

Tab 1 SB 302 by Garcia; Nature-based Solutions for Improving Coastal Resilience					
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The Florida Senate
COMMITTEE MEETING EXPANDED AGENDA
ENVIRONMENT AND NATURAL RESOURCES
Senator Rodriguez, Chair
Senator Mayfield, Vice Chair

MEETING DATE: Tuesday, December 2, 2025
TIME: 3:30—5:30 p.m.
PLACE: *Toni Jennings Committee Room*, 110 Senate Building

MEMBERS: Senator Rodriguez, Chair; Senator Mayfield, Vice Chair; Senators Arrington, Avila, DiCeglie, Harrell, Polsky, and Smith

TAB	BILL NO. and INTRODUCER	BILL DESCRIPTION and SENATE COMMITTEE ACTIONS	COMMITTEE ACTION
1	SB 302 Garcia	Nature-based Solutions for Improving Coastal Resilience; Requiring the Department of Environmental Protection to adopt rules and guidelines for nature-based solutions for improving coastal resilience; requiring the department, in consultation with the Division of Insurance Agent and Agency Services of the Department of Financial Services, to conduct a statewide feasibility study regarding the value of nature-based solutions being used for a specified purpose, etc. EN 12/02/2025 AEG FP	
Presentations on land management by:			
2	The Department of Environment Protection		
3	The Fish and Wildlife Conservation Commission		
4	The Department of Agriculture and Consumer Services		
Other Related Meeting Documents			

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Environment and Natural Resources

BILL: SB 302

INTRODUCER: Senator Garcia

SUBJECT: Nature-based Solutions for Improving Coastal Resilience

DATE: December 1, 2025

REVISED: _____

ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1. <u>Barriero</u>	<u>Rogers</u>	<u>EN</u>	<u>Pre-meeting</u>
2. _____	_____	<u>AEG</u>	_____
3. _____	_____	<u>FP</u>	_____

I. Summary:

The bill directs the Department of Environmental Protection (DEP) to adopt rules for using nature-based solutions to improve coastal resilience. Among other things, the rules must:

- Provide methods to mitigate erosion in areas of critical state concern.
- Provide a framework for developers to mitigate impacts on existing mangrove stands.
- Encourage mangrove replanting programs and the restoration of oyster reefs, salt marshes, and coral reefs.
- Provide a framework for the implementation of nature-based solutions.
- Provide a framework for local governments to identify vulnerable coastal properties and develop protection and restoration zone projects that use nature-based solutions through the Resilient Florida Grant Program.
- Create permitting incentives for the use of new technologies, such as 3D printing, for living shorelines and nature-based solutions.
- Provide for the development of workforce training that includes flood and sea level rise research methods, predictive strategies, and adaptation and mitigation strategies.
- Streamline the permitting process after a storm event for green infrastructure projects and the replacement of failed coastal infrastructure with hybrid infrastructure.
- Provide guidance on the optimal combination of nature-based solutions and hybrid infrastructure to address sea level rise and mitigate the impact of storm surges.
- Model the projected effects of the integration of hybrid infrastructure designs.

The bill also requires DEP to conduct a statewide feasibility study to determine the value of nature-based solutions for coastal flood risk reduction within coastal communities to reduce insurance premiums and improve local governments' community ratings in the National Flood Insurance Program Community Rating System. DEP must submit a report on the findings of the study by July 1, 2027. For the 2026-2027 fiscal year, the bill appropriates \$250,000 in nonrecurring funds from the Resilient Florida Trust Fund to DEP to conduct the feasibility study.

