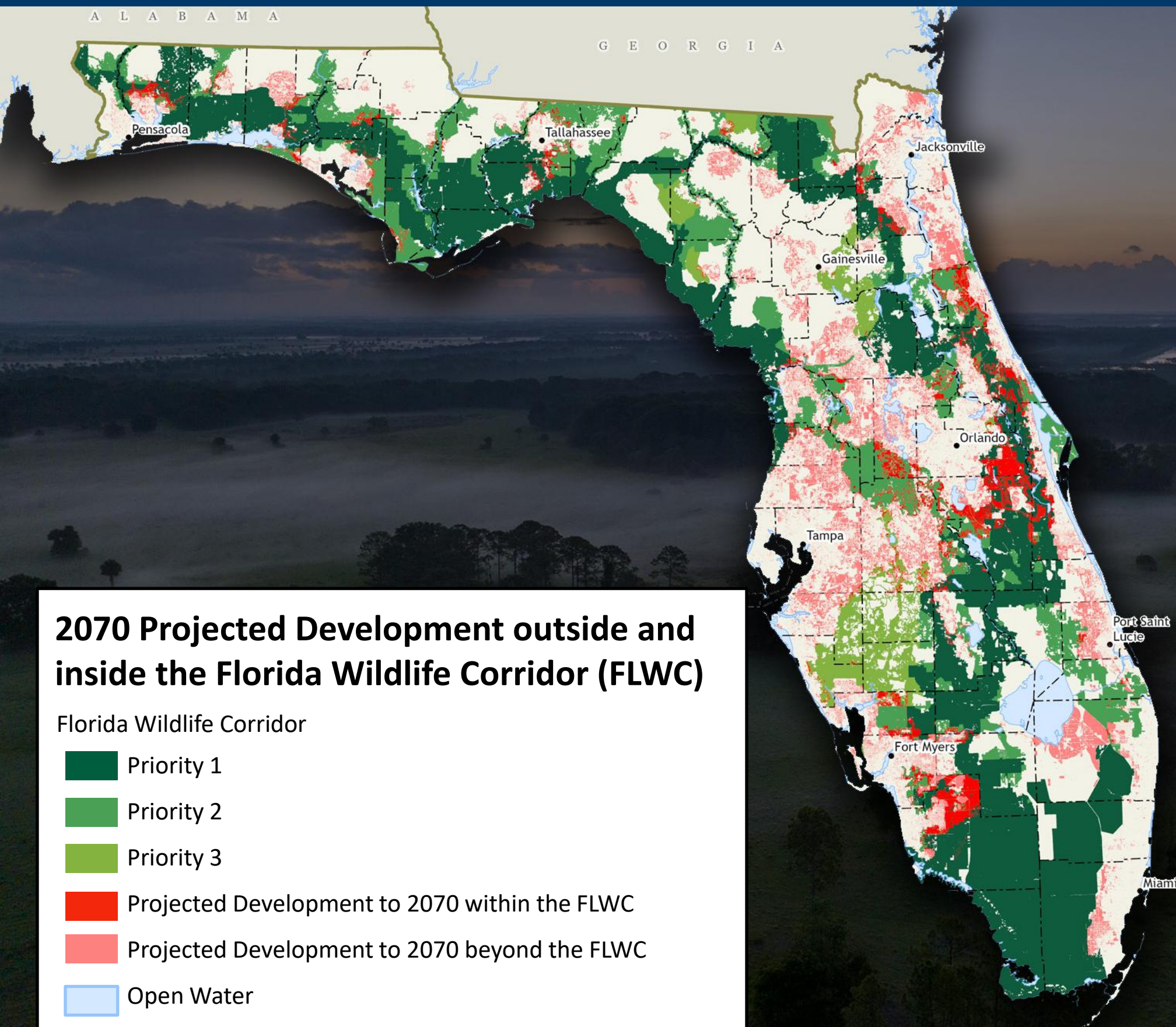


- **Hubs (Large Patches):** Key green spaces like county parks, urban forests, natural areas, and working lands.
- **Links (Corridors):** Greenways, trails, and naturalized riparian networks, including links to the regional and statewide network.
- **Sites (Small Patches):** Small, often isolated green spaces, like smaller nature parks.
- **Stepping Stones:** Backyards, pocket parks, and native plantings that provide some connectivity through developed areas.

**Local network components may overlap with regional and statewide networks, but more often they connect to them, capturing smaller local green spaces and connections not represented at the statewide scale.*

Since the passage of the Florida Wildlife Corridor Act in 2021, **500,000+ acres** have been protected within the Florida Wildlife Corridor, bringing the total protected area to approximately **10 million acres** of the nearly **18 million acre Florida Wildlife Corridor (57%)**.



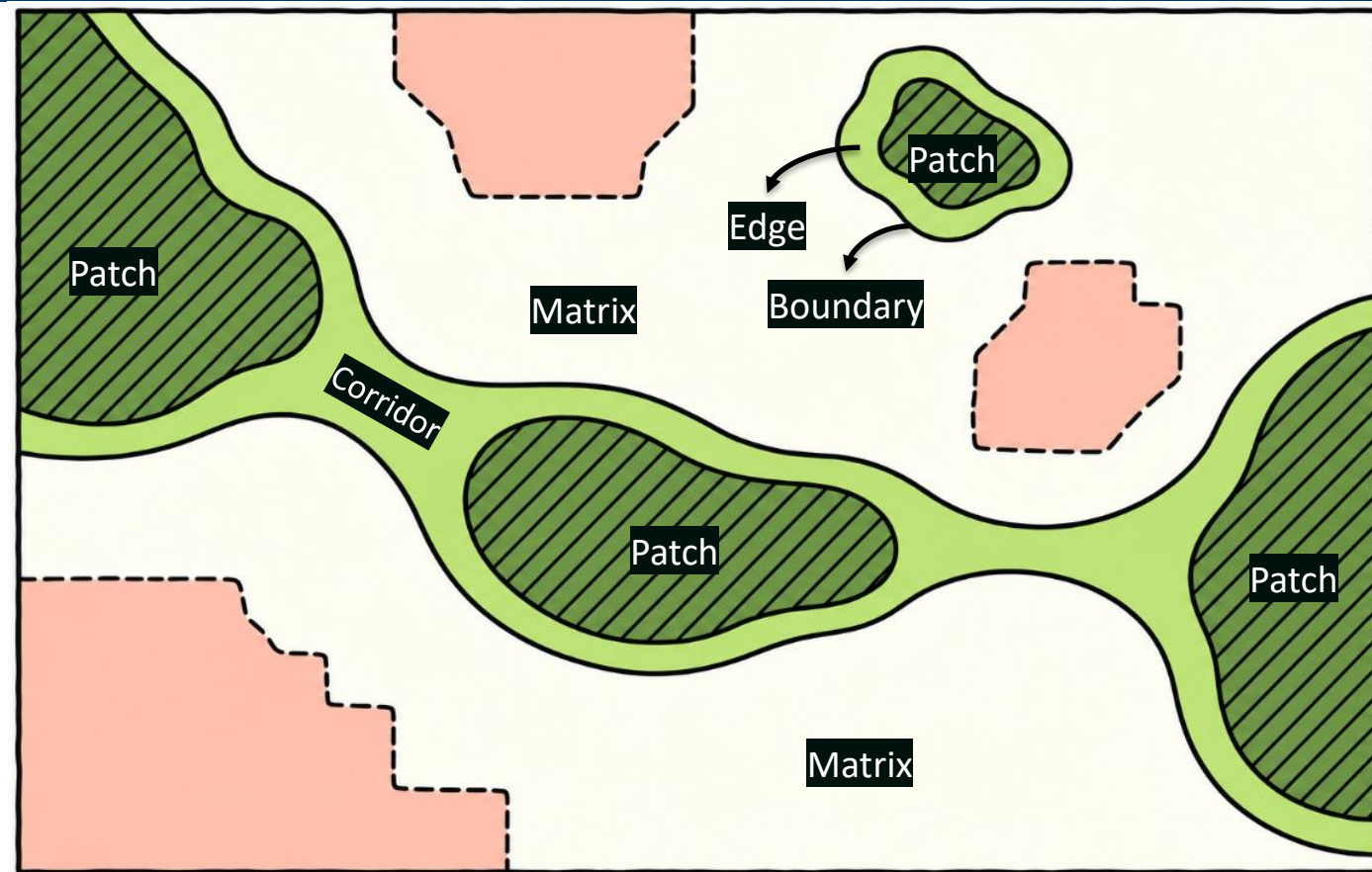
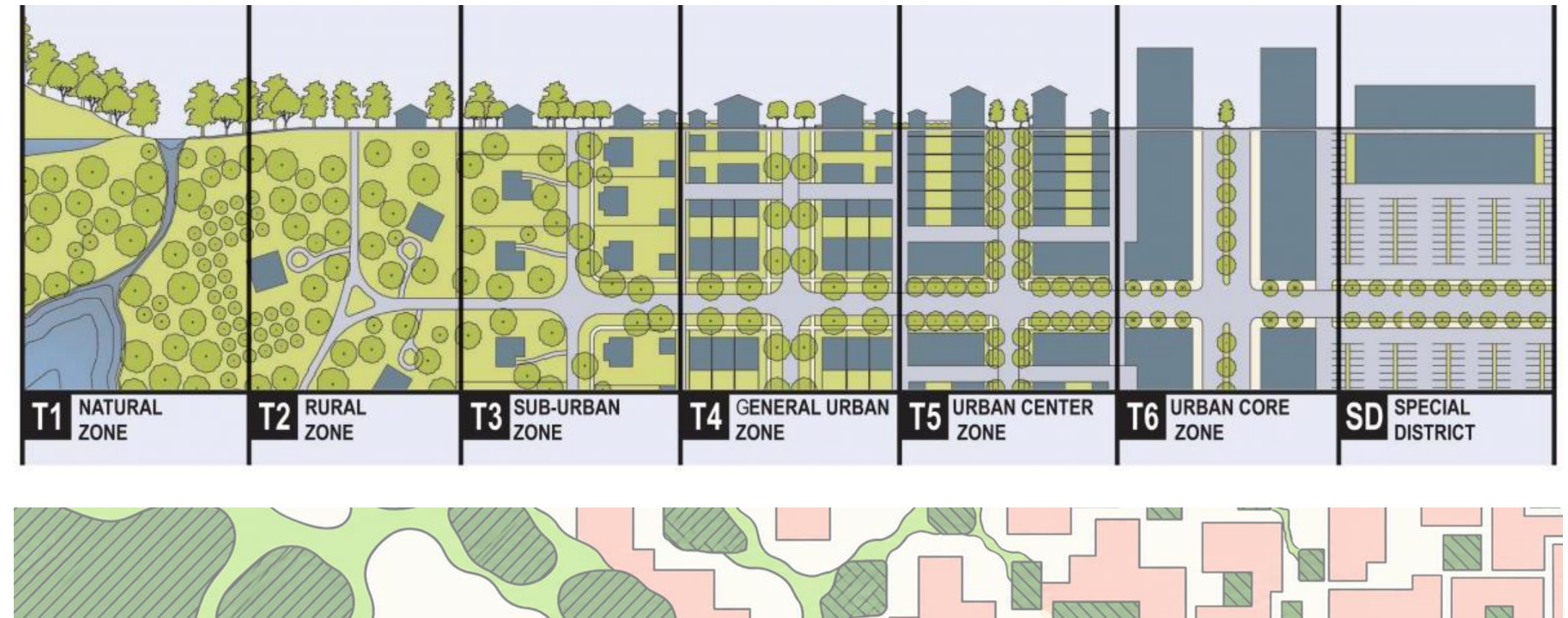


1,192,242 + acres *inside* the Florida Wildlife Corridor are **projected for potential future development by 2070**

3,080,170 + acres *outside* the Florida Wildlife Corridor are **projected for potential future development by 2070**

Data source: University of Florida Center for Landscape Conservation Planning and 1000 Friends of Florida. (2021). Florida's Rising Seas: Mapping Our Future – Sea Level 2070

Photo: Lauren Yoho
Source: Wildpath



General Characterizations Patch-Corridor-Matrix Model in Relation to the Urban-Rural Transect:

Natural & Rural (Approx. T1–T2)

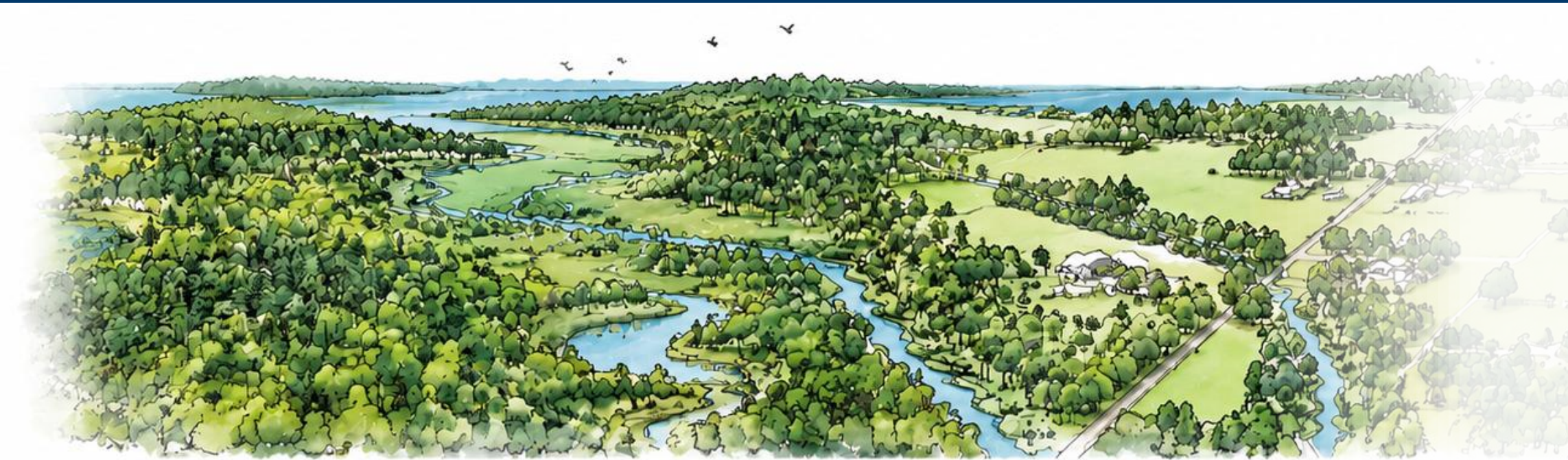
- **Matrix:** Natural and working, rural lands
- **Patches:** Large hubs with core interior habitat
- **Edges:** Soft, wide, natural transitions
- **Corridors:** Wide, connected, multiple

Suburban Fringe (Approx. T3)

- **Matrix:** Mixed and in transition, from natural, agrarian, and rural lands to development
- **Patches:** Some large patches remain, but many are being divided and reduced in size
- **Edges:** Increasingly hard edges and growing edge effects; significant buffers needed between development and natural areas
- **Corridors:** Some remain intact but are threatened by fragmentation, narrowing, and disconnection; connectivity mainly relies on greenways, riparian strips, and stepping stones, and wildlife crossings

Urban (Approx. T4–T6)

- **Matrix:** Developed
- **Patches & edges:** Small and isolated, mostly edge, with little to no core habitat
- **Corridors:** Few to none; connectivity relies on greenways, riparian strips, and stepping stones such as urban green spaces and individual properties, and wildlife crossings



Base image generated by Google Gemini (2026). Subsequently modified and compiled using Adobe Creative Suite.

Significance of Protecting the Natural and Rural End of the Transect (The Natural & Rural Matrix)

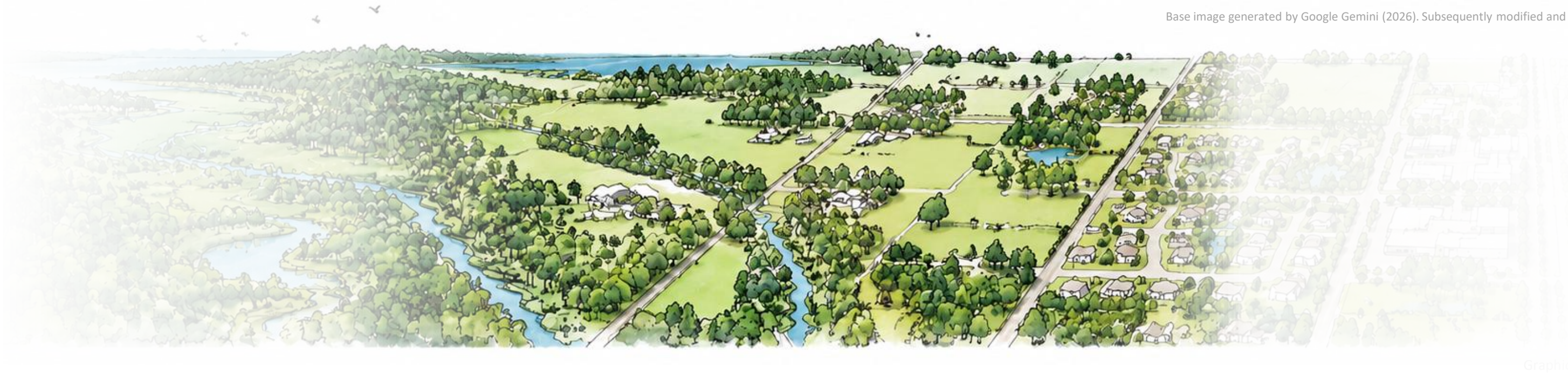
All greenspace provides benefits, but large, intact natural lands deliver benefits that compound.

- **Protects ecotones**, the transitions between natural communities (e.g., wetland to upland)
- **Allows natural processes to function**, like fire moving across uplands to wetlands, or flooding of floodplains
- **Conserves rare natural communities** and biodiversity priorities
- **Safeguards watersheds** for flood management and drinking water supply

Natural Community	Fire Dependent	Fire Influenced	FNAI Fire Frequency/Interval
Hardwood Forested Uplands:			
Mesic Hammock	No	Maybe	Frequent (for prairie variant) to rare depending on surrounding community
Up. Hardwood Forest	No	Maybe	Fire may be important on edges
Xeric Hammock	No	Maybe	Impacts to edges, 30+ yrs
High Pine and Scrub:			
Sandhill	Yes	-	Frequent, 1-3 yrs
Scrub	Yes	-	Variable, 5-30
Up. Mixed Woodland	Yes	-	Fire burns into it, 10-20 yrs
Upland Pine	Yes	Yes	Frequent, 1-3 yrs
Pine Flatwoods and Dry Prairie:			
Dry Prairie	Yes	-	Frequent, 1-2 yrs
Mesic Flatwoods	Yes	-	Frequent, 1- 4 yrs
Pine Rockland	Yes	-	Frequent, 3-7 yrs
Scrubby Flatwoods	Yes	-	Occasional, 5-15 yrs
Wet Flatwoods	Yes	-	Frequent, 3-10 yrs
Coastal Uplands:			
Beach Dune	No	Yes	Occasional – rare
Coastal Grassland	No	Yes	Occasional
Sinkhole and Outcrop Communities:			
Upland Glade	Yes	-	Irregular intervals
Freshwater Non-Forested Wetlands:			
Basin Marsh	Yes	-	Frequency depends on surroundings
Depression Marsh	Yes	-	Burns with surrounding community
Floodplain Marsh	Yes	-	Depends on water levels
Glades Marsh	Yes	-	Tied to surrounding matrix, estimate 2-5 yrs
Marl Prairie	Yes	-	Frequent, 1-6 yrs
Seepage Slope	Yes	-	Frequent to occasional, 2-3 yrs
Shrub Bog	No	Yes	Shrubs, 3-8 yrs; woody, 50-150 yrs
Slough	Yes	-	Tied to surroundings, est. 2-5 yrs
Wet Prairie	Yes	-	Frequent, 2-4 yrs
Freshwater Forested Wetlands:			
Baygall	No	Yes	Fire impacts edge
Basin Swamp	No	Yes	5-150 yrs
Dome Swamp	No	Yes	Light surface fire from nearby community
Hydric Hammock	No	Maybe	Frequent (for prairie variant) to rare depending on surrounding community

Fire plays a role in over 26 (32%) of Florida’s 81 Natural Communities (FNAI)

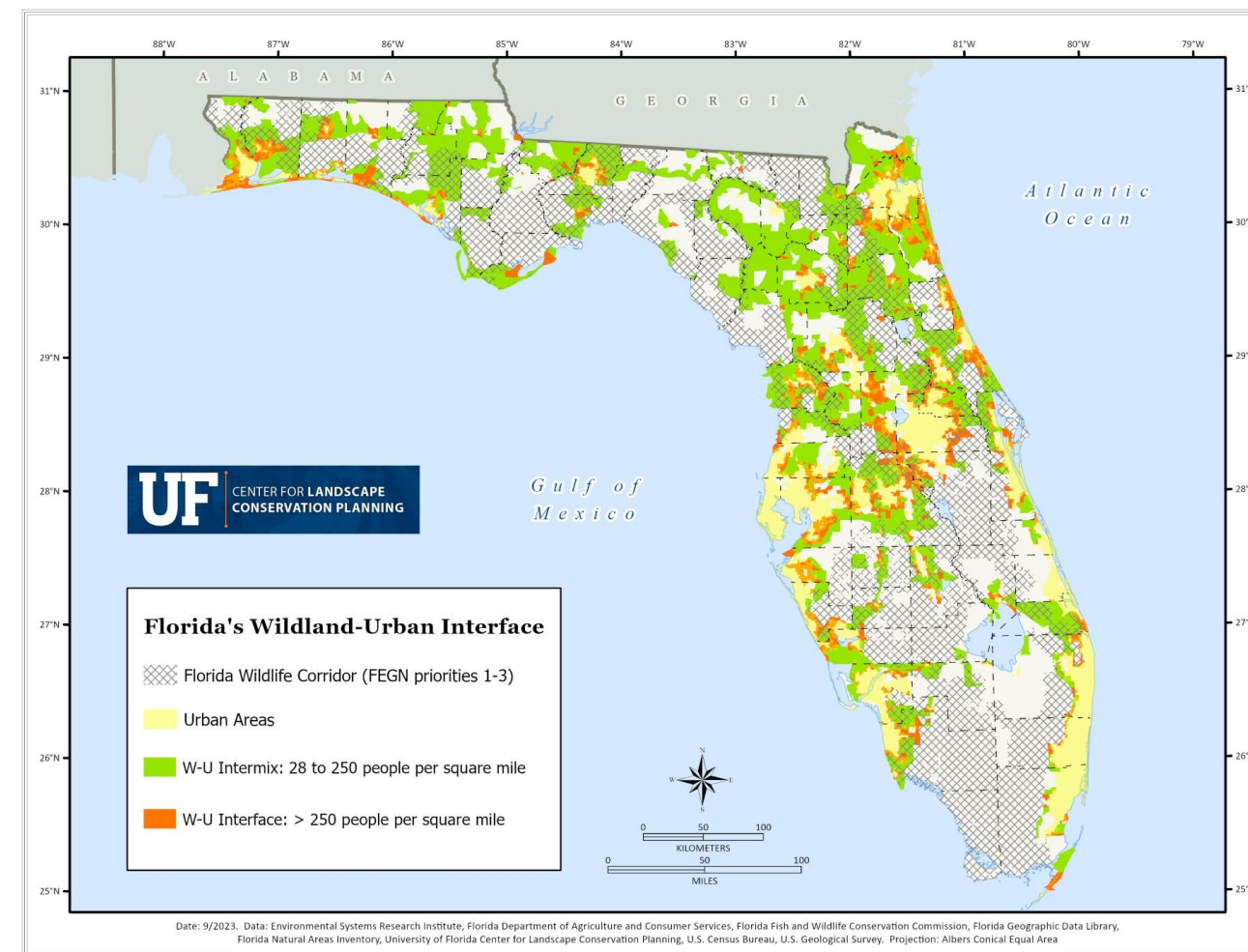
Base image generated by Google Gemini (2026). Subsequently modified and compiled using Adobe Creative Suite.



Significance of Managing Growth in the Urban-Rural Fringe and Sprawl in Suburban Areas

The fringe is where natural areas are most actively being fragmented, and where edges multiply.

- Development pressure **shrinks and divides** significant natural areas
- **More fragmentation makes it harder** to keep ecosystems physically connected and natural processes like fire functioning, often degrading the integrity of rare ecosystems
- **Edge effects** push farther into remaining natural lands
- **Every effort to avoid and minimize development impacts at the fringe strengthens Florida's green infrastructure, from the Corridor and beyond.**

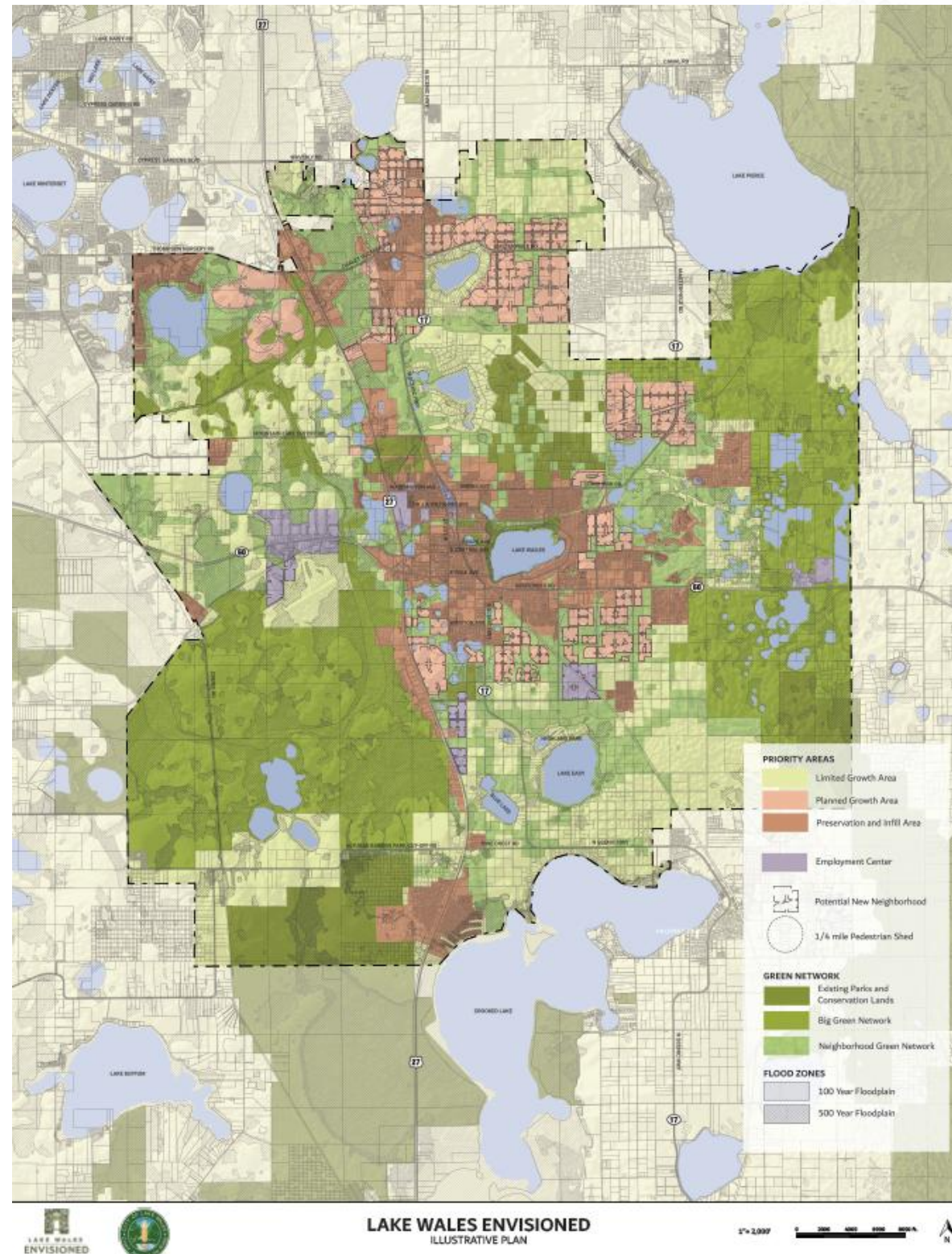


The Wildland-Urban Interface (WUI)

"The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels."
Florida Department of Agriculture and Consumer Services

Florida Ranks **#3** in states with greatest number of houses in the WUI

Base image generated by Google Gemini (2026). Subsequently modified and compiled using Adobe Creative Suite.



Significance of Concentrating our Built Footprint in Existing Urban and Suburban Areas

Compact, livable cities reduce pressure on rural and natural lands.

- Directing growth away from the rural fringe and natural areas reduces fragmentation of natural and working lands
- Focuses on maintaining existing infrastructure, increased viability of alternative modes of travel and walkability
- Paired with urban greenspace that enhances quality of life, providing recreation, stormwater management, cooling, and health benefits while supporting wildlife and ecosystem function
- Dense, mixed use development produces more revenue per acre than its infrastructure requires while low density suburban development does not (Urban3, 2024, 2025)

The Lake Wales Envisioned project is an example of a community planning initiative that included the identification of local corridor networks and their connections to the FLWC and greater FEGN, supporting regional habitat and conservation planning.
Source: www.lakewalesenvisioned.com

Urban3 reports in partnership with 1000 Friends of Florida, UF Center for Landscape Conservation Planning, and Live Wildly. <https://1000fof.org/priorities/fiscal/>



Strategies to address planning challenges across urban to rural landscapes

Protect the Natural & Rural Matrix (*Approx. T1–T2*)

- Land acquisition and conservation easements
- Support the viability of working lands
- Low-density land use designations and rural protection overlays
- Manage for natural processes like prescribed fire
- Keep incompatible development out of natural and rural lands and their buffers
- **Ultimate goal: big, connected natural and rural landscapes**

Manage the Fringe (*Approx. T3*)

- Direct unavoidable development to the most compatible locations, because good design is not a substitute for good location
- Use compatible configurations that keep natural areas connected
- Create significant buffers and soft transitions to natural and working lands
- Protect riparian corridors and wetlands with buffers; limit invasive species, pesticides, and fertilizer in adjacent land uses

Concentrate the Footprint (*Approx. T4–T6*)

- Infill, redevelopment, historic preservation, and sprawl repair
- Urban greenspace and local green and blue networks
- Native canopy and plantings
- Stormwater retrofits to reduce downstream impacts

Base image generated by Google Gemini (2026). Subsequently modified and compiled using Adobe Creative Suite.



Good Urban Planning Supports Rural Conservation, and Vice Versa



Good urban planning → supports rural conservation

Compact, livable cities reduce development pressure on natural and working lands

Well-planned growth keeps incompatible development away from the corridor and its buffers

Good rural conservation → supports our communities

Protected watersheds sustain drinking water supply and flood management

Natural and working lands buffer communities and support safer fire management

Connected landscapes provide recreation, scenic value, and access to nature

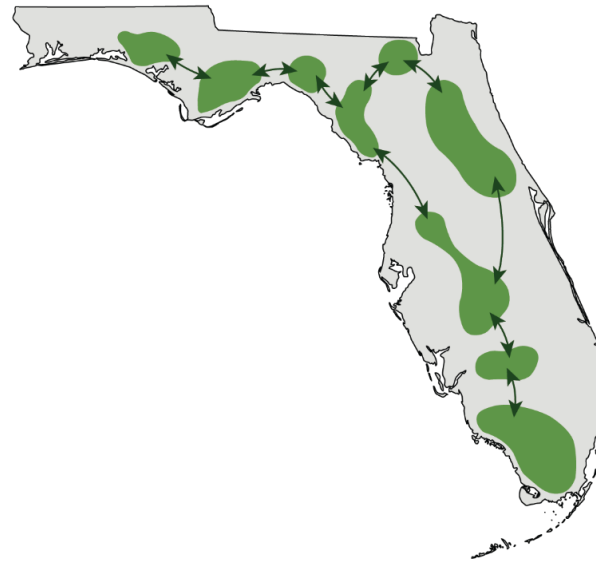
Connected by regional and local networks:

Linked to the FEGN: Strengthen statewide connectivity

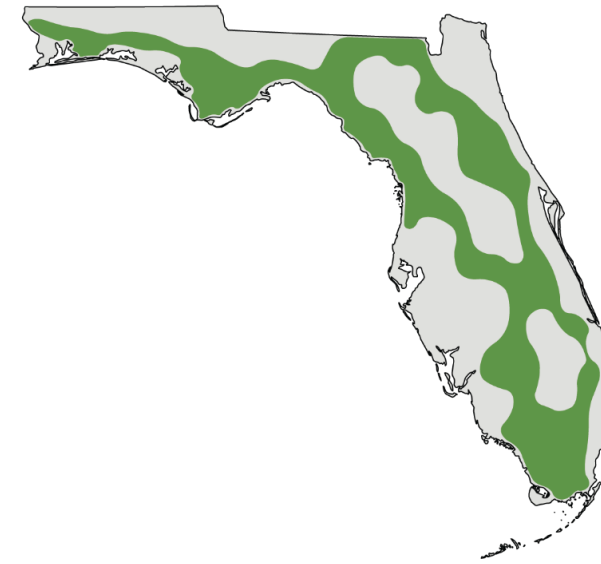
Beyond the FEGN: Support species and ecosystem services, like shared water resources and buffering the wildland–urban interface

Isolated reserves: Still important for biodiversity conservation

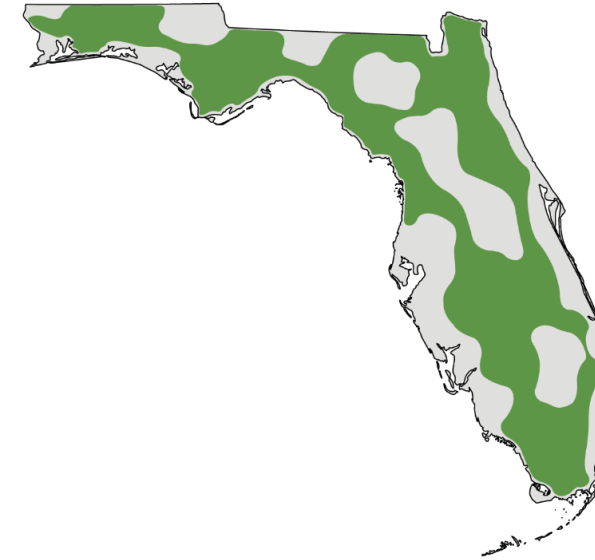
Scales of Connectivity



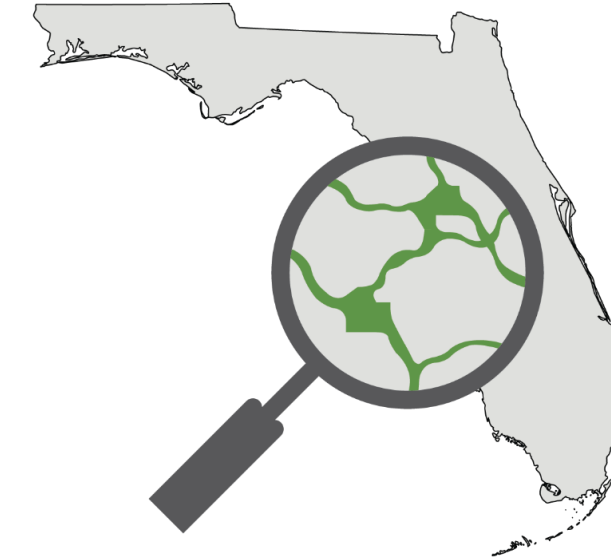
Scale 1
Critical Linkages



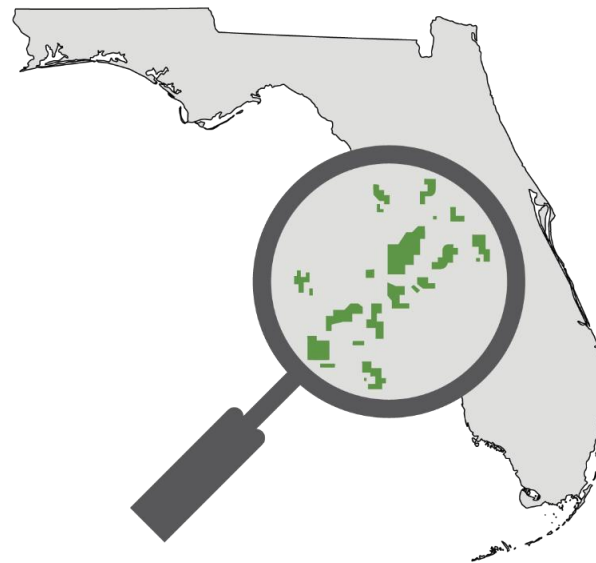
Scale 2
Florida Wildlife Corridor
(FWC)



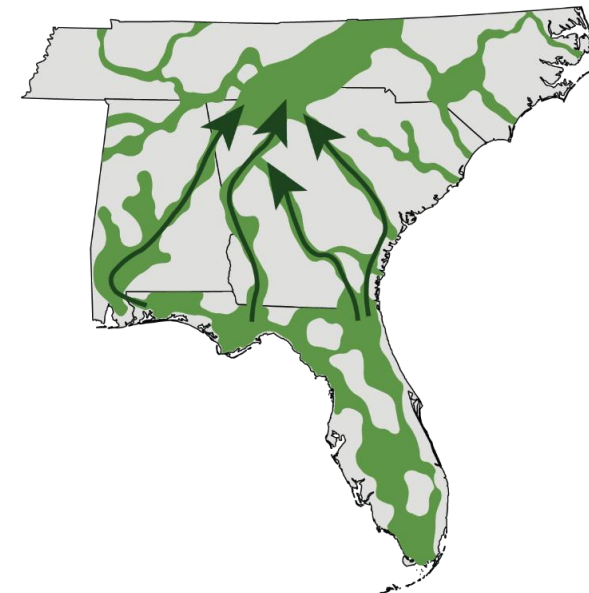
Scale 3
Florida Ecological Greenways Network
(FEGN)