II. Present Situation:

Coastal Resilience, Green Infrastructure, and Nature-Based Solutions

Resilience is the ability of a community to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions.¹ Resilience planning includes preparing for hazard events, risk mitigation, and post-event recovery and should be proactive, continuous, and integrated into other community goals and plans.²

Green infrastructure and nature-based solutions are increasingly being integrated into resilience planning. Green infrastructure uses vegetation, soils, and natural processes to manage and treat stormwater runoff water, often in urban environments.³ The scale of green infrastructure ranges from urban installations, such as rain gardens and green roofs, to large tracts of undeveloped natural lands.⁴ The interconnected network of green infrastructure can enhance the resiliency of infrastructure and communities by increasing water supplies, reducing flooding, providing climate adaptability, and improving water quality.⁵

Similarly, nature-based solutions integrate natural features and processes into the built environment to promote resilient communities.⁶ Coastal nature-based solutions can stabilize shorelines, reduce erosion, and buffer coastal areas from the impacts of storms, sea level rise, and flooding.⁷ Examples of green infrastructure and nature-based solutions include:

- Land conservation;
- Tree canopy preservation;
- Floodplain and wetland restoration;
- Bioretention (e.g., planter boxes, bioswales, rain gardens, green roofs);
- Permeable pavement; and
- Living shorelines and oyster reefs.⁸

¹ Federal Emergency Management Agency (FEMA), *National Risk Index: Community Resilience*, <https://hazards.fema.gov/nri/community-resilience> (last visited Nov. 20, 2025).

² National Institute of Standards and Technology, U.S. Dep't of Commerce, *Community Resilience Planning Guide for Buildings and Infrastructure Systems*, 1 (2016), available at <https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.1190v1.pdf>.

³ U.S. Environmental Protection Agency (EPA), *Improving Community Resiliency with Green Infrastructure*, 1 (2014), available at https://www.epa.gov/sites/default/files/2014-06/documents/gi_resiliency.pdf.

⁴ *Id.*

⁵ *Id.*

⁶ FEMA, *Building Community Resilience with Nature-based Solutions*, 4 (2020), available at https://www.fema.gov/sites/default/files/2020-07/fema_bric_nature-based-solutions-guide_2020.pdf.

⁷ FEMA, *Building Community Resilience with Nature-based Solutions* at 5. See generally EPA, *Green Infrastructure and Extreme Weather*, <https://www.epa.gov/green-infrastructure/climate-resiliency-and-green-infrastructure> (last visited Nov. 20, 2025); EPA, *Green Infrastructure Opportunities that Arise During Municipal Operations*, 1 (2015), available at https://www.epa.gov/sites/default/files/2015-09/documents/green_infrastructure_roadshow.pdf.

⁸ FEMA, *Building Community Resilience with Nature-based Solutions* at 6-8; EPA, *Types of Green Infrastructure*, <https://www.epa.gov/green-infrastructure/types-green-infrastructure> (last visited Nov. 20, 2025).



Stormwater Planter, Permeable Pavement, Living Shoreline, and Bioretention⁹

Living Shorelines and Seawalls

A living shoreline is a nature-based solution that consists of strategically placing natural materials such as plants and stones along a coastal edge.¹⁰ Living shorelines promote and rely on the growth of natural vegetation over time to help reduce erosion, increase resiliency, and filter runoff.¹¹ This natural infrastructure helps maintain the shoreline ecosystem while being an innovative coastal management technique.¹² Research indicates that living shorelines are more resilient than bulkheads in protecting against the effects of hurricanes.¹³

A living seawall is designed to encourage underwater habitats and usually consists of naturalistic concrete, rock, and/or shell structures designed to attract fish, oysters, and other living things, absorb wave energy without causing erosion, and improve aesthetics.¹⁴

⁹ EPA, *Types of Green Infrastructure*, <https://www.epa.gov/green-infrastructure/types-green-infrastructure> (last visited Nov. 20, 2025).