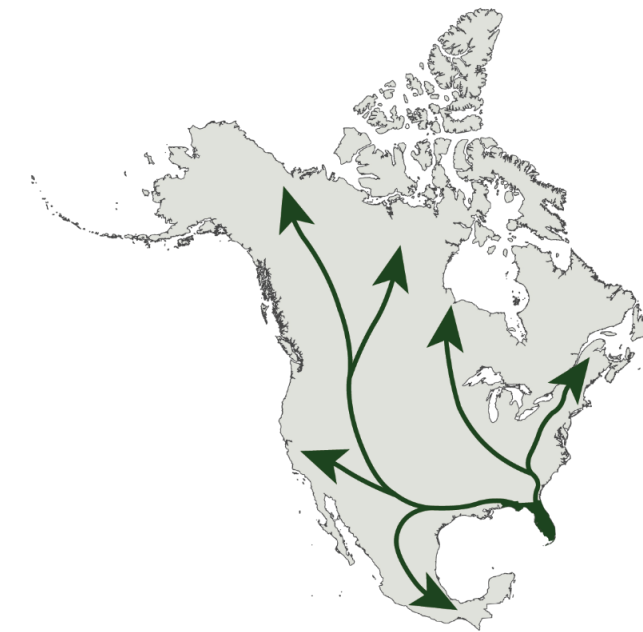
Scale 4
Connected
Local Networks



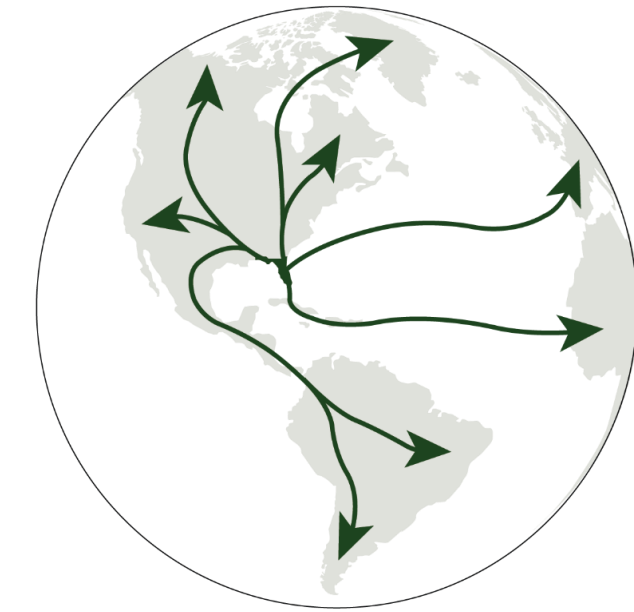
Scale 5
Isolated Local Networks



Scale 6
Multistate



Scale 7
Continental



Scale 4
Global/International

A place is never only itself



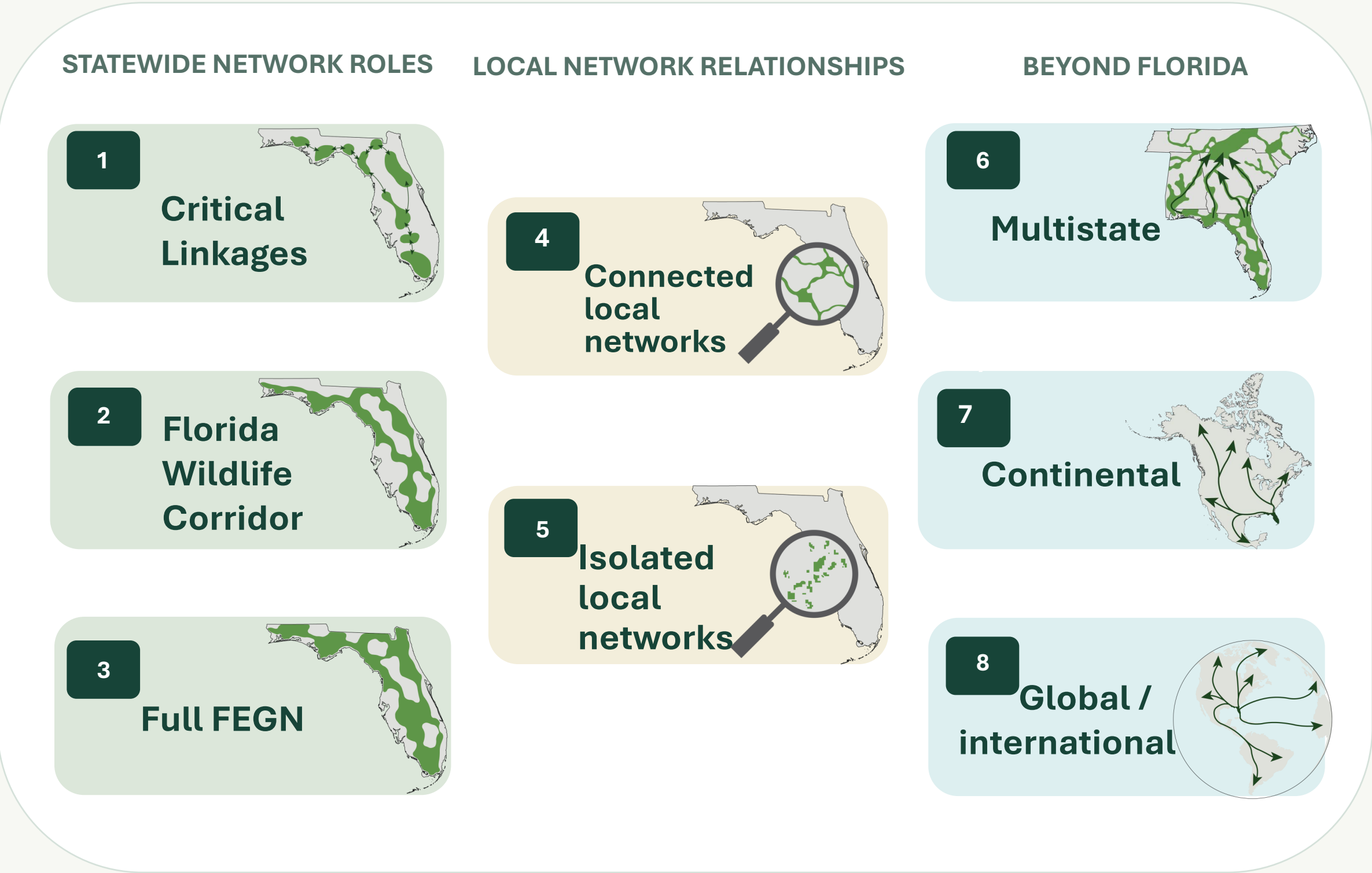
Photo by Lauren Yoho/Wildpath

FLORIDA CONNECTED

Eight scales of ecological connectivity

To understand a place, we must understand what it is connected to—and what depends on those connections.

Eight scales. Eight different questions.



THE IDEA

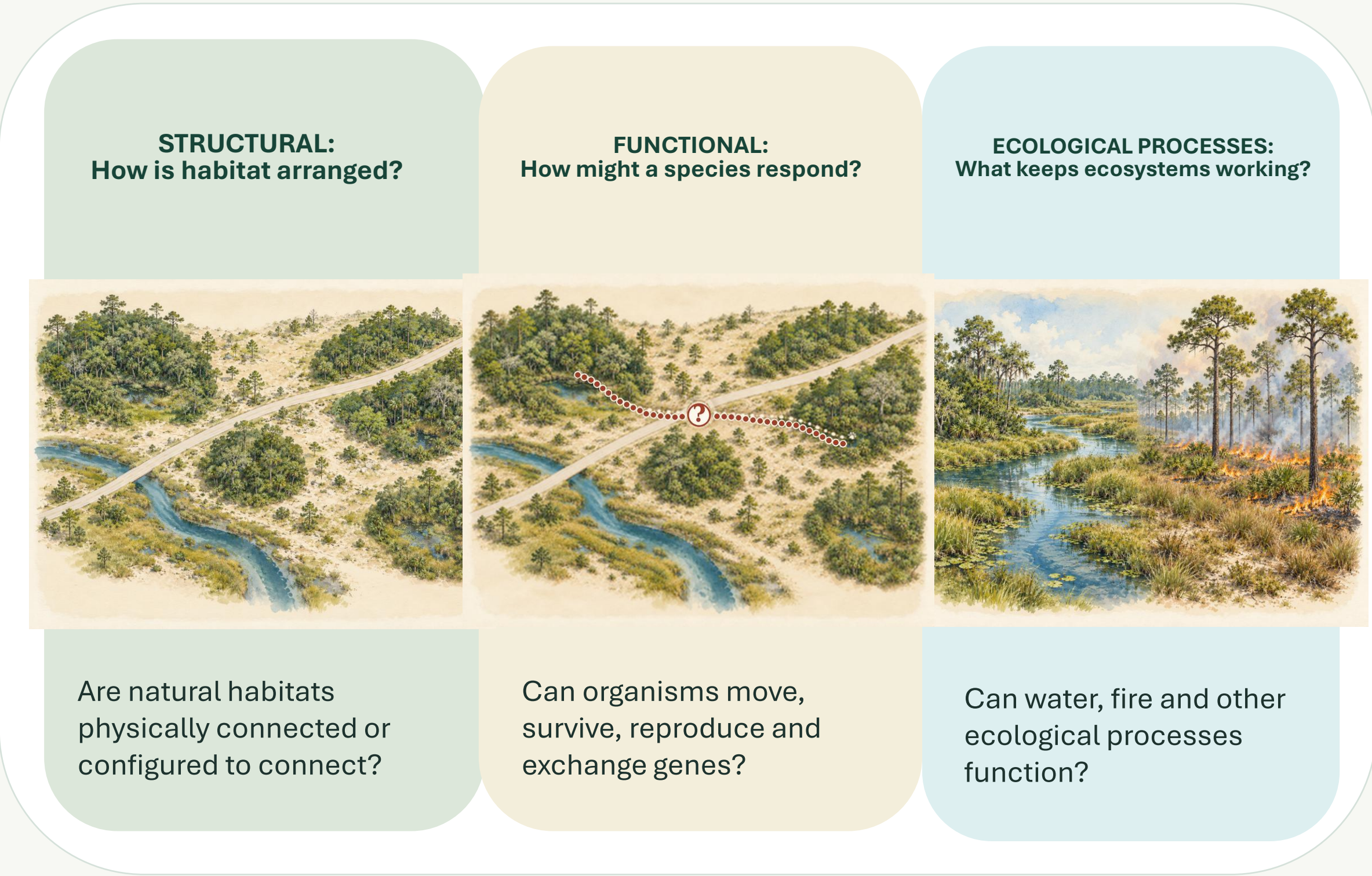
Eight lenses—not eight concentric circles

The first three describe priority and network role; the next two local relationships; the last three connections beyond Florida.

PLANNING QUESTION

Which conservation question are we asking?

A line on a map is only the beginning



THE IDEA

Connectivity is not one thing

Mapped continuity does not, by itself, demonstrate species movement, gene flow, appropriate fire regimes, or hydrologic function.

PLANNING QUESTION

Which kind of connection does the evidence support?

Our route across Florida and beyond



THE IDEA

Changing lenses

We revisit real Florida places through statewide roles, local relationships, and connections beyond borders.

THREE WAYS WE WILL LOOK

01-03

Statewide roles

Critical Linkages · Corridor · Full FEGN

04-05

Local relationships

Connected and isolated local networks

06-08

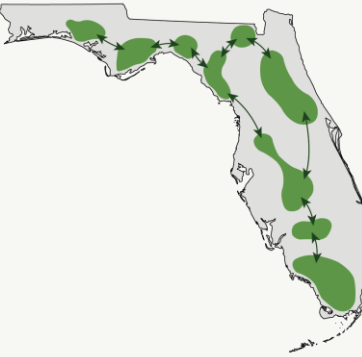
Beyond Florida

Multistate · Continental · Global

NOW VIEWING • CONTINENTAL / GLOBAL • SCALES 7-8

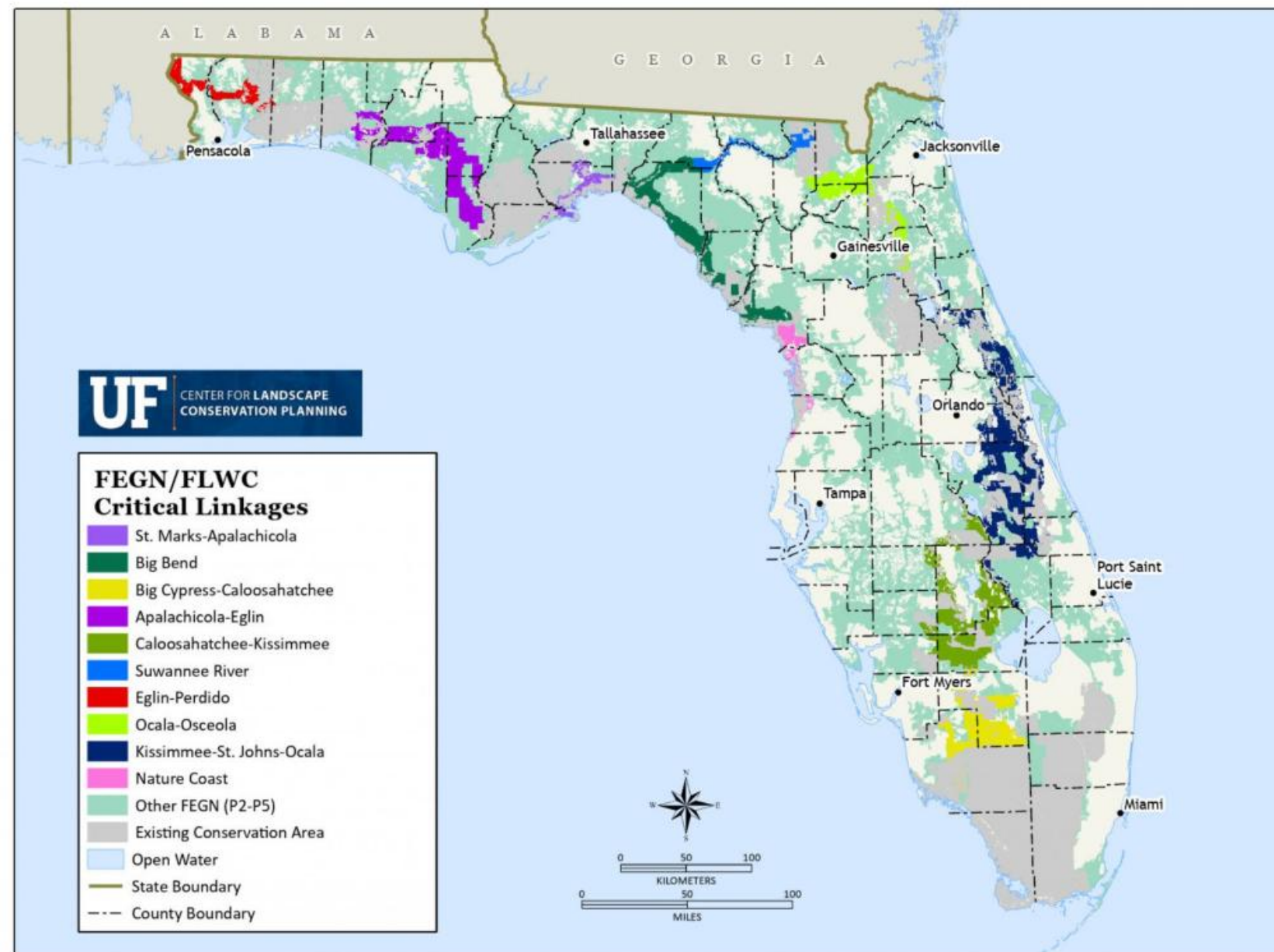
PLANNING QUESTION

What becomes visible as our perspective changes?



Ten Critical Linkages. One statewide network.

01 CRITICAL LINKAGES



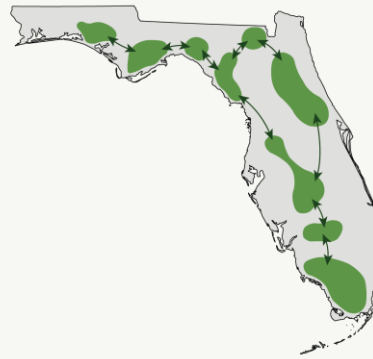
THE IDEA

Florida's statewide network depends on protecting its most strategic connections

Critical Linkages are the unprotected Priority 1 lands of the FEGN and Florida Wildlife Corridor.

PLANNING QUESTION

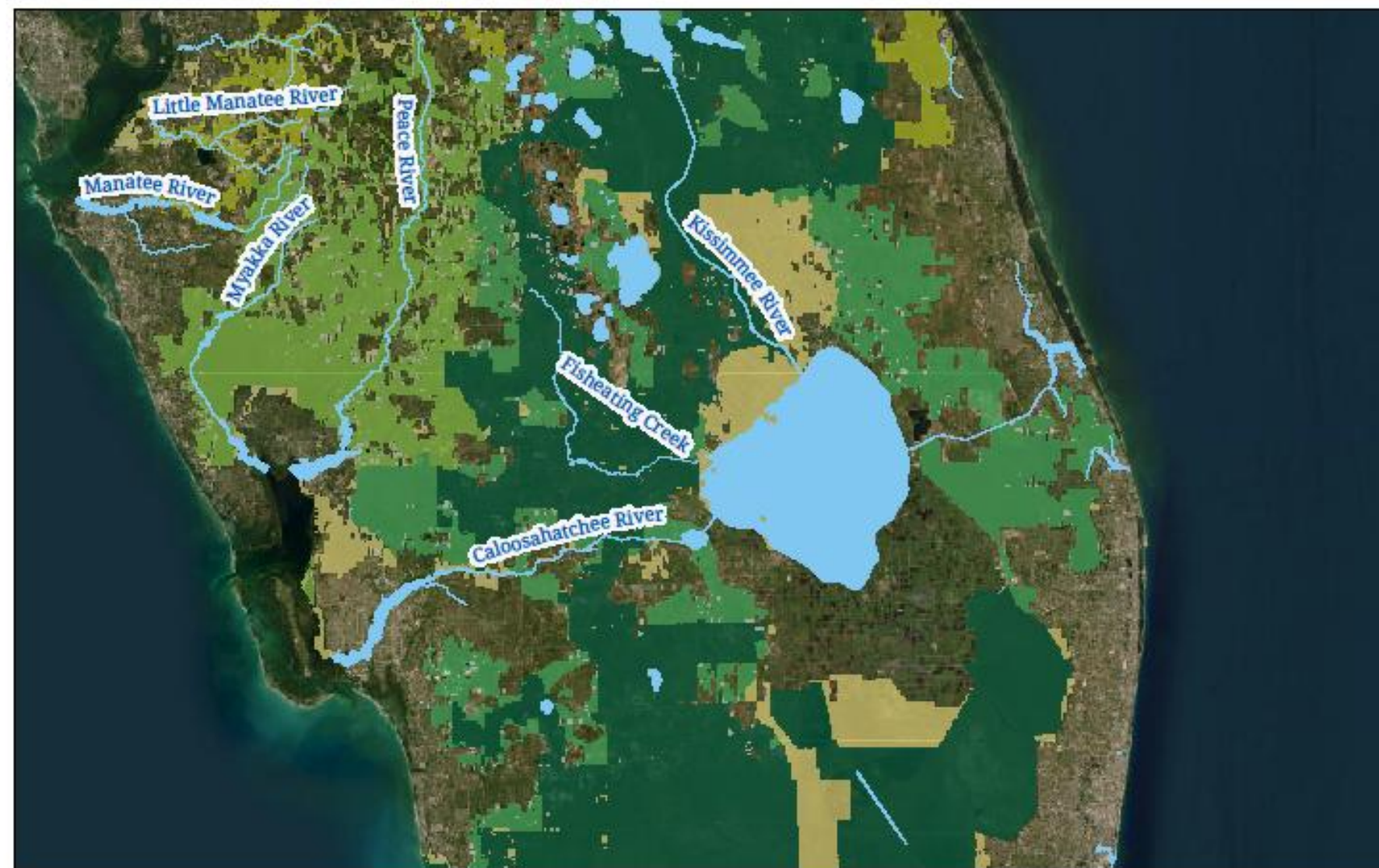
Where could conservation help secure the connections that matter most statewide?



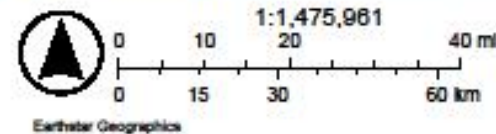
Where one connection matters statewide

01 CRITICAL LINKAGES

2021 FEGN Priority 1- Caloosahatchee-Kissimmee



10/24/2026, 9:15:37 AM



Map made by: Sarah CLCP
Map source: UF Center for Landscape Conservation Planning EcoCon Viewer

THE IDEA

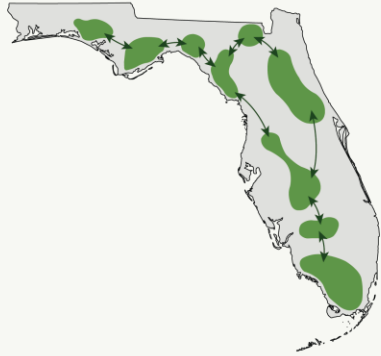
Some links carry statewide consequences

Critical Linkages are the unprotected Priority 1 lands of the FEGN and Florida Wildlife Corridor.

Here, prairie, wetlands, rivers, wildlife and working lands share a consequential landscape.

PLANNING QUESTION

What land-use decision could affect the larger network?



A female panther changes the story

01 CRITICAL LINKAGES

CALOOSAATCHEE-KISSIMMEE



FWC camera-trap evidence, March 2017- north of the Caloosahatchee River

THE IDEA

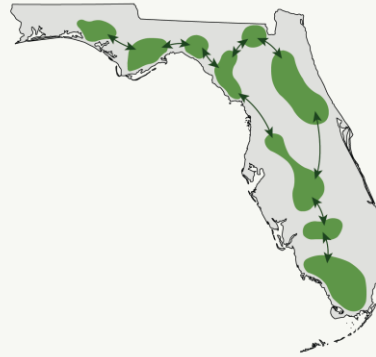
Breeding evidence changes the game

FWC documented a nursing female and kittens north of the Caloosahatchee in 2017.

That is not proof of an established northern population.

PLANNING QUESTION

What does a successful expansion require?

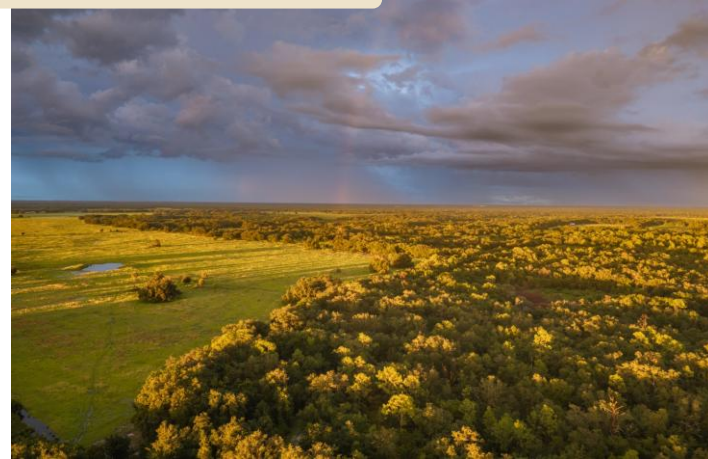


Panther recovery requires more than room for one animal

01→02 SPECIES RECOVERY

THREE VIABLE POPULATIONS

Photo by Carlton Ward Jr. /Wildpath



POPULATION 1
≥240 adults + subadults

Photo by Lauren Yoho/Wildpath

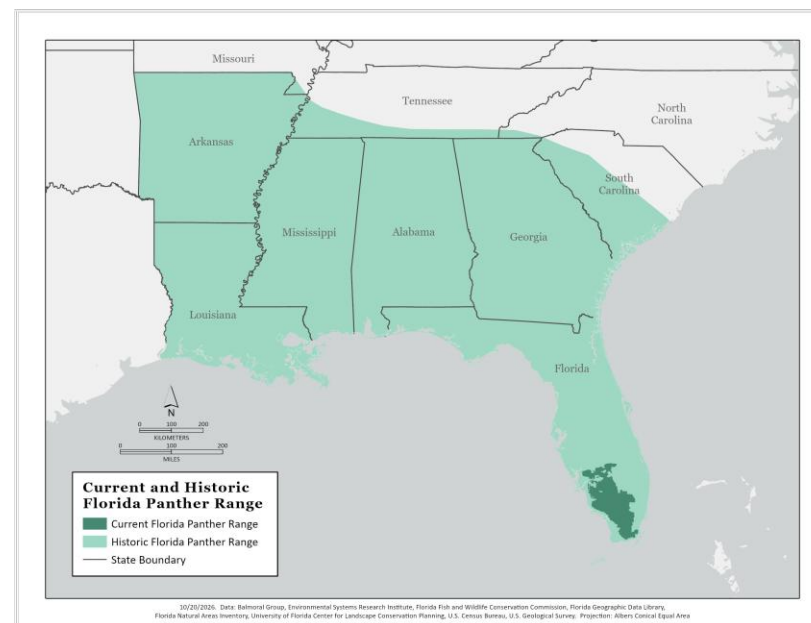


POPULATION 2
≥240 adults + subadults

Photo by Lauren Yoho/Wildpath



POPULATION 3
≥240 adults + subadults



Maintained for at least 12 years

2008 U.S. FISH & WILDLIFE SERVICE RECOVERY PLAN
(federal delisting goal, not current population status)

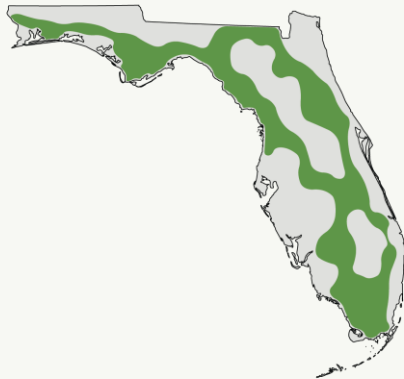
THE IDEA

A recovery target needs a connected landscape

Three viable, self-sustaining populations are part of the federal 2008 delisting criteria, alongside additional habitat and population conditions.

PLANNING QUESTION

What must remain possible over decades?



One network. Many ecological functions.

02 FLORIDA WILDLIFE CORRIDOR

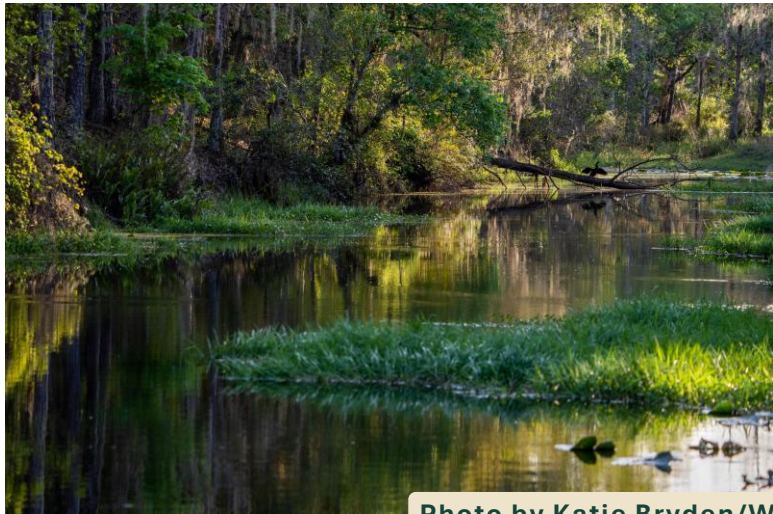


Photo by Katie Bryden/Wildpath



PANTHER

Range expansion + populations

BLACK BEAR

Movement across large landscapes

RIVER SYSTEMS

Riparian and aquatic processes

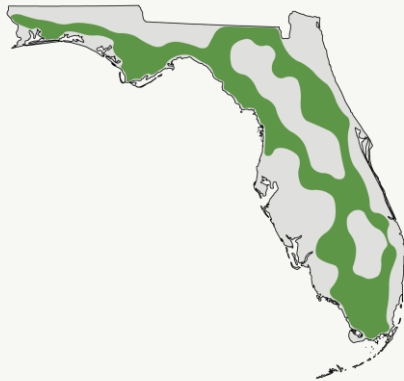
THE IDEA

One network. Different ecological roles.

Panthers, black bears, river systems, and fire-dependent lands do not all rely on identical routes or landscape conditions.

PLANNING QUESTION

Which modeled function do we need to evaluate?



The Florida Wildlife Corridor

02 FLORIDA WILDLIFE CORRIDOR

THE IDEA

The statutory Corridor uses FEGN priorities 1–3

The mapped network includes protected lands and additional conservation opportunity areas.

Designation is not the same as protection.

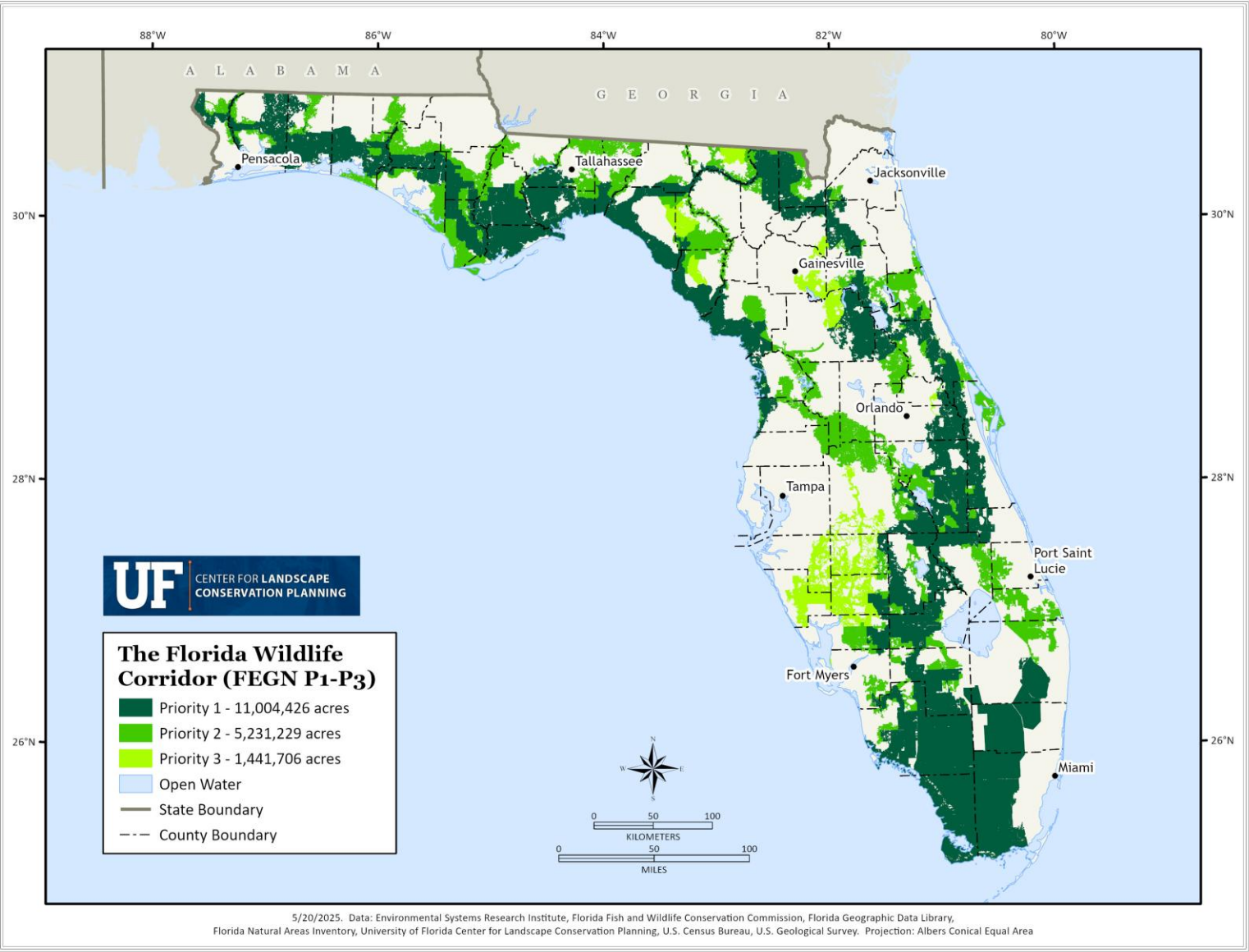
PLANNING QUESTION

What should remain connected across Florida?

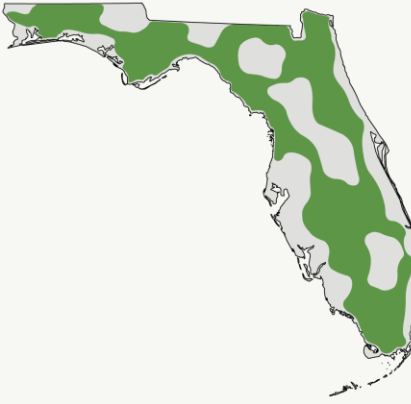
P1 Critical statewide links

P2 Supporting connections

P3 Significant alternatives

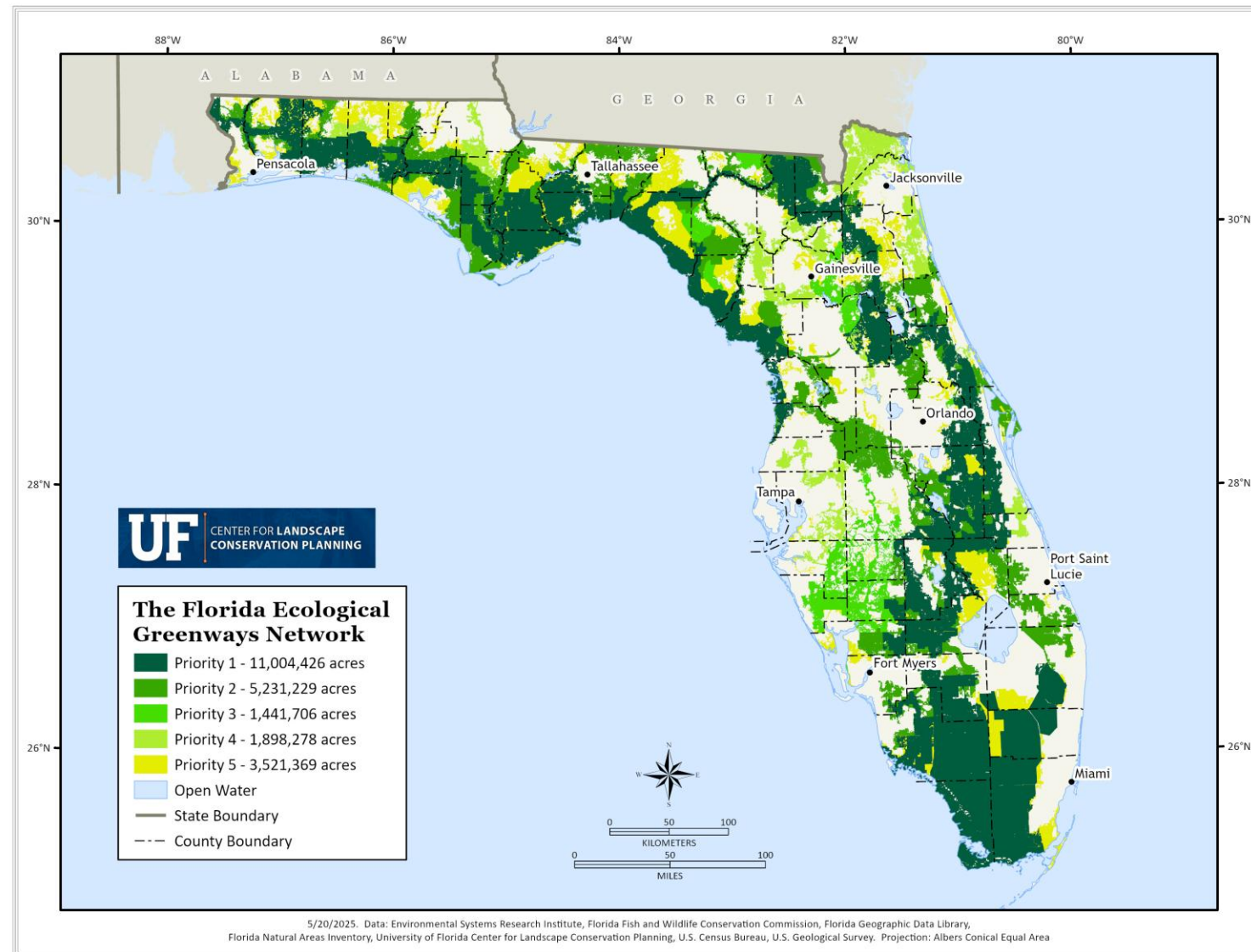


2021 FEGN / P1–P3



The statewide greenprint expands

03 FULL FEGN



2021 FEGN / P1–P5

P1 Critical

P2 Support

P3 Alternatives

P4 Riparian / regional

P5 Other intact lands

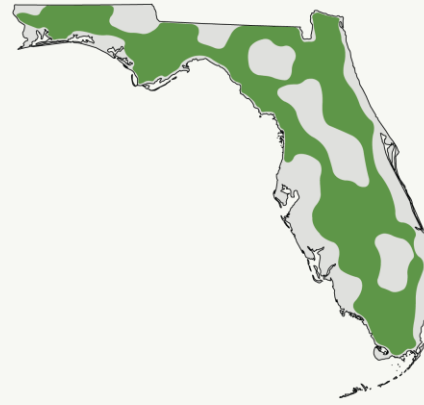
THE IDEA

The full FEGN extends beyond the Corridor

Priorities 4–5 identify additional riparian, regional and intact-landscape conservation opportunities beyond statutory P1–3.

PLANNING QUESTION

What would P1–3 alone leave out?



The Suwannee: one place, several systems

03 FULL FEGN

SUWANNEE RIVER — PRIORITY 1 LINKAGE + FEGN



Photo by Larry A. Woodward/USFWS



Photo by USFWS



Photo by Daniel Parker/FWC

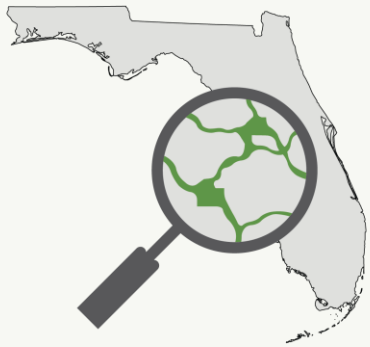
THE IDEA

The same river supports different kinds of connection

Uplands and floodplains, freshwater–marine movements, and hydrologic relationships are distinct but overlapping.

PLANNING QUESTION

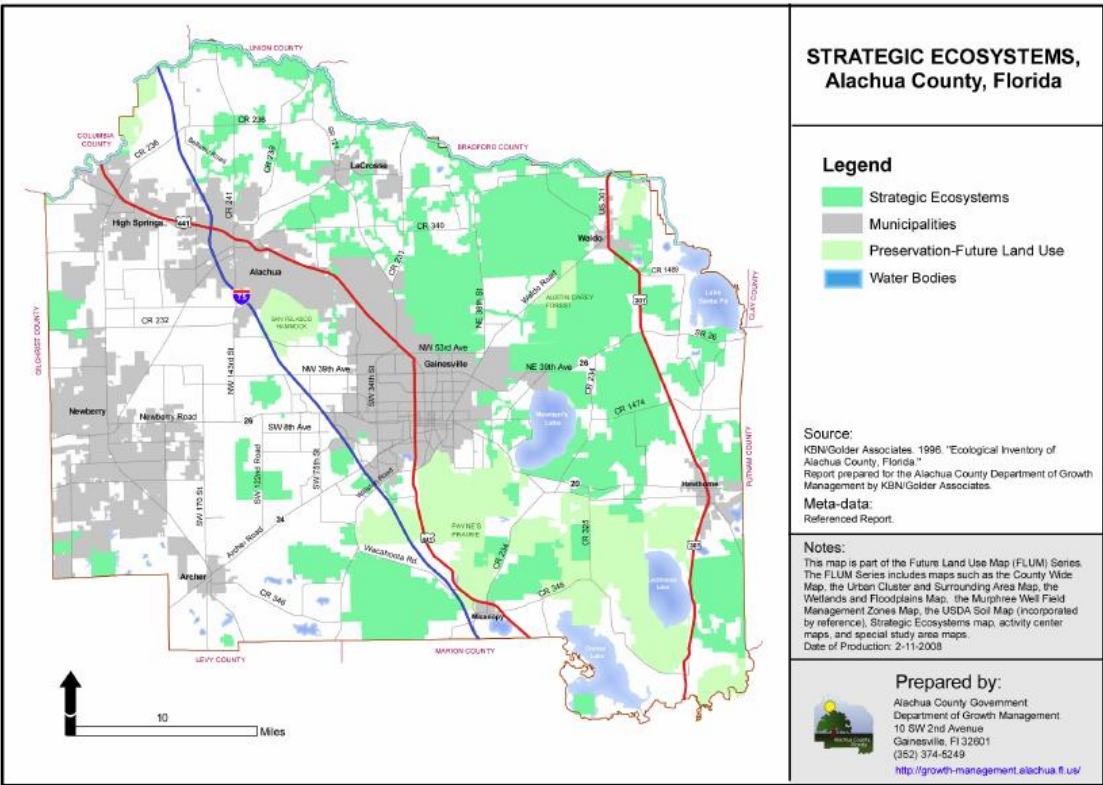
What does each map layer actually measure?