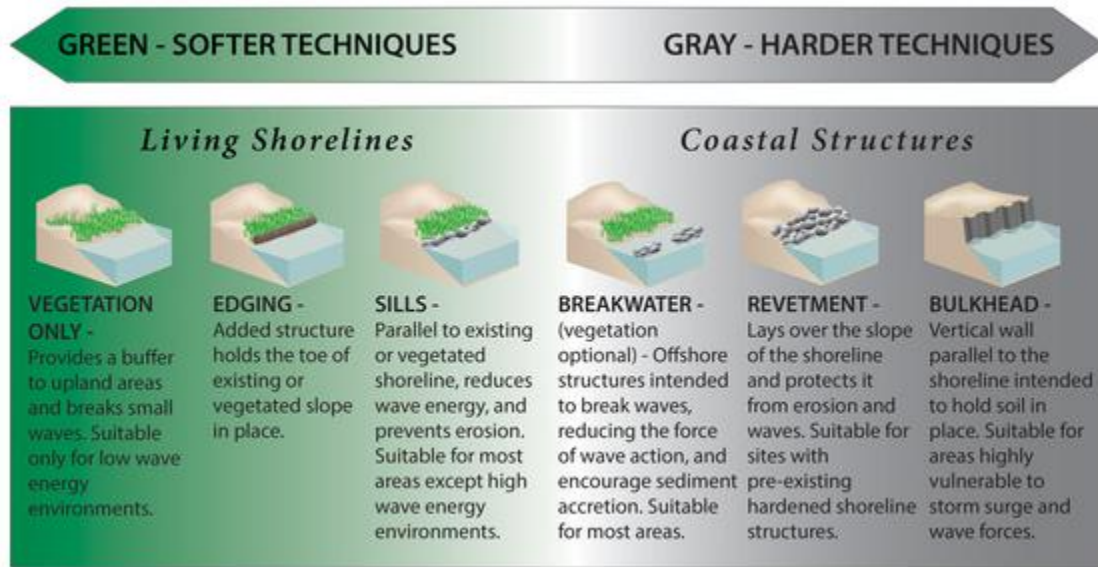
¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

¹³ National Oceanic and Atmospheric Administration (NOAA), *What is a living shoreline?*, <https://oceanservice.noaa.gov/facts/living-shoreline.html> (last visited Nov. 20, 2025). See also NOAA, *Understanding Living Shorelines*, <https://www.fisheries.noaa.gov/insight/understanding-living-shorelines#what-is-a-living-shoreline> (last visited Nov. 20, 2025).

¹⁴ Mote Marine Laboratory and Aquarium, *Mote scientists to study Sarasota's new 'living seawall,'* <https://mote.org/news/mote-scientists-to-study-sarasotas-new-living-seawall/> (last visited Nov. 20, 2025). See also Port of San Francisco, *Living Seawall Pilot*, <https://www.sfport.com/wrp/living-seawall> (last visited Nov. 20, 2025).



Mangroves

Florida's estimated 600,000 acres of mangrove forests contribute to the overall health of the state's southern coastal zone and beyond.¹⁵ Mangroves stabilize coastlines, slow the movement of tides, store carbon, and help protect against erosion and damage from storm surges.¹⁶ According to one study by the Nature Conservancy, mangroves prevented \$1.5 billion in direct flood damages and protected over half a million people in Florida during Hurricane Irma in 2017, reducing damages by nearly 25 percent in counties with mangroves.¹⁷ In Collier County, some regions immediately behind the county's mangroves receive annual risk reduction benefits of over \$1 million.¹⁸ Another study found that without the mangroves on Florida's coast, the storm surge of Hurricane Wilma would have extended up to 70 percent further inland.¹⁹

¹⁵ DEP, *Florida's Mangroves*, <https://floridadep.gov/rcp/rcp/content/floridas-mangroves> (last visited Nov. 20, 2025).