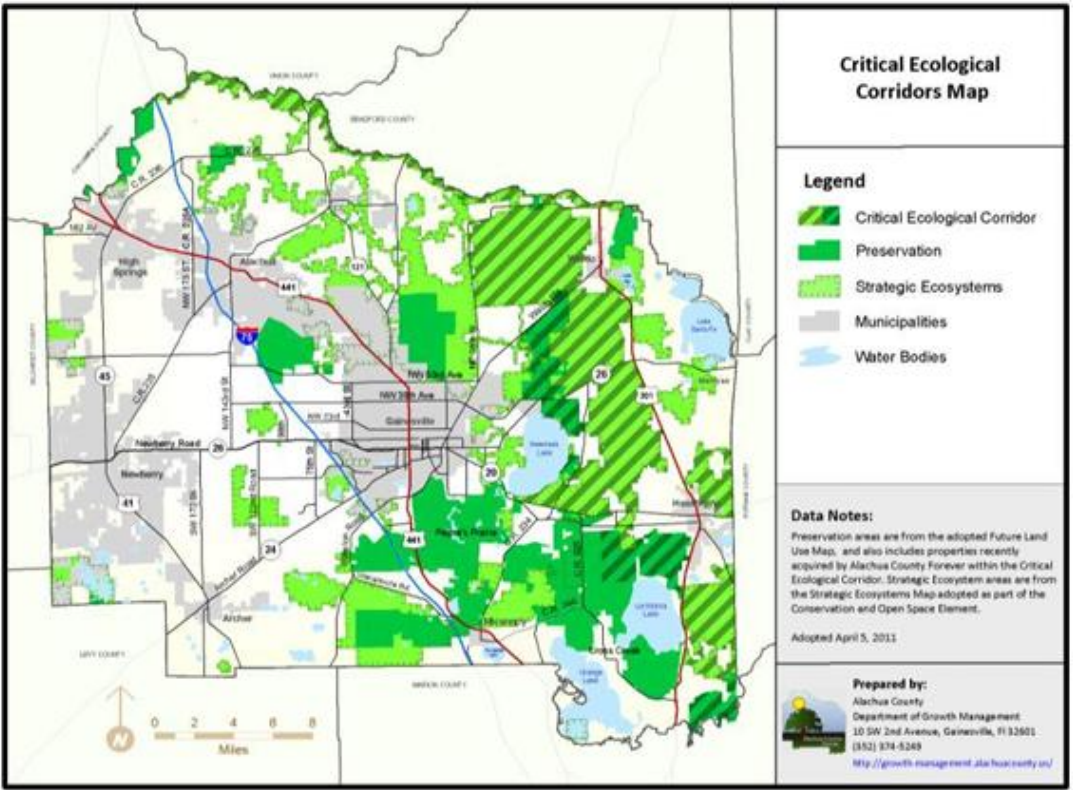
Local networks can reinforce statewide ones

04 CONNECTED LOCAL NETWORKS

Alachua County’s “Emerald Necklace”



<https://growth-management.alachuacounty.us/formsdocs/Green-Infrastructure-Land-Conservation-Issue-Paper.pdf>



Critical Ecological Corridors Map from COSE 6.3.2 (2011)

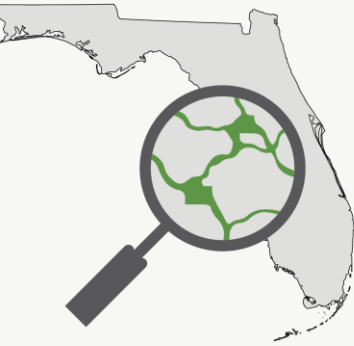
THE IDEA

The statewide network meets local decisions

Patches, preserves and compatible land uses can strengthen local ecological functions where connections to the FEGN exist.

PLANNING QUESTION

How does local green infrastructure plug into statewide opportunities?



Fire and water cross the boundaries we draw

04 CONNECTED LOCAL NETWORKS

FIRE-ADAPTED UPLANDS



Prescribed fire, Florida Panther National Wildlife Refuge.
Photo by Josh O'Conner/USFWS.

WATER-CONNECTED SYSTEMS



Kissimmee River Water Reservation. Photo by South Florida
Water Management District

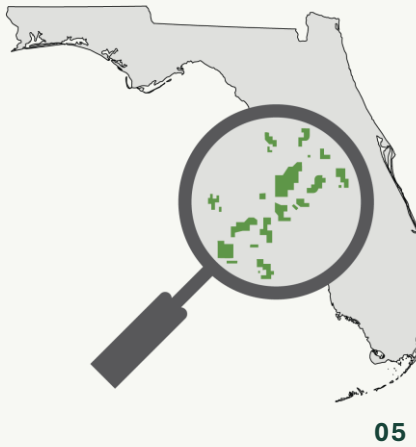
THE IDEA

Connectivity also describes functioning processes

Manageable fire-adapted mosaics and connected watersheds have ecological needs beyond animal movement corridors.

PLANNING QUESTION

How can we maintain the ecological processes that sustain connected landscapes?



An isolated landscape can still be irreplaceable

05 ISOLATED LOCAL NETWORKS



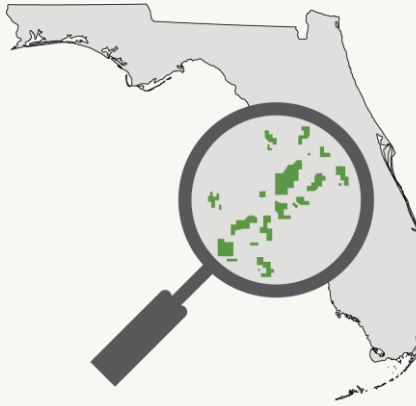
THE IDEA

**Outside the statewide map
≠ unimportant**

Local systems also require protection and stewardship; one example is protecting and connecting scrub habitat and Florida scrub-jay populations.

PLANNING QUESTION

What is important even without an FEGN connection?



Functional connectivity is a biological outcome

05 ISOLATED LOCAL NETWORKS



THE IDEA

A movement is not necessarily a connection

The ecological outcome is successful dispersal and reproduction—not simply how far apart two patches are.

PLANNING QUESTION

Can movement become lasting gene flow?

The distance changes. The ecological question does not.



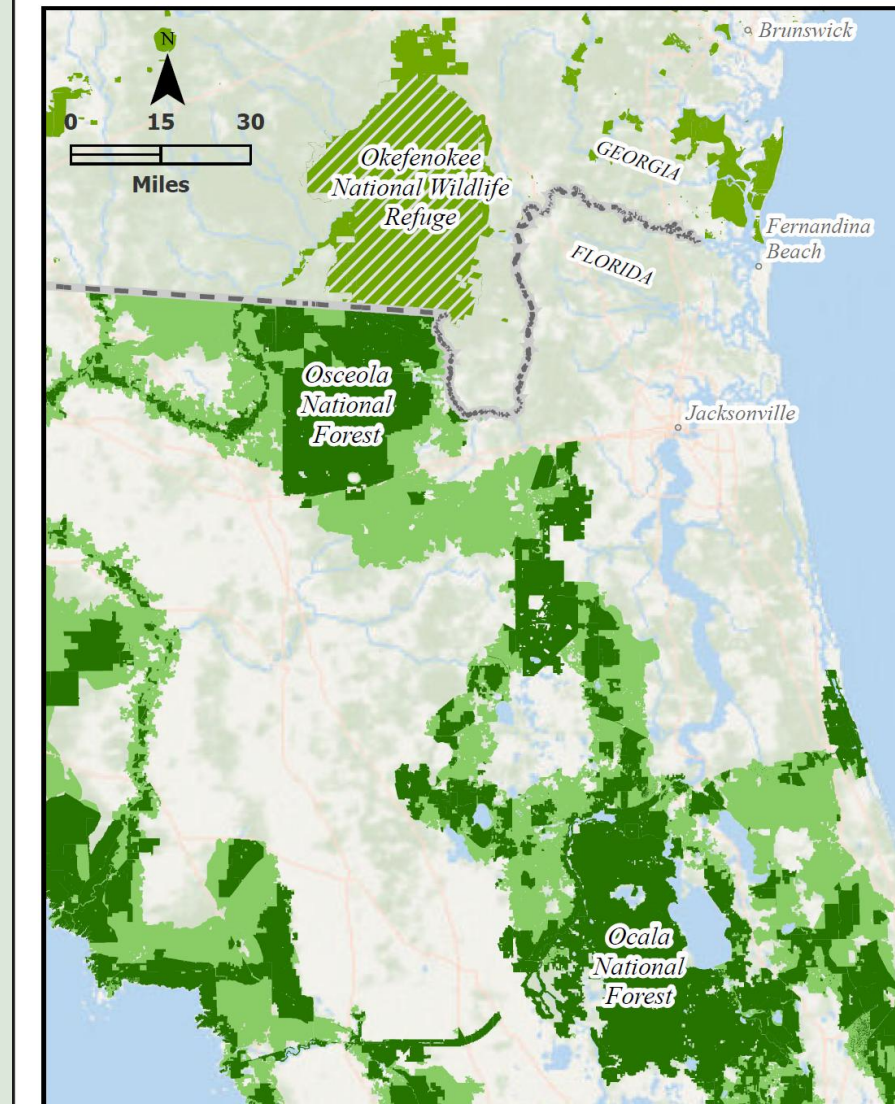
Photo by Lauren Yoho/Wildpath

Ecology crosses state lines

06 MULTISTATE

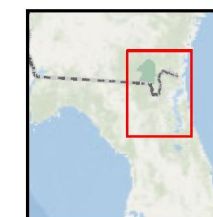


Photos by Lauren Yoho/Wildpath



The Okefenokee Swamp, the Ocala to Osceola Corridor, and the Florida Wildlife Corridor

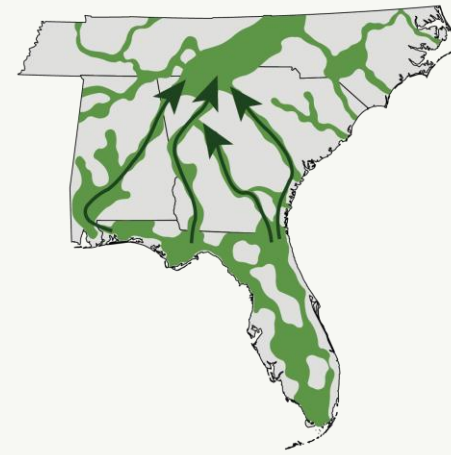
- State Boundary
- Okefenokee National Wildlife Refuge
- Unprotected Florida Wildlife Corridor
- Protected Florida Wildlife Corridor
- Georgia Conservation Lands



UF Center for Landscape Conservation Planning
UNIVERSITY of FLORIDA

7/17/2025. Data: Environmental Systems Research Institute, Florida Fish and Wildlife Conservation Commission, Florida Geographic Data Library, Florida Natural Areas Inventory, University of Florida Center for Landscape Conservation Planning, Georgia Dept. of Natural Resources - Wildlife Resources Division, U.S. Census Bureau, U.S. Geological Survey. Projection: Web Mercator

06 MULTISTATE



THE IDEA

Landscapes and partnerships cross borders

Ecological networks extend beyond Florida, requiring cooperation among states, agencies, conservation partners, and private landowners.

PLANNING QUESTION

Where does conservation success depend on decisions beyond Florida's borders?

A small Florida beach. A continental life cycle.

07 CONTINENTAL

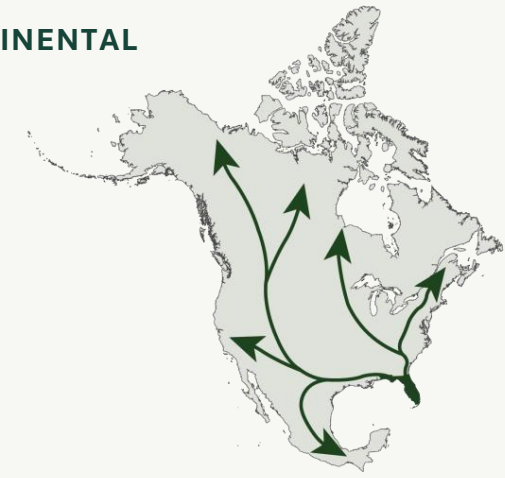
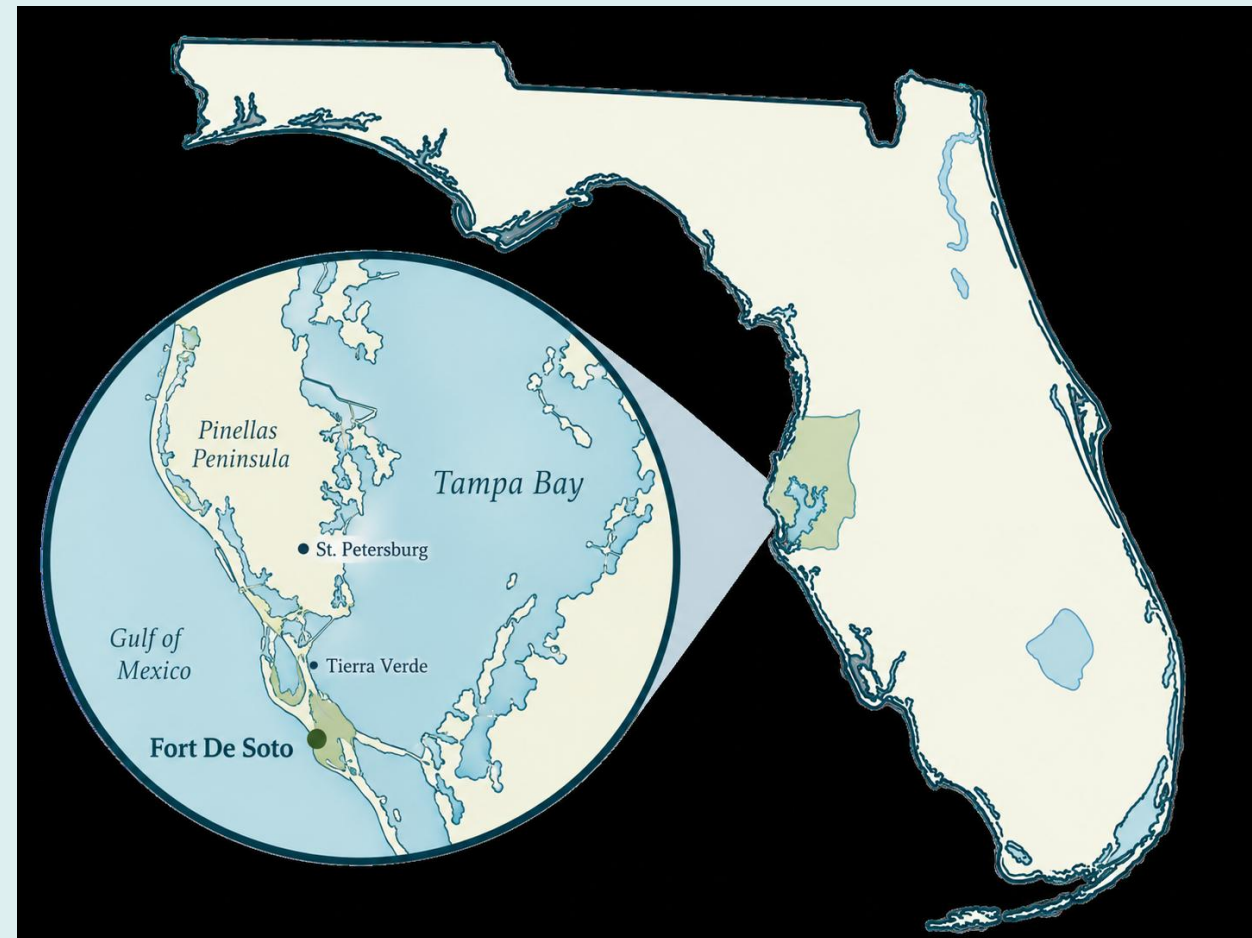


Photo by Gregory Breese/USFWS



Photo by Catherine Amoo

THE IDEA

A local beach holds more than local significance

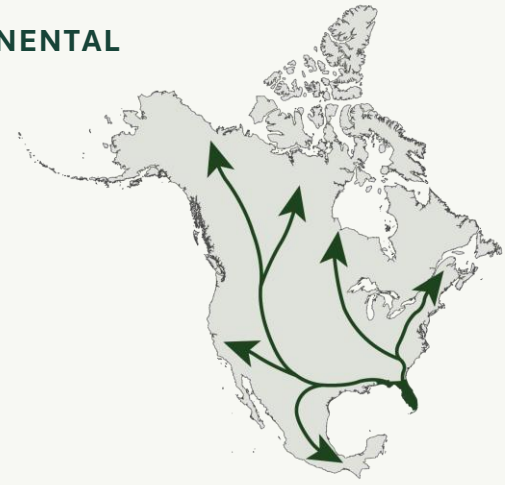
Wintering and stopover habitat at Fort De Soto participates in a wider network of coastal places and annual movements.

PLANNING QUESTION

What depends on this one stretch of shore?

One coast. Many sites. Different routes.

07 CONTINENTAL



THE IDEA

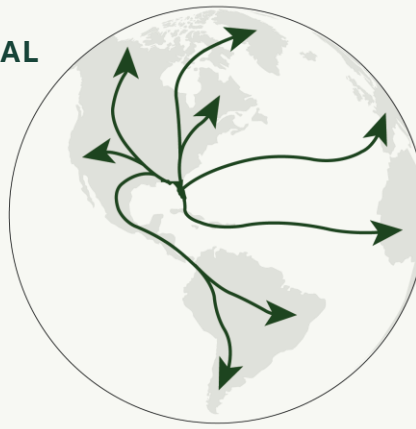
One species can use multiple migratory strategies

Bird observations show linked Southeast use sites; telemetry documents alternative northbound pathways.

PLANNING QUESTION

Which geographically separated places sustain the annual cycle?





A Florida beach. An Atlantic life cycle.

08 GLOBAL / INTERNATIONAL

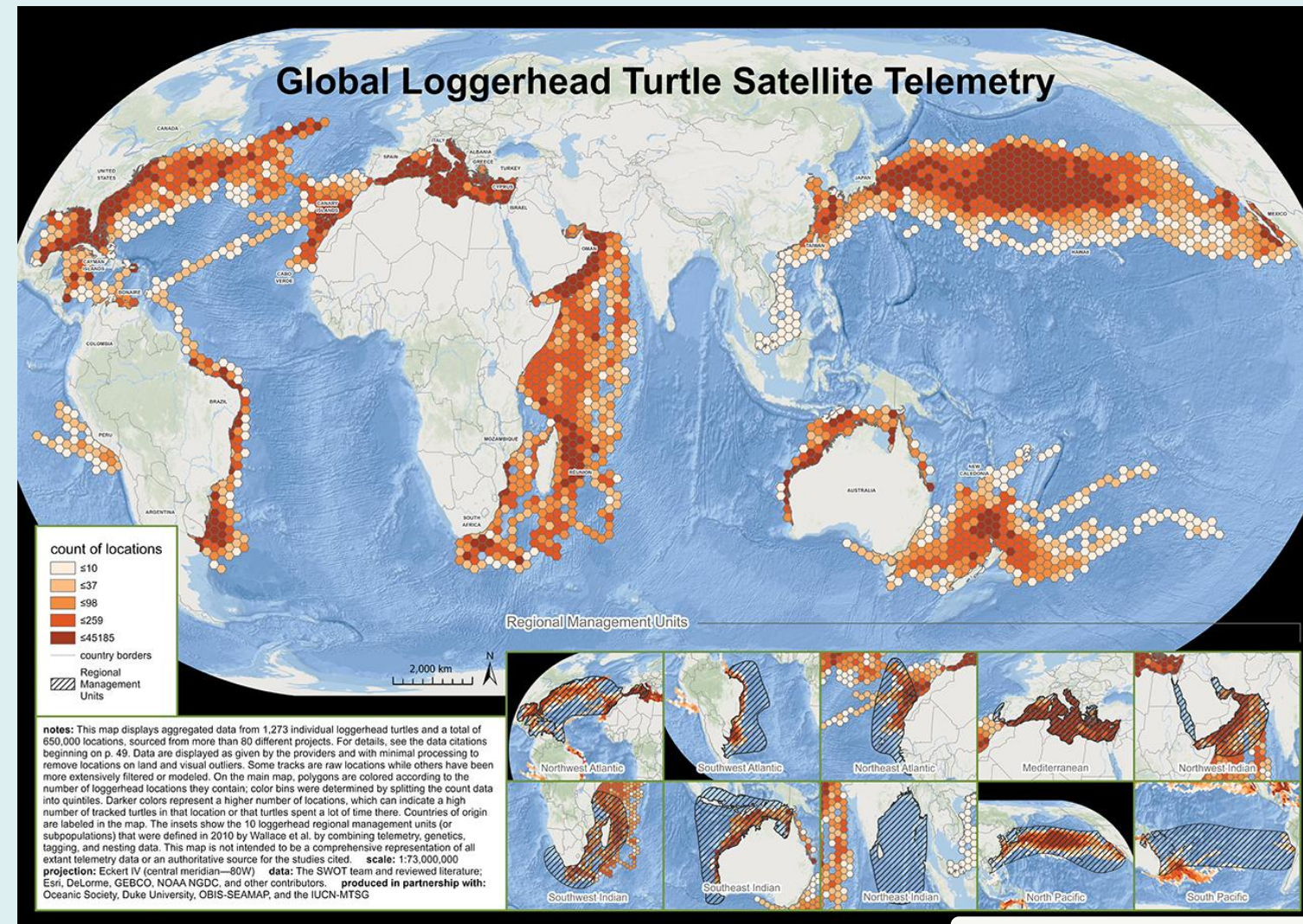

www.seaturtlestatus.org


Photo by James Lyon/USFWS



Photo by Michael Sciortino/USFWS

THE IDEA

A local nesting beach; an ocean-scale life cycle

Atlantic loggerhead movements link beaches, open ocean and multiple jurisdictions.