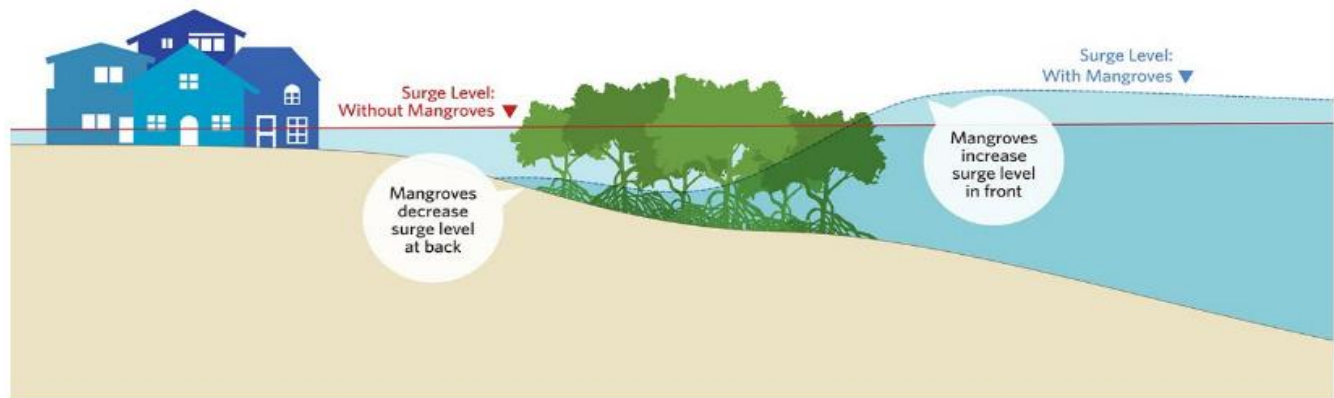
Mangroves are gaining ground along their northern Florida habitat limits, and as winter cold snaps decrease, mangroves are expected to expand further north into new territory. Kristen Minogue & Heather Dewar, Smithsonian Environmental Research Center, *With Fewer Hard Frosts, Tropical Mangroves Push North*, 1 (2013), available at <https://sercblog.si.edu/with-fewer-hard-frosts-tropical-mangroves-push-north/>.

¹⁶ NASA, *Mangroves Are Losing Their Resilience*, <https://landsat.gsfc.nasa.gov/article/mangroves-are-losing-their-resilience/> (last visited Nov. 20, 2025). See also, DEP, *Florida's Mangroves*, <https://floridadep.gov/rcp/rcp/content/floridas-mangroves>; NASA, *NASA Study Maps the Roots of Global Mangrove Loss*, available at <https://www.nasa.gov/feature/goddard/2020/nasa-study-maps-the-roots-of-global-mangrove-loss>. Mangroves reduce wave heights by 31 percent on average. Siddharth Narayan et al., *The Effectiveness, Costs and Coastal Protection Benefits of Natural and Nature-Based Defenses*, Plos One, 4 (2016), available at <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0154735>.

¹⁷ Siddharth Narayan et al., *The Nature Conservancy, Valuing the Flood Risk Reduction Benefits of Florida's Mangroves*, 2, available at https://www.nature.org/content/dam/tnc/nature/en/documents/Mangrove_Report_digital_FINAL.pdf.

¹⁸ *Id.* at 10. Worldwide, mangroves reduce risk to more than 15 million people and prevent more than \$65 billion in property damages each year. Tiffany Duong, World Economic Forum, *Why planting mangroves can help save the planet* (2021), available at <https://www.weforum.org/agenda/2021/08/planting-mangroves-helps-the-planet/>.

¹⁹ Keqi Zhang et al., *The role of mangroves in attenuating storm surges*, Estuarine, Coastal and Shelf Science, vols. 102-103, 11, 23 (2012), available at <https://www.sciencedirect.com/science/article/abs/pii/S0272771412000674>.



MANGROVE BENEFITS Surge is reduced behind mangroves, helping ease flooding to land and properties. © The Nature Conservancy

The amount of protection afforded by mangroves depends on the width of the forest. A narrow fringe of mangroves offers limited protection, while a wide fringe can considerably reduce wave and flood damage to landward areas by enabling overflowing water to be absorbed into the expanse of forest.²⁰ Notably, the Legislature has found that many areas of mangroves in Florida occur as narrow riparian fringes that do not provide all the functions of mangrove forests or provide such functions to a lesser degree.²¹

Mangroves also play an important ecological role as a habitat for various species of marine and estuarine vertebrates, invertebrates, and other wildlife,²² including endangered and threatened species such as the manatee, hawksbill sea turtle, American crocodile, Key deer, and Florida panther.²³ Mangrove branches act as bird rookeries and nesting areas for coastal wading birds, and their intricate root systems provide critical nursery habitats for fish, crustaceans, shellfish, and other marine life.²⁴ The roots also make ideal underwater perches for barnacles, oysters, crabs, and other marine organisms.²⁵ These organisms provide food for juvenile fish, birds, reptiles, and other wildlife.²⁶ Florida's important recreational and commercial fisheries would drastically decline without healthy mangrove forests.²⁷

Human activities such as coastal development are responsible for destroying more mangrove forests worldwide than any other type of coastal habitat.²⁸ Rising sea levels and more intense droughts and storms could increase the rate of mangrove loss.²⁹

²⁰ *Id.*

²¹ Section 403.9322(3), F.S.

²² Section 403.9322(2), F.S.

²³ Florida Museum, University of Florida, *South Florida Aquatic Environments: Mangrove Life*, <https://www.floridamuseum.ufl.edu/southflorida/habitats/mangroves/mangrove-life/> (last visited Nov. 20, 2025).

²⁴ *Id.*; DEP, *Florida's Mangroves*; Tiffany Duong, World Economic Forum, *Why planting mangroves can help save the planet* (2021), available at <https://www.weforum.org/agenda/2021/08/planting-mangroves-helps-the-planet/>.

²⁵ Hannah Waters, Smithsonian Institution, *Mangrove Restoration: Letting Mother Nature Do the Work* (2016), available at <https://ocean.si.edu/ocean-life/plants-algae/mangrove-restoration-letting-mother-nature-do-work>.

²⁶ *Id.*

²⁷ DEP, *Florida's Mangroves*, <https://floridadep.gov/rcp/rcp/content/floridas-mangroves>.

²⁸ Florida Fish and Wildlife Conservation Commission, *Mangrove Forests*, <https://myfwc.com/research/habitat/coastal-wetlands/mangroves/> (last visited Nov. 20, 2025).

²⁹ Miriam C. Jones et al., *Rapid inundation of southern Florida coastline despite low relative sea-level rise rates during the late-Holocene*, *Nature Communications*, 1, 10 (2019), available at <https://www.nature.com/articles/s41467-019-11138-4>;

National Flood Insurance Program Community Rating System

The National Flood Insurance Program (NFIP) was created by the passage of the National Flood Insurance Act of 1968.³⁰ The NFIP is administered by the Federal Emergency Management Agency (FEMA) and enables homeowners, business owners, and renters in flood-prone areas to purchase flood insurance protection from the federal government.³¹ Participation in the NFIP is voluntary.³² To join, a community must:

- Complete an application;
- Adopt a resolution of intent to participate and cooperate with FEMA; and
- Adopt and submit a floodplain management ordinance that meets or exceeds the minimum NFIP criteria.³³

The NFIP's Community Rating System (CRS) is a voluntary incentive program that rewards communities for implementing floodplain management practices that exceed the minimum requirements of the NFIP.³⁴ Property owners within communities that participate in the CRS program receive discounts on flood insurance premiums.³⁵ Premium discounts range from 5 to 45 percent based on a community's CRS credit points.³⁶ Communities earn credit points by implementing FEMA-approved activities or programs, such as:

- Flood damage reduction programs that reduce the flood risk to existing development;
- Public outreach programs advising people about flood hazards, flood insurance, and ways to reduce flood damage;
- Mapping and regulations limiting floodplain development or providing increased protection to new and existing development; or
- Warning and response programs that provide early flood warnings to the public and incorporate substantial damage assessments into flood response operations.³⁷

Resilient Florida Grant Program

The Resilient Florida Grant Program provides grants to counties and municipalities to fund community resilience planning, including, among other things, vulnerability assessments that identify or address risks of flooding and sea level rise, comprehensive plan amendments, and feasibility studies and permitting costs for nature-based solutions that reduce the impact of

Xiucheng Yang et al., *Tracking mangrove condition changes using dense Landsat time series*, Remote Sensing of Environment, vol. 15, 1 (2024), available at <https://www.sciencedirect.com/science/article/pii/S0034425724004875?via%3Dihub>.