The reference tracking compilation combines many turtles and projects.

PLANNING QUESTION

Which connections require international stewardship?

The connections we see—and the processes we sustain

THE IDEA

Connections operate through living processes

Wildlife movement, water, fire regimes and ecological resilience can overlap without sharing the same boundaries.

PLANNING QUESTION

What must stay connected—and functional?



What the connections make possible

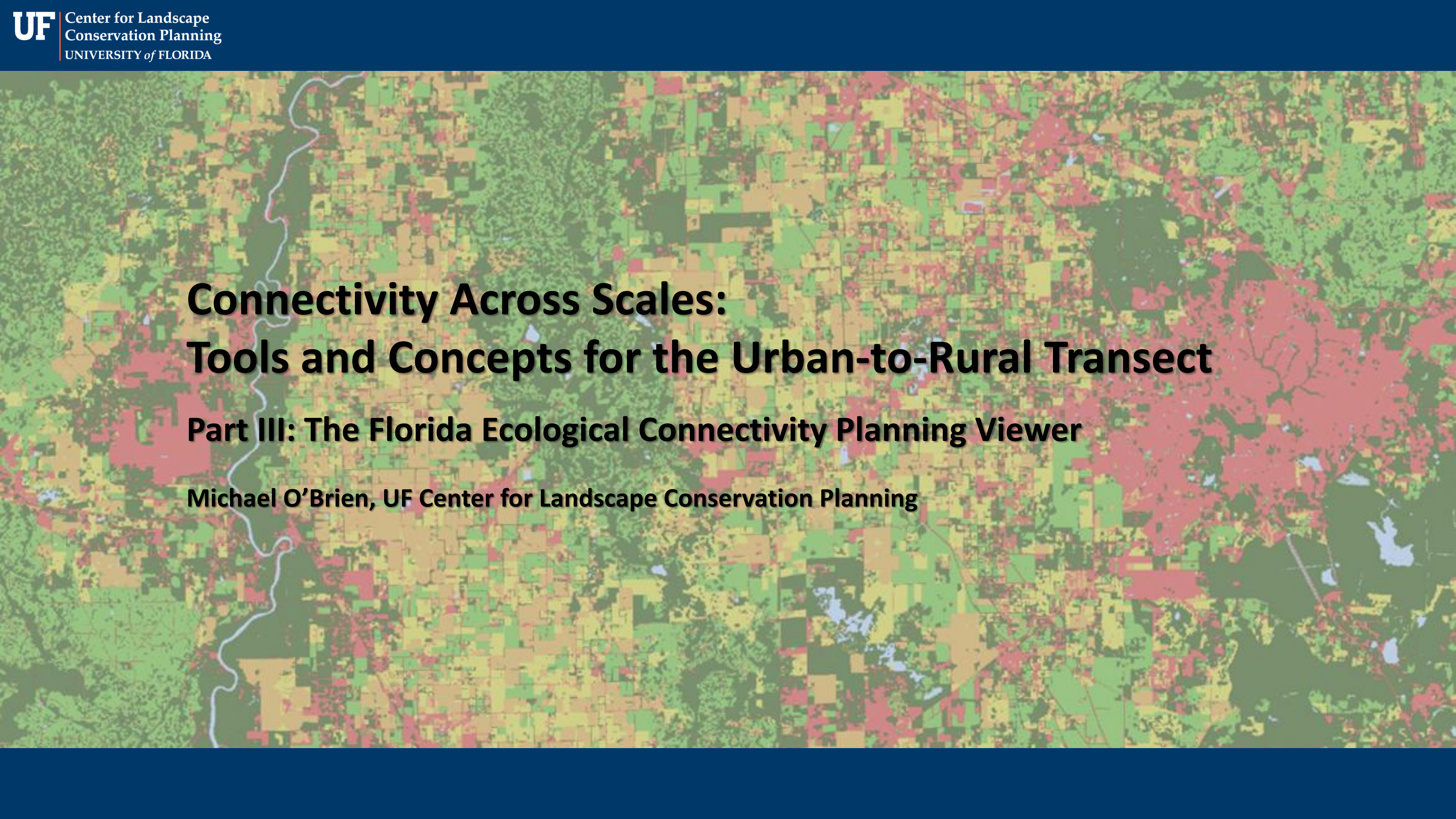


Photo by Lauren Yoho/Wildpath

**WE DON'T PROTECT CONNECTIONS
BECAUSE OF THE LINES
THEY MAKE ON A MAP.**

**We protect them because of the life
they sustain.**

NEXT: SEE THE EVIDENCE IN ECOCON



Connectivity Across Scales: Tools and Concepts for the Urban-to-Rural Transect

Part III: The Florida Ecological Connectivity Planning Viewer

Michael O'Brien, UF Center for Landscape Conservation Planning

Presentation Overview



Introduction to the EcoCon application



The EcoCon and landscape ecology



The EcoCon and scales of connectivity



Addressing planning questions with the EcoCon

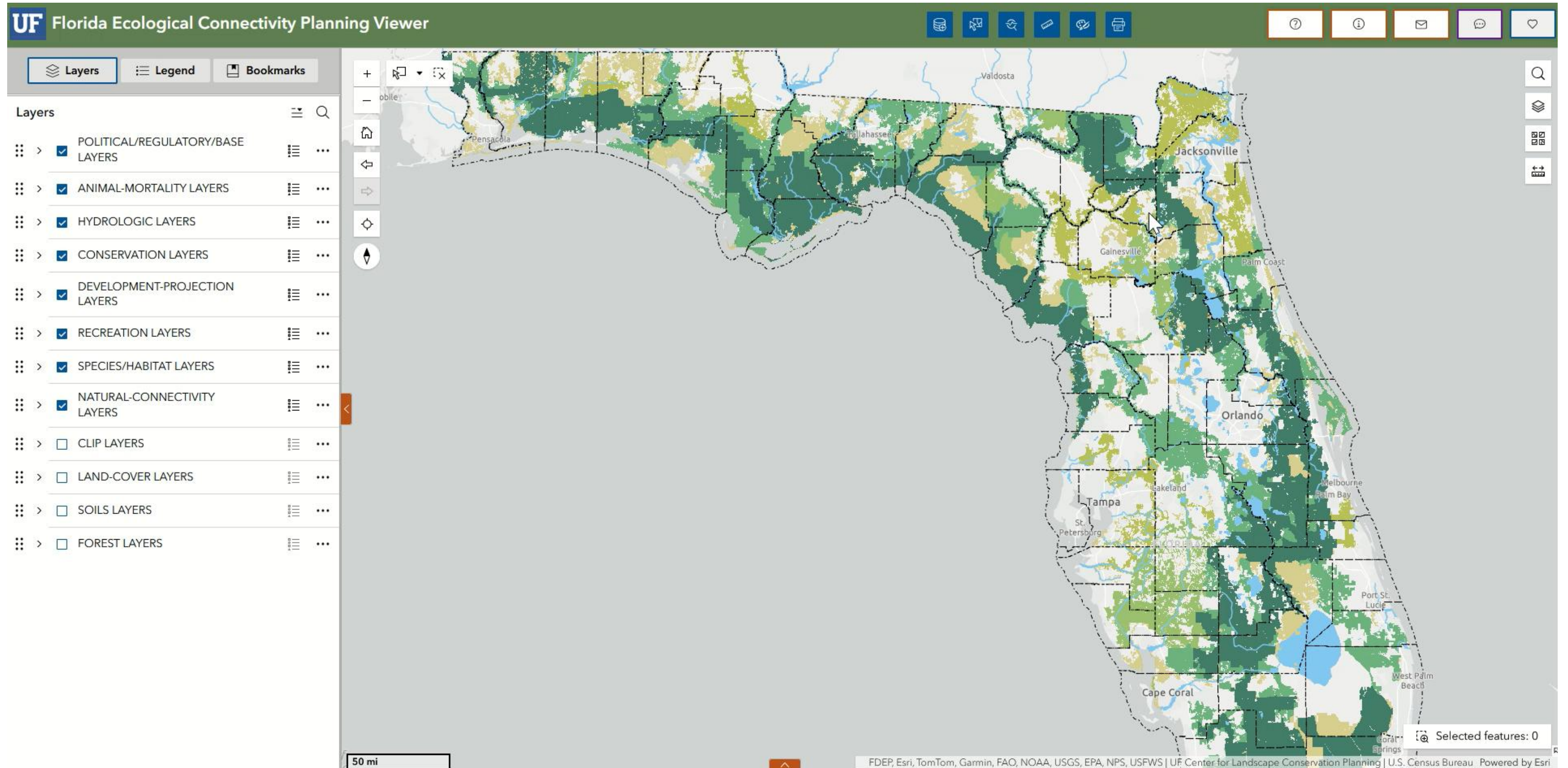
Introduction to the EcoCon Application

Introduction to the EcoCon Application

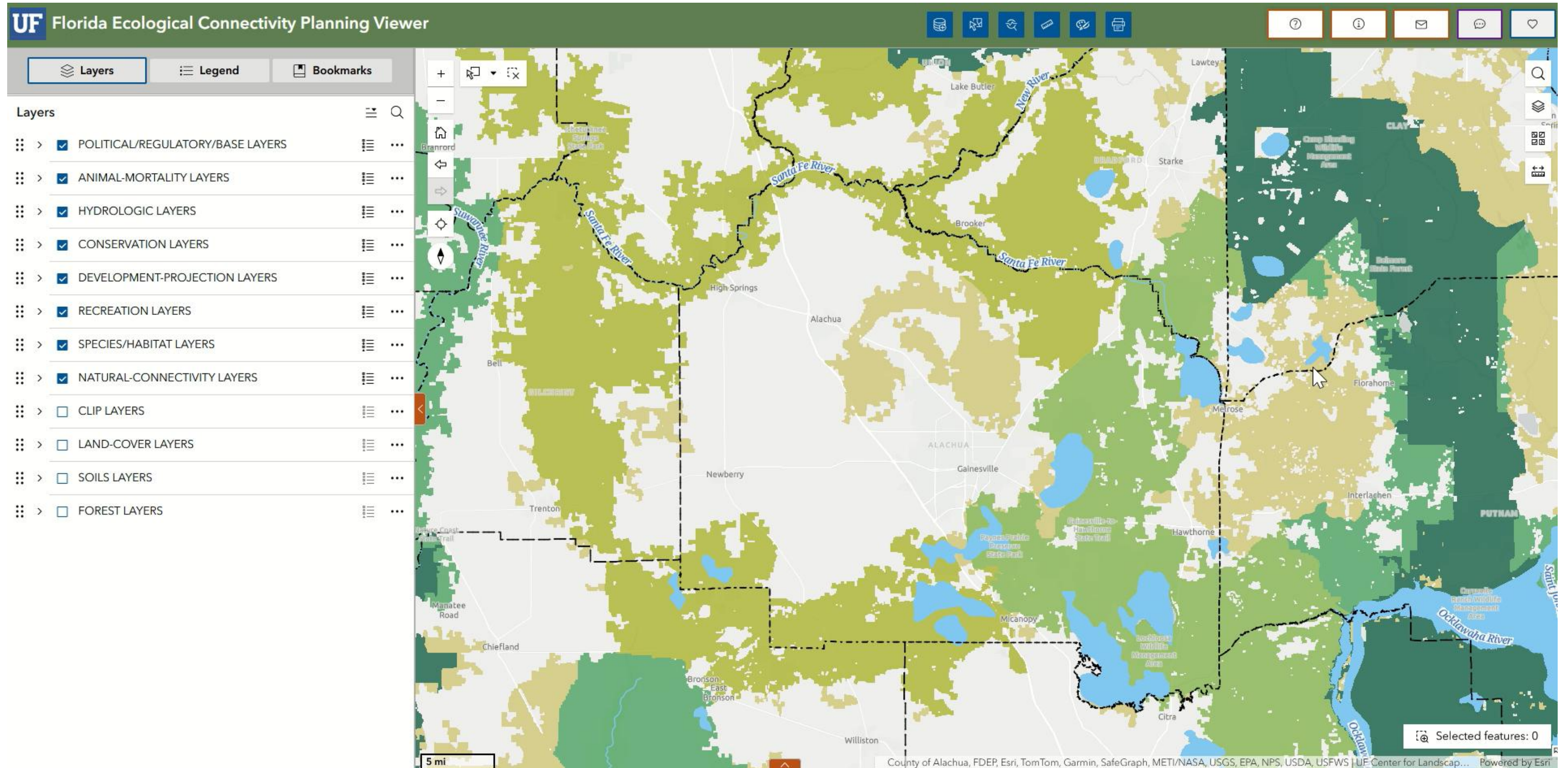
- User interface basics
- Advanced functionality
 - Adding data
 - Analysis
 - Printing
- Analysis demonstration
- Follow along at tinyurl.com/UFEcoCon



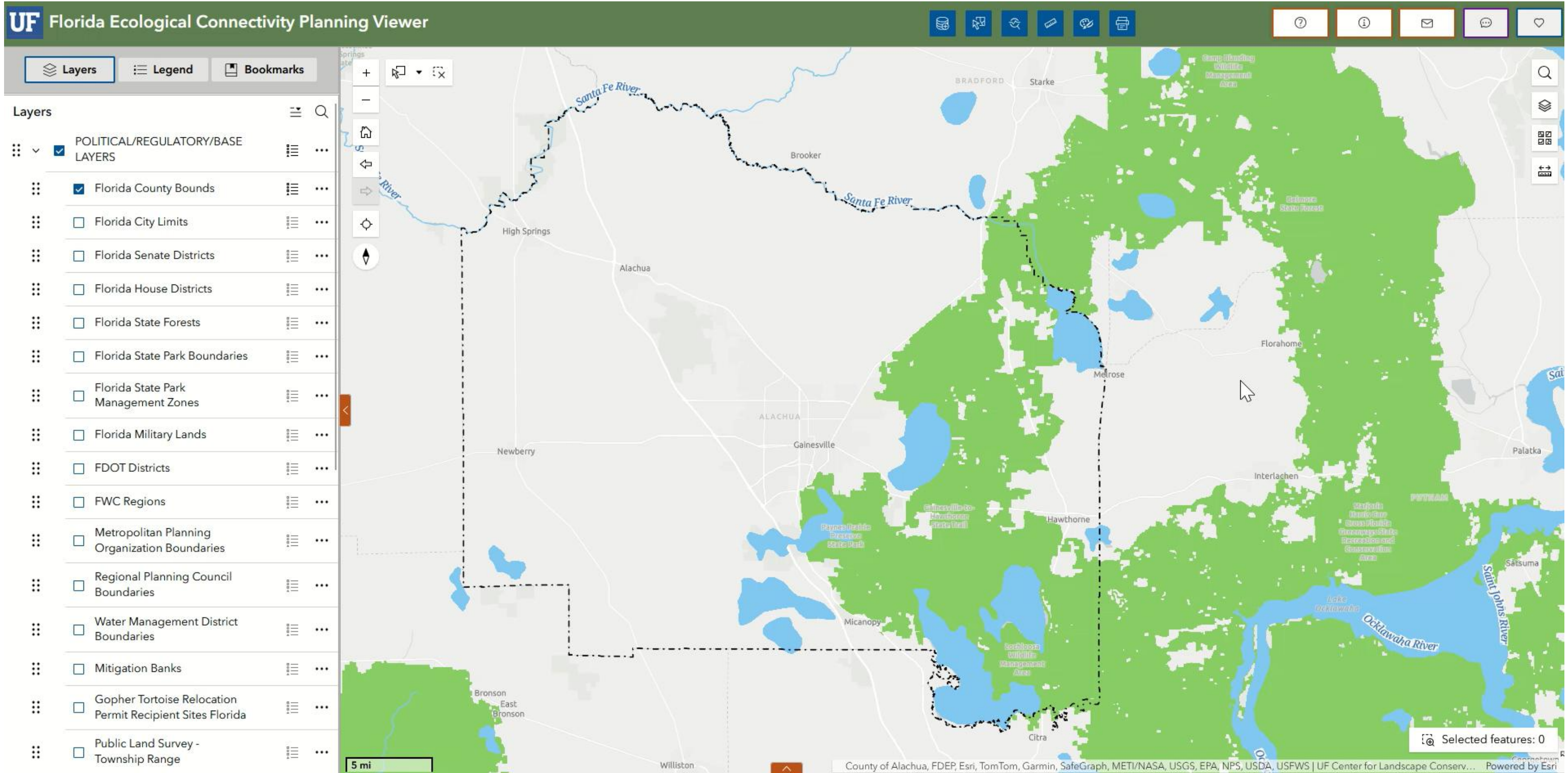
Introduction to the EcoCon Application – Video 1



Introduction to the EcoCon Application – Video 2



Introduction to the EcoCon Application – Video 3

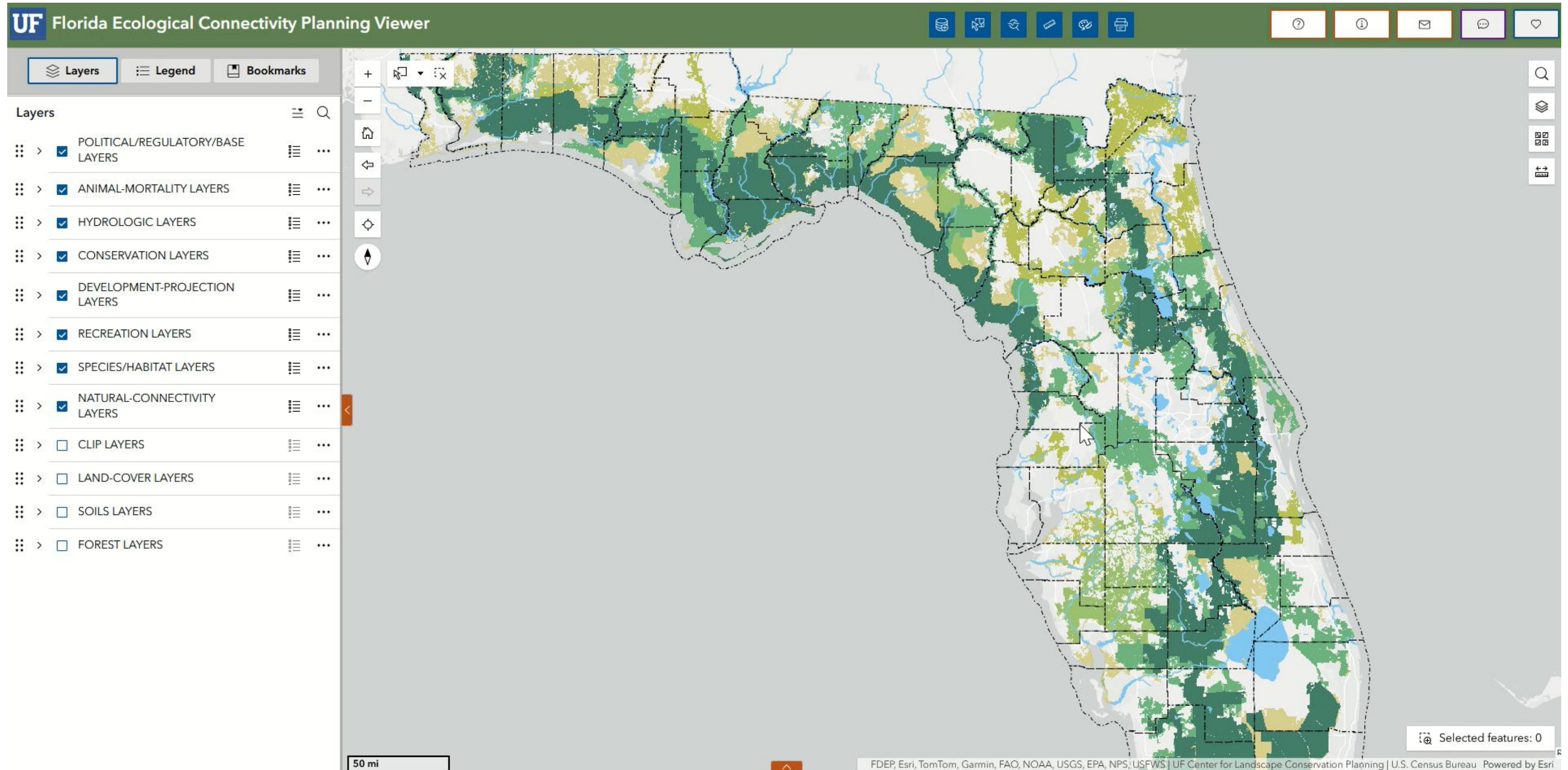


The EcoCon and Landscape Ecology

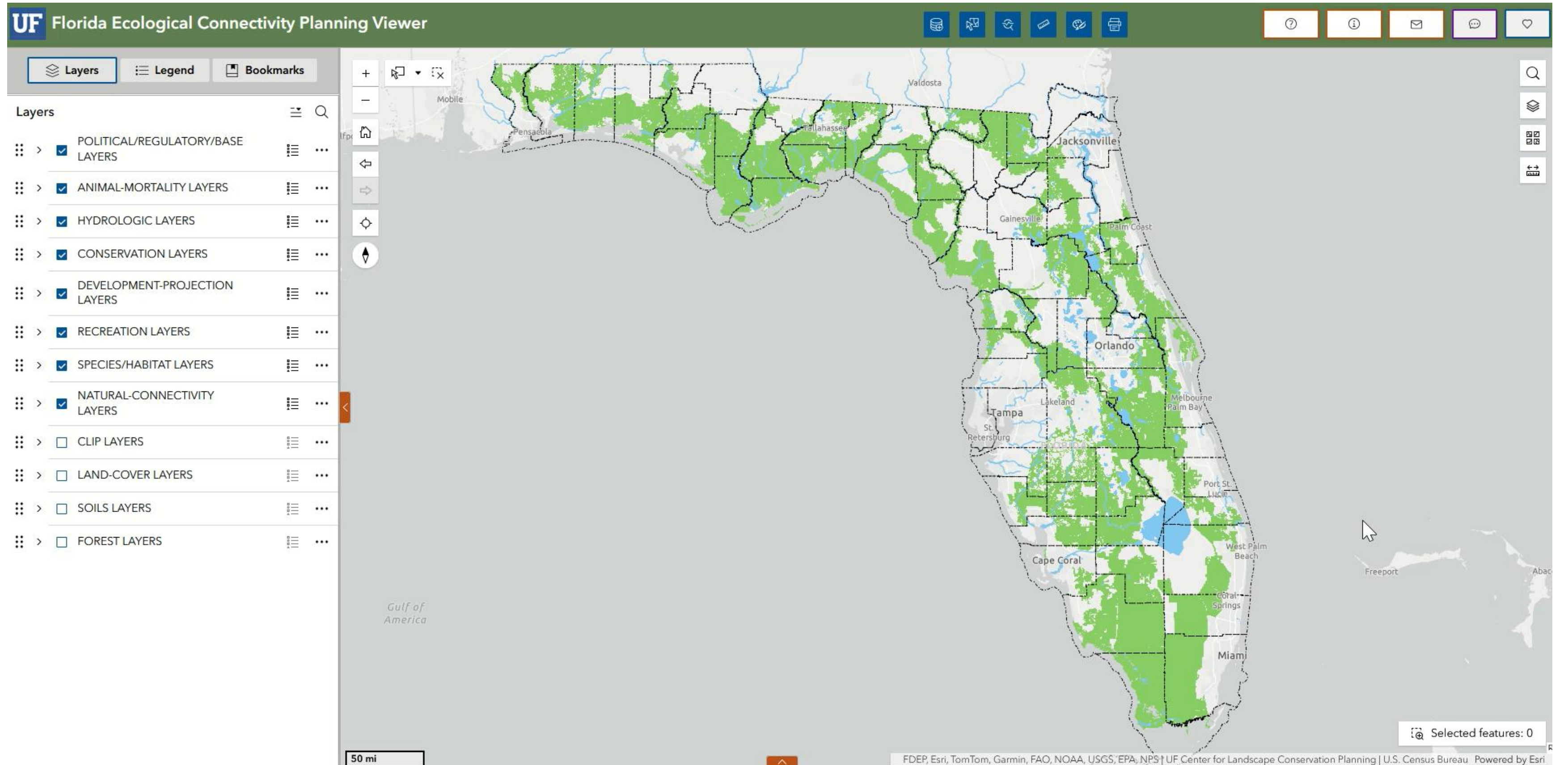
The EcoCon and Landscape Ecology

- The mosaic: patches, corridors, and the matrix
- Hubs, corridors, and connectivity
- Challenges to a connected landscape
 - Roads and other linear infrastructure
 - Development
 - Sea level rise

The EcoCon and Landscape Ecology – Video 1



The EcoCon and Landscape Ecology – Video 2

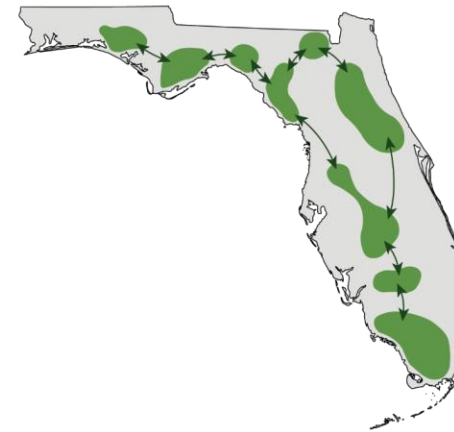
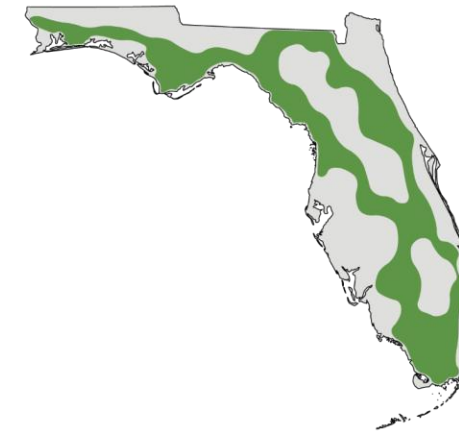
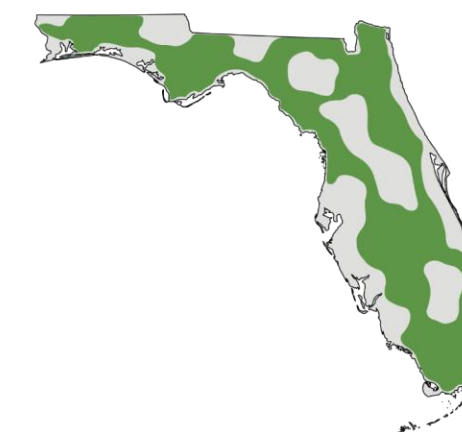
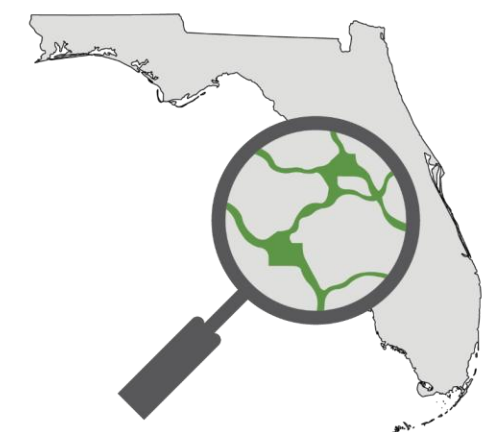
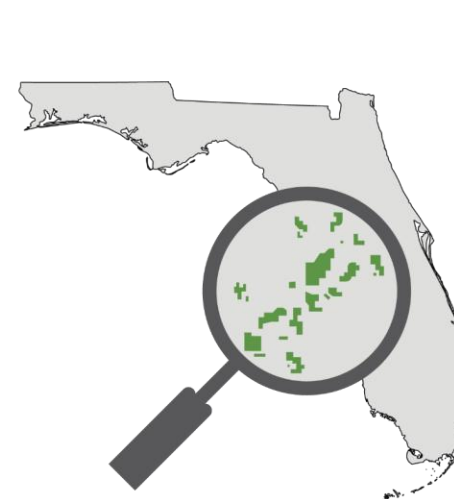
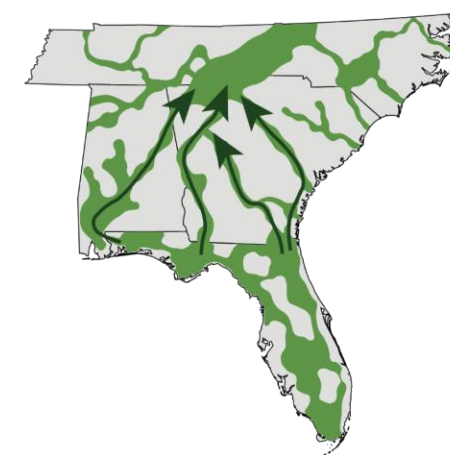
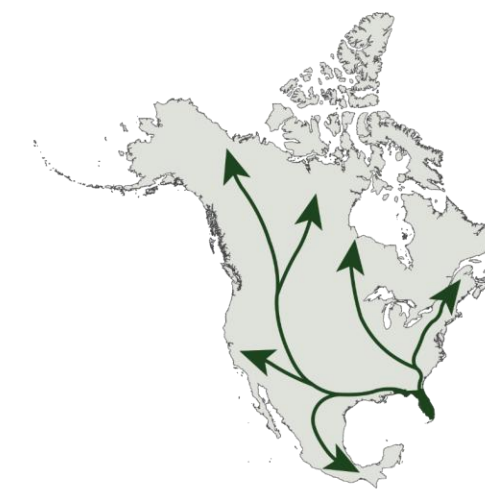
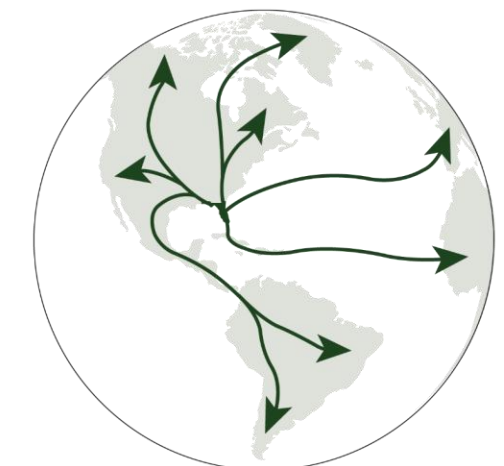


The EcoCon and Scales of Connectivity

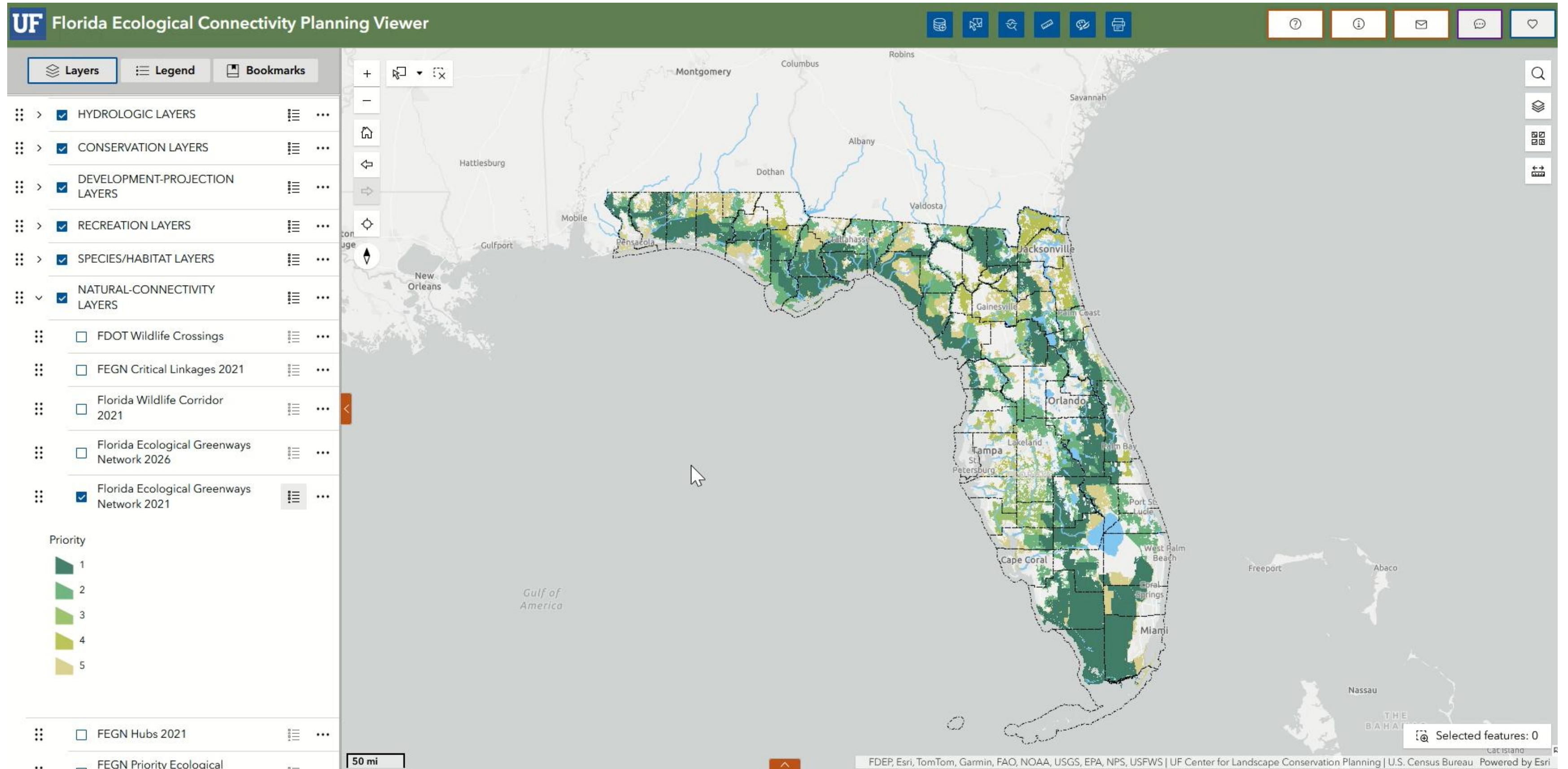


The EcoCon and Scales of Connectivity

- Critical linkages
- Florida wildlife corridor
- Full FEGN
- Connected local networks
- Isolated local networks
- Multistate
- Continental
- International



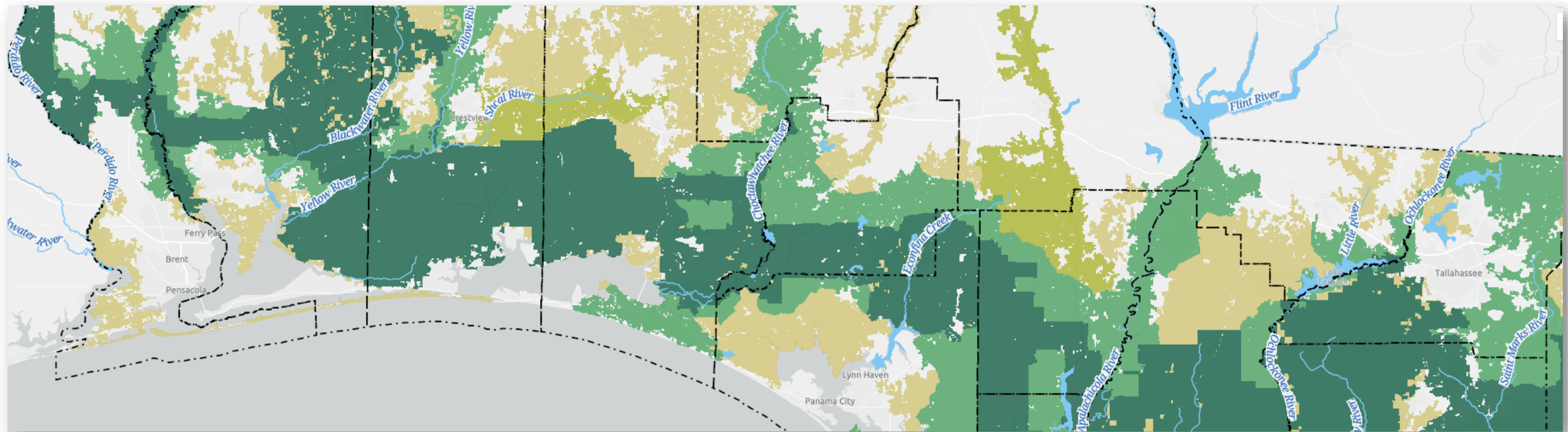
Scales of Connectivity – Video 1



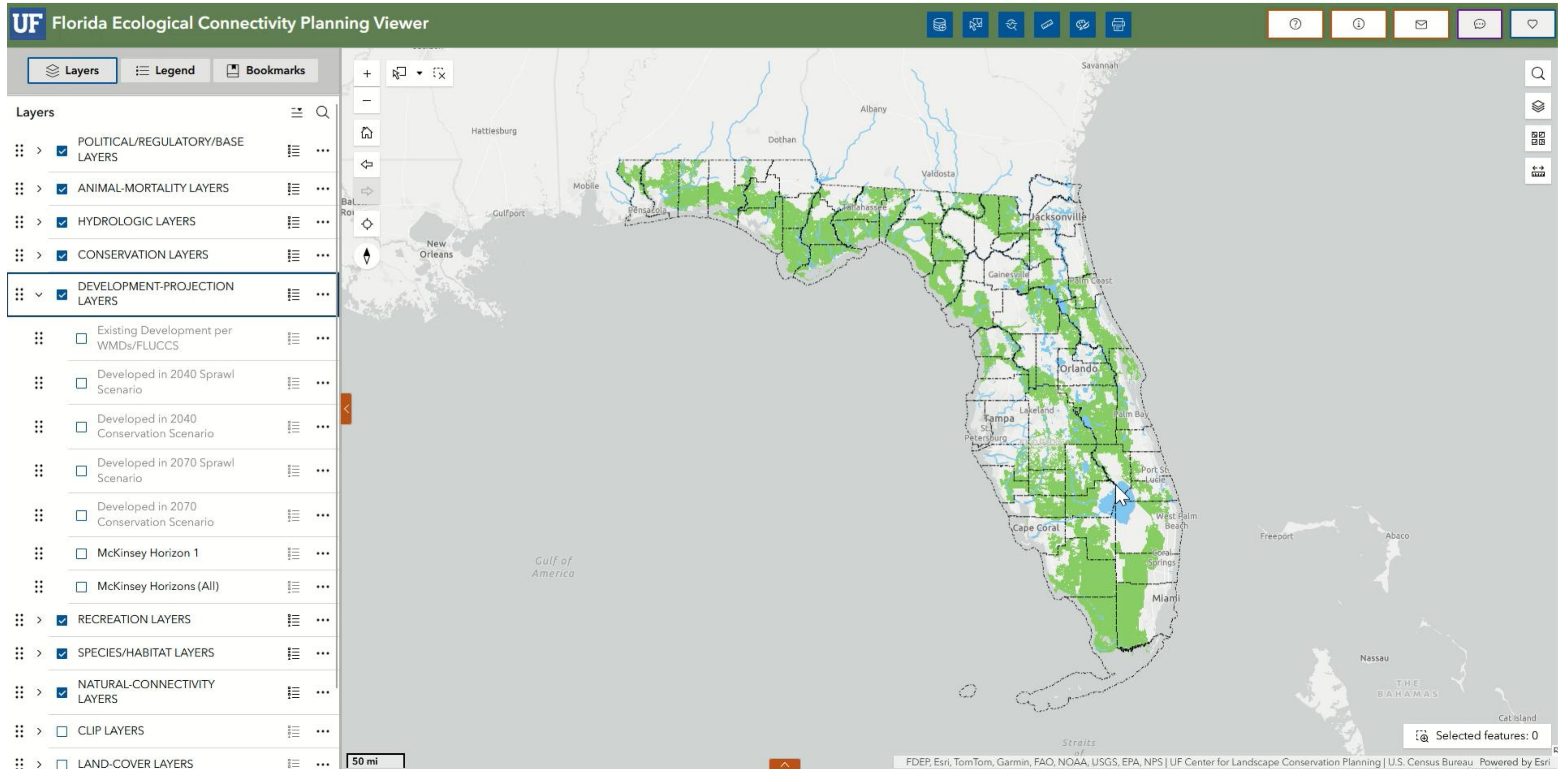
Addressing Planning Questions with the EcoCon