³⁰ The National Flood Insurance Act, Pub. L. 90-448, 82 Stat. 572 (codified as amended at 42 U.S.C. 4001 et seq.). See also FEMA, *Flood Insurance Rules and Regulations*, <https://www.fema.gov/flood-insurance/rules-legislation> (last visited Feb. 7, 2025).

³¹ See FEMA, *Flood Insurance*, <https://www.fema.gov/flood-insurance> (last visited Nov. 20, 2025).

³² FEMA, *Participation in the NFIP*, <https://www.fema.gov/about/glossary/participation-nfip> (last visited Nov. 20, 2025).

³³ *Id.*

³⁴ FEMA, *Community Rating System*, <https://www.fema.gov/floodplain-management/community-rating-system> (last visited Nov. 20, 2025).

³⁵ *Id.*

³⁶ *Id.*

³⁷ FEMA, *Community Rating System: A Local Official's Guide to Saving Lives, Preventing Property Damage, and Reducing the Cost of Flood Insurance*, 3-6 (2018), available at https://www.fema.gov/sites/default/files/documents/fema_community-rating-system_local-guide-flood-insurance-2018.pdf.

flooding and sea level rise.³⁸ Water management districts are also eligible to receive grants under the Resilient Florida Grant Program to assist local government adaptation planning.³⁹

Workforce Development Capitalization Incentive Grant Program

The Workforce Development Capitalization Incentive Grant Program was created to provide grants to school districts and Florida College System institutions to fund costs associated with the creation or expansion of career and technical education programs that lead to industry certifications included on the CAPE Industry Certification Funding List.⁴⁰ The programs may serve secondary students or postsecondary students if the postsecondary career and technical education program also serves secondary students.⁴¹

Grant funds may be used for instructional and laboratory equipment, supplies, personnel, student services, or other expenses associated with the creation or expansion of a career and technical education program that serves secondary students.⁴² In ranking applications, the State Board of Education must consider the statewide geographic dispersion of grant funds and give priority to applications from education agencies that are making maximum use of their workforce development funding by offering high-performing, high-demand programs.⁴³

Environmental Resource Permitting (ERP)

Part IV of chapter 373, F.S., and chapter 62-330 of the Florida Administrative Code regulate the statewide ERP program, which is the primary tool used by DEP and the water management districts for preserving natural resources and fish and wildlife, minimizing degradation of water resources caused by stormwater discharges, and providing for the management of water and related land resources. The program governs the construction, alteration, operation, maintenance, repair, abandonment, and removal of stormwater management systems, dams, impoundments, reservoirs, appurtenant works, and other works such as docks, piers, structures, dredging, and filling located in, on, or over wetlands or other surface waters.⁴⁴

Projects that are in, on, or over surface waters and wetlands are subject to additional permitting requirements. For example, if a proposed activity significantly degrades or is within an Outstanding Florida Water,⁴⁵ the ERP applicant must provide reasonable assurance that the proposed activity will be clearly in the public interest.⁴⁶ In determining whether an activity is clearly in the public interest, the water management district or DEP must consider and balance the following criteria:

³⁸ Section 380.093(3)(b)1., F.S.

³⁹ Section 380.093(3)(b)2., F.S. Such funding must support the Florida Flood Hub and DEP's efforts related to data creation, collection, modeling, and statewide standards implementation.

⁴⁰ Section 1011.801, F.S.

⁴¹ *Id.*

⁴² Section 1011.801(1), F.S.

⁴³ Section 1011.801(2), F.S.

⁴⁴ Fla. Admin. Code R. 62-330.010(2).

⁴⁵ An Outstanding Florida Water is a water designated worthy of special protection because of its natural attributes. DEP, *Outstanding Florida Waters*, <https://floridadep.gov/dear/water-quality-standards/content/outstanding-florida-waters> (last visited Nov. 20, 2025); see Fla. Admin. Code R. 62-302.700(2) and (9).

⁴⁶ Section 373.414(1), F.S.

- Whether the activity will adversely affect the public health, safety, or welfare or the property of others;
- Whether the activity will adversely affect the conservation of fish and wildlife, including endangered or threatened species, or their habitats;
- Whether the activity will adversely affect navigation or the flow of water or cause harmful erosion or shoaling;
- Whether the activity will adversely affect the fishing or recreational values or marine productivity in the vicinity of the activity;
- Whether the activity will be of a temporary or permanent nature;
- Whether the activity will adversely affect or will enhance significant historical and archaeological resources; and
- The current condition and relative value of functions being performed by areas affected by the proposed activity.⁴⁷

III. Effect of Proposed Changes:

The bill contains four whereas clauses that acknowledge the following:

- The coastline is a critical state resource that benefits the public interest by providing economic benefits, such as flood control, fishing, recreation, and navigation, and natural habitat and biodiversity functions, such as improved water quality and habitat for endangered and threatened species and other flora and fauna;
- Rising sea levels and an increasing frequency of adverse weather events pose a significant risk to people and property along the coastline and threaten the public benefits and functions offered by the coastline;
- As identified in the Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study, nature-based solutions, including mangrove stands and living seawalls, can play an essential role in improving coastal resilience and mitigating harm to this state's coastlines; and
- The Legislature intends to promote state and local efforts to restore mangrove forests along the coastline and further study the impact of other nature-based methods on this state's coastal resilience and economic development.

Section 1 creates s. 380.0938, F.S., regarding nature-based solutions for improving coastal resilience. The bill defines nature-based solutions as the use of natural features and processes to reduce risks from hazards, such as flooding and erosion.

The bill directs the Department of Environmental Protection (DEP) to adopt rules and guidelines for the implementation of nature-based solutions to improve coastal resilience. The rules and guidelines must, at a minimum, do all the following:

- Provide methods and practices to mitigate erosion in areas of critical state concern.⁴⁸

⁴⁷ Section 373.414(1)(a), F.S.

⁴⁸ The Areas of Critical State Concern Program was created by the Florida Environmental Land and Water Management Act of 1972 and is intended to protect resources and public facilities of major statewide significance within designated geographic areas from uncontrolled development that would cause substantial deterioration of such resources. Florida Department of Commerce, *Area of Critical State Concern Program*, <https://www.floridajobs.org/community-planning-and-development/programs/community-planning-table-of-contents/areas-of-critical-state-concern> (last visited Nov. 20, 2025). See Ch. 72-317, s. 5, Laws of Fla.; section 380.05, F.S. Designated areas of critical state concern include the Big Cypress Area,

- Provide a framework for developers to avoid or mitigate impacts on existing mangrove stands.
- Encourage local governmental entities to develop or participate in mangrove replanting and hydrological restoration programs and the restoration of oyster reefs, salt marshes, and coral reefs.
- Create mechanisms that identify and monitor threats to mangroves.
- Provide for the protection of barrier and spoil islands.
- Provide a framework for the implementation of nature-based solutions, which must include, but need not be limited to:
 - Beach renourishment.
 - Dune restoration and reinforcement.
 - Wetland restoration.
 - Reef restoration.
 - Living seawalls.
 - Shoreline and vegetation planting.
 - Stormwater planters.
 - Permeable pavements.
 - Ecologically sound building materials.
 - Green infrastructure.
- Provide a framework for local governments to identify vulnerable public and private properties along coastlines so that such entities may create local protection and restoration zone programs or projects that implement nature-based solutions through the Resilient Florida Grant Program.
- Encourage local governments to promote awareness of the value of nature-based solutions, including wetland and floodplain preservation and restoration, through education campaigns.
- Provide for the protection, maintenance, continued access to, and navigation of the marked channel and the right-of-way of the Florida Intracoastal Waterway.
- Create permitting incentives and approval processes for the use of new strategies and technologies, such as 3D printing, for living shorelines and nature-based solutions.
- Provide for the development of workforce training that includes flood and sea level rise research methods, predictive strategies, and adaptation and mitigation strategies. The department shall provide incentives to local communities that apply for funding through the Workforce Development Capitalization Incentive Grant Program to implement such workforce training.
- Develop methodology for determining whether a green infrastructure project is “not contrary to the public interest” or is “clearly in the public interest” pursuant to s. 373.414(1)(a), F.S.⁴⁹
- Streamline the permitting process for green infrastructure projects.

the Green Swamp Area, the City of Key West and the Florida Keys, and the Apalachicola Bay Area. Sections 380.055, 380.0551, 380.0552, and 380.0555, F.S.