Addressing Planning Questions with the EcoCon

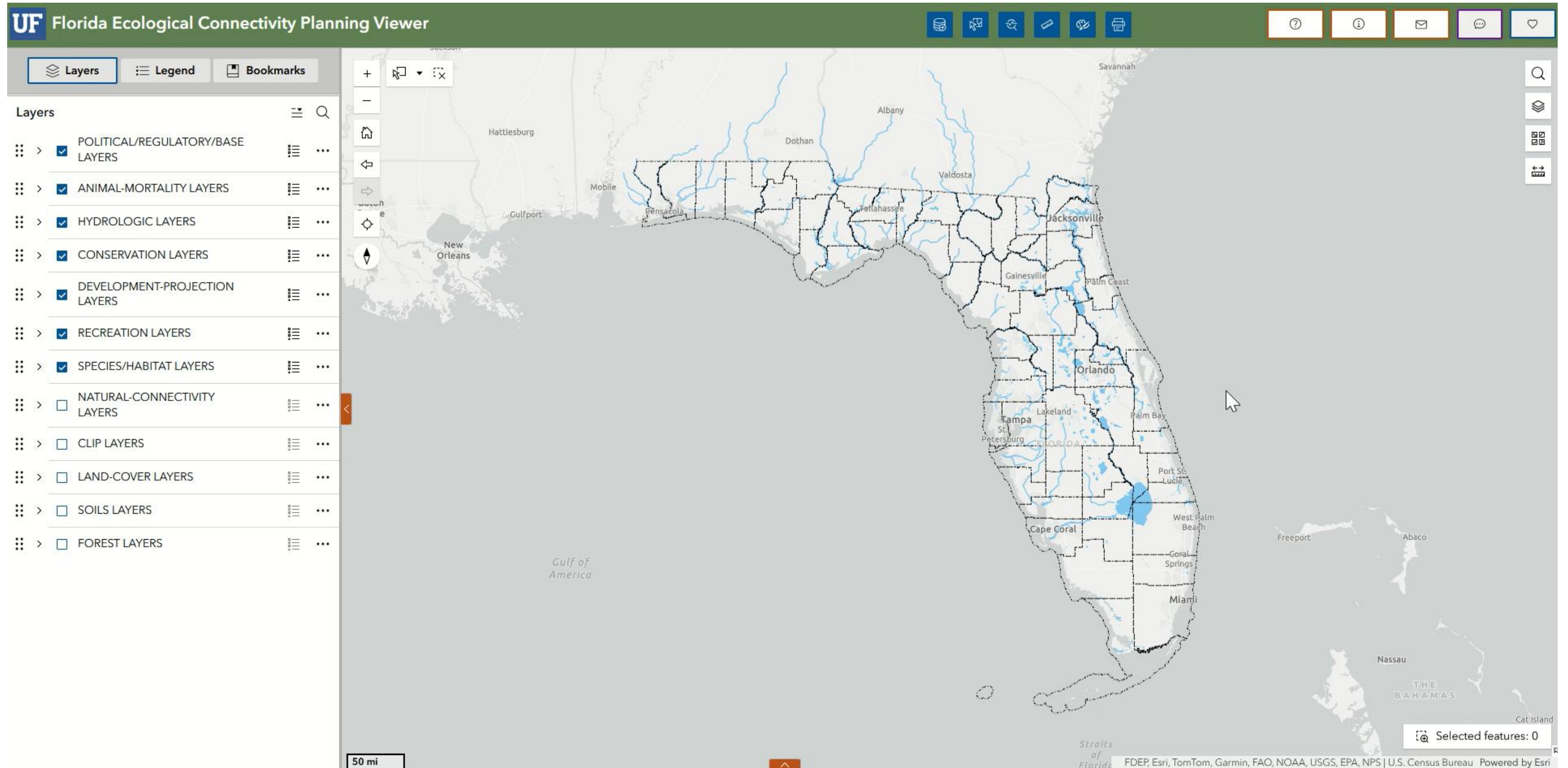
- What land use decisions could affect the larger network?
- What should remain connected across Florida?
- What is important even without an FEGN connection?



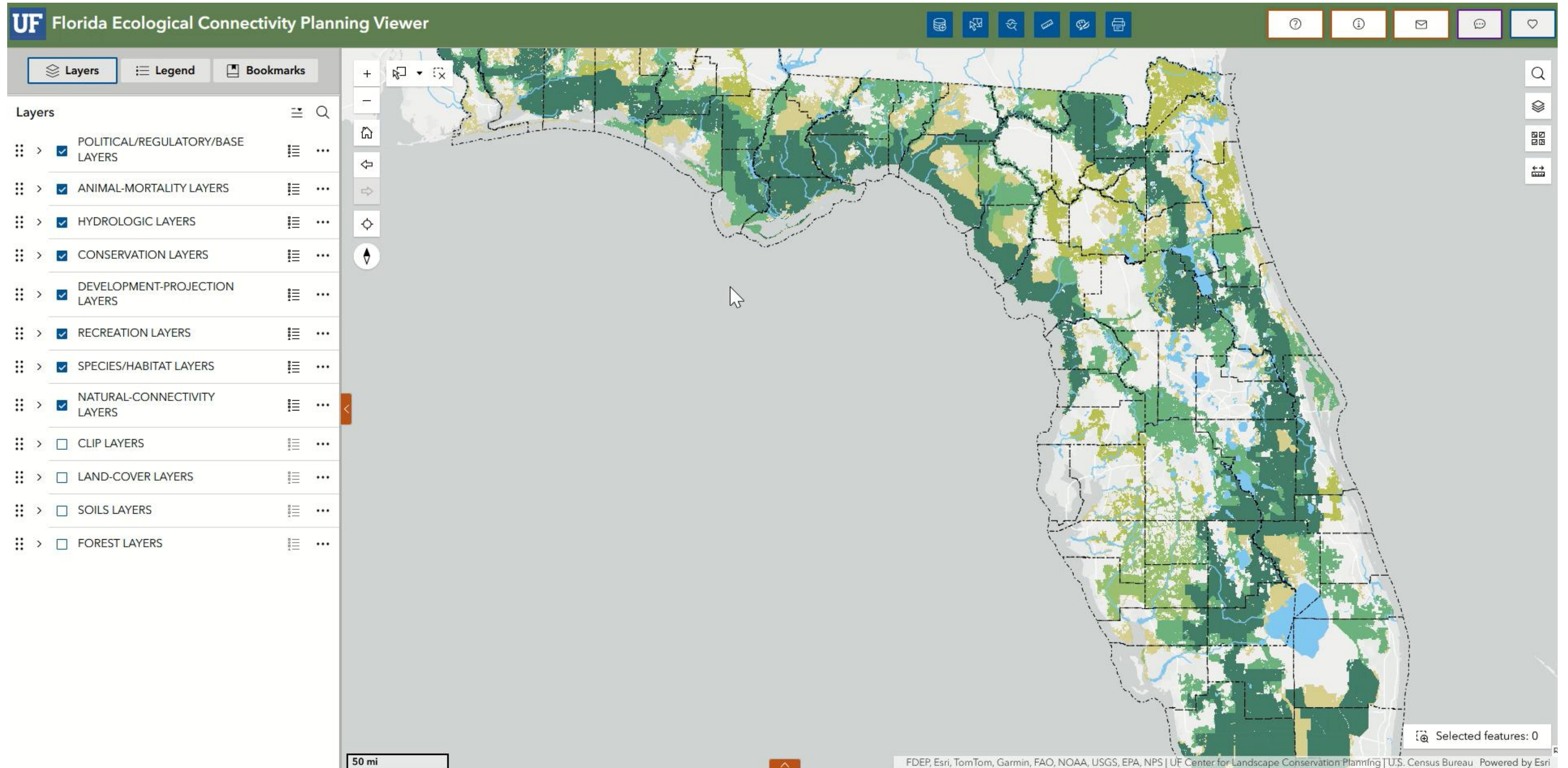
Addressing Planning Questions – Video 1



Addressing Planning Questions – Video 2

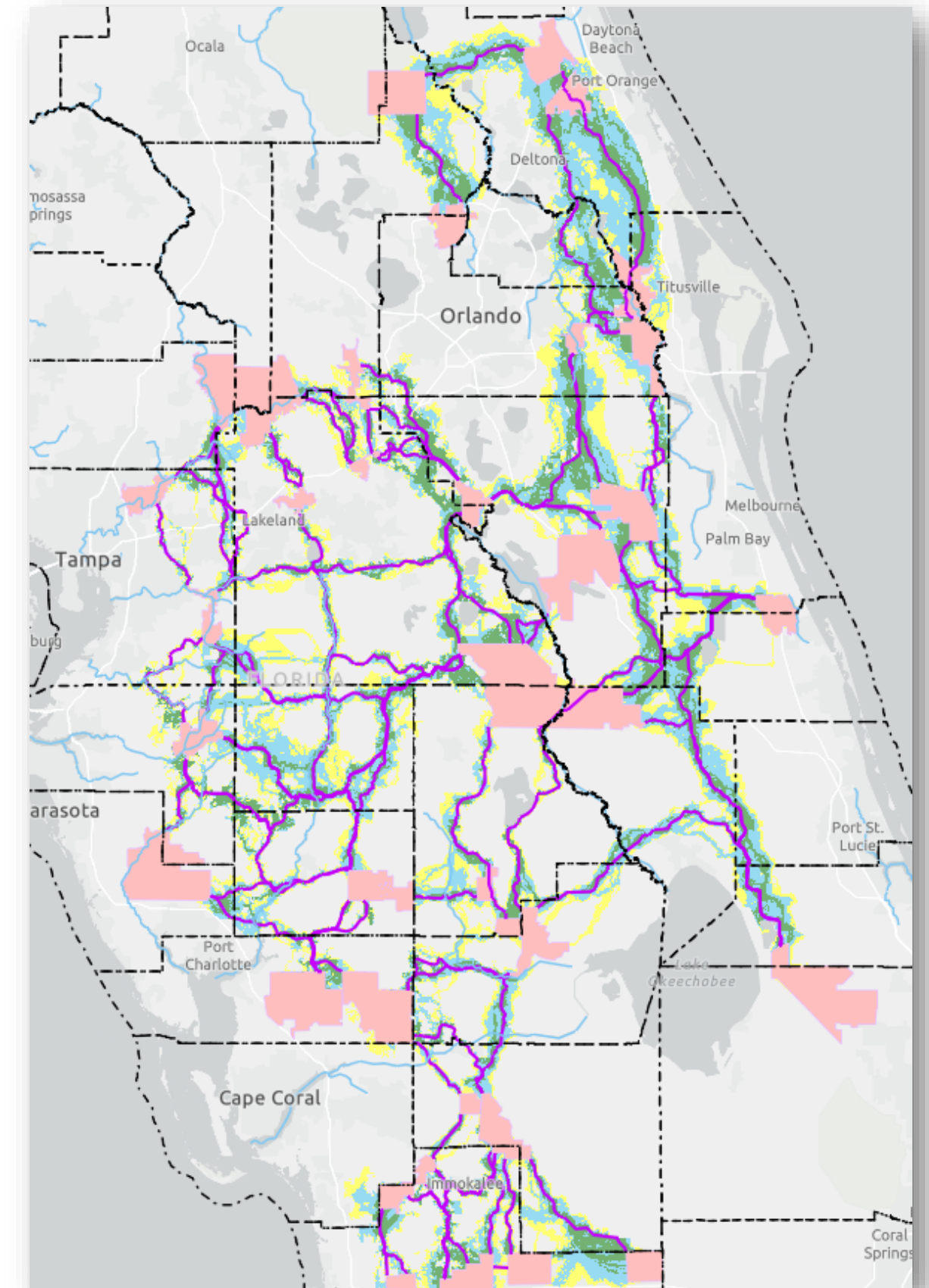


Addressing Planning Questions – Video 3



Summary

- The EcoCon is a public, mostly free, conservation-focused web GIS
- Landscape ecology informs use of the EcoCon and vice versa
- Several scales of connectivity can be seen in the EcoCon
- The EcoCon can help inform difficult planning questions

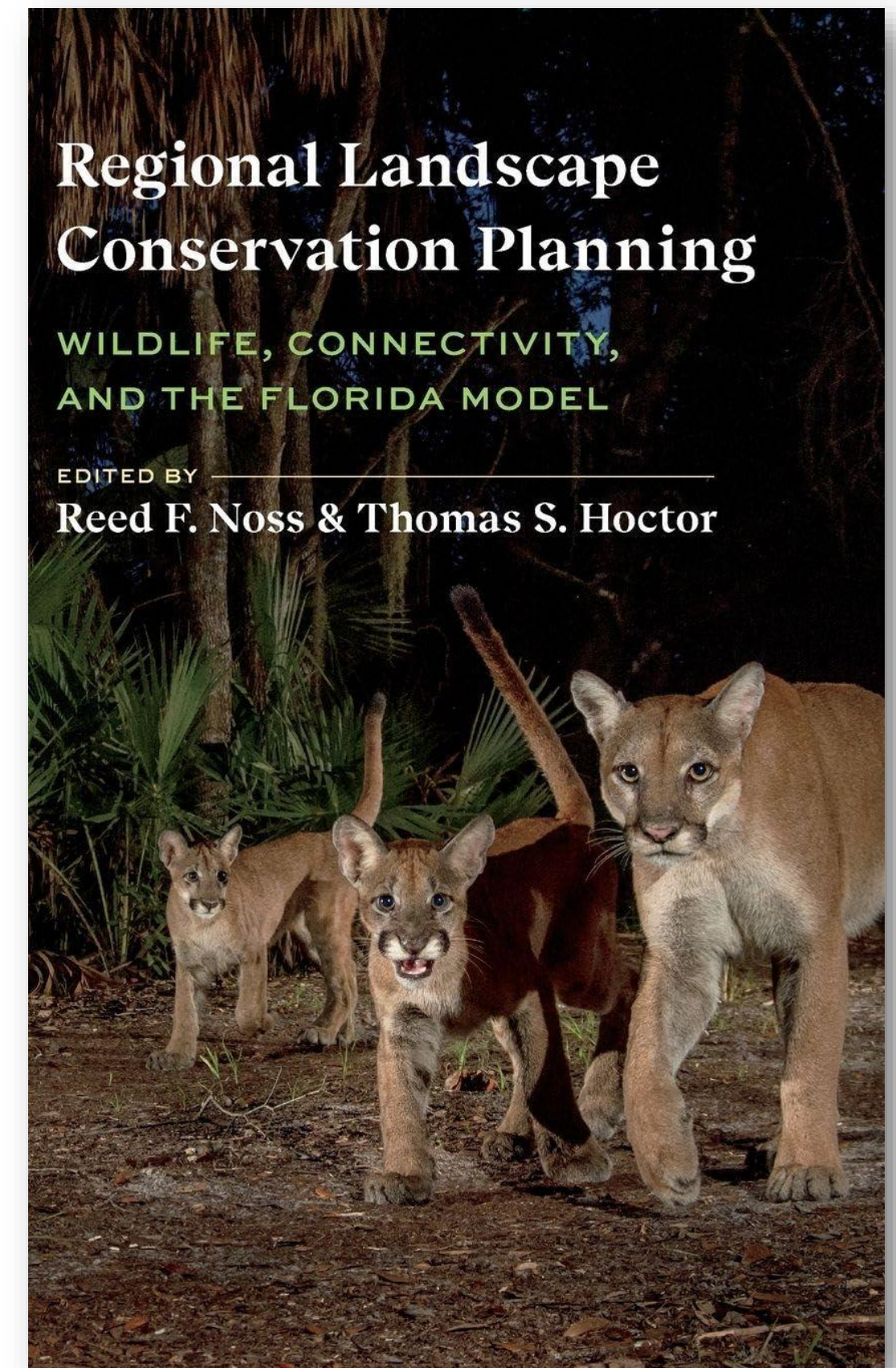


Resources

- EcoCon, FEGN Dashboard, FEGN Basic Viewer, FEGN StoryMaps, various datasets: UF CLCP Hub: tinyurl.com/UFHub
- New CLCP book on conservation planning: tinyurl.com/NossAndHector
- Florida Geographic Data Library: fgdl.org
- Emails: isabellaguttuso@ufl.edu, s.lockhart@ufl.edu, mgobrien@ufl.edu



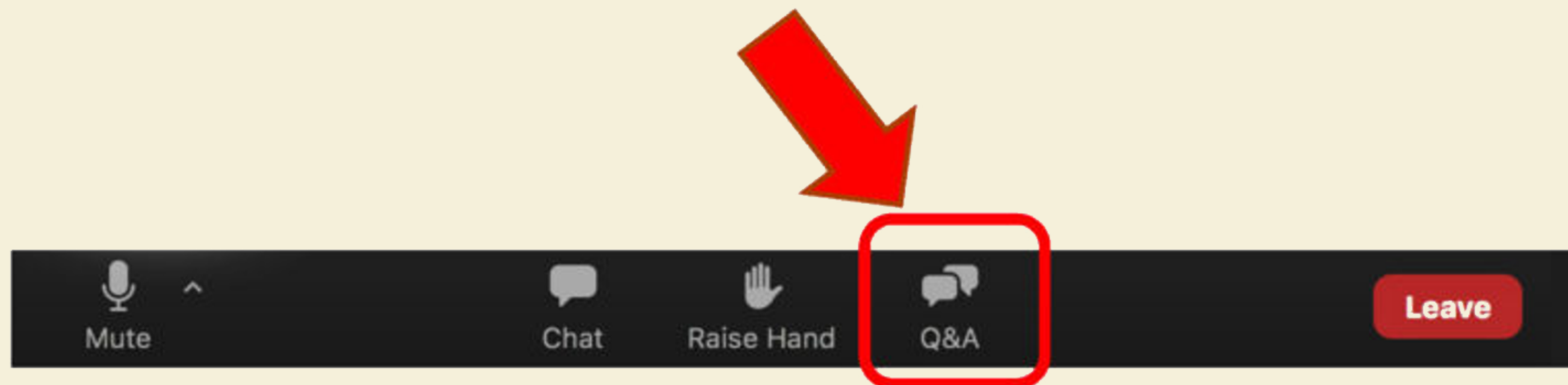
tinyurl.com/UFHub



Questions & Answers

Please submit questions for speakers using the Q&A button on your Zoom control panel.

Keep questions succinct and, if possible, indicate who your question should be directed to.



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- Watch for an email from friends@1000fof.org within a few business days, and check your spam folder.

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Upcoming Webinars

Stay tuned for our November webinar!