⁴⁹ Applicants for an environmental resource permit are required to provide reasonable assurance that state water quality standards will not be violated and that activities in, on, or over surface waters or wetlands are “not contrary to the public interest.” Section 373.414(1), F.S. If the proposed activity significantly degrades or is within an Outstanding Florida Water, the applicant must provide reasonable assurance that the proposed activity will be “clearly in the public interest.” *Id.* Section 373.414(1)(a), F.S., delineates criteria that must be considered when determining whether an activity is “not contrary to the public interest” or “clearly in the public interest.”

- Streamline permitting, after designated storm events or disasters, for the replacement of failed coastal infrastructure with hybrid infrastructure that follows established stormwater infrastructure design guidelines.
- Provide guidance on the optimal combination of nature-based solutions and hybrid infrastructure to address sea level rise and mitigate the impact of storm surges.
- Model the projected effects of the integration of hybrid infrastructure designs, including flood risk reduction, socioeconomic benefits, and environmental benefits.

The bill defines “gray infrastructure” as the use of conventionally engineered structures to manage stormwater and mitigate flooding. The bill defines “green infrastructure” as the use of natural systems to manage stormwater, improve water quality, and mitigate flooding. The bill defines “hybrid infrastructure” as infrastructure that combines the use of gray and green infrastructure to create resilient solutions that are more effective than either approach alone.

The bill requires DEP, in consultation with the Division of Insurance Agent and Agency Services, to conduct a statewide feasibility study to determine the value of nature-based solutions for coastal flood risk reduction within coastal communities to reduce insurance premiums and improve local governments’ community ratings in the National Flood Insurance Program Community Rating System. DEP must submit a report on the findings of the study to the Governor and Legislature by July 1, 2027.

Section 2 appropriates, for the 2026-2027 fiscal year, the sum of \$250,000 in nonrecurring funds from the Resilient Florida Trust Fund to DEP to conduct the feasibility study for coastal flood risk reduction required by the bill.

Section 3 provides an effective date of July 1, 2026.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:**A. Tax/Fee Issues:**

None.

B. Private Sector Impact:

None.

C. Government Sector Impact:

The bill may have an indeterminate negative fiscal impact on the Department of Environmental Protection (DEP) related to the bill's rulemaking requirements. The bill also appropriates \$250,000 in nonrecurring funds from the Resilient Florida Trust Fund for DEP to complete the required feasibility study.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill creates section 380.0938 of the Florida Statutes.

IX. Additional Information:**A. Committee Substitute – Statement of Changes:**

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.



329416

LEGISLATIVE ACTION

Senate

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House

The Committee on Environment and Natural Resources (Garcia)
recommended the following:

Senate Amendment

Delete lines 53 - 55
and insert:
combines the use of gray and green infrastructure.

By Senator Garcia

36-00571-26

2026302__

1 A bill to be entitled
2 An act relating to nature-based solutions for
3 improving coastal resilience; creating s. 380.0938,
4 F.S.; defining terms; requiring the Department of
5 Environmental Protection to adopt rules and guidelines
6 for nature-based solutions for improving coastal
7 resilience; providing requirements for such rules and
8 guidelines; requiring the department, in consultation
9 with the Division of Insurance Agent and Agency
10 Services of the Department of Financial Services, to
11 conduct a statewide feasibility study regarding the
12 value of nature-based solutions being used for a
13 specified purpose; requiring the department to submit
14 a report to the Governor and the Legislature by a
15 specified date; providing an appropriation; providing
16 an effective date.
17

18 WHEREAS, Florida's coastline is a critical state resource
19 that benefits the public interest by providing economic
20 benefits, such as flood control, fishing, recreation, and
21 navigation, and natural habitat and biodiversity functions, such
22 as improved water quality and habitat for endangered and
23 threatened species and other flora and fauna, and

24 WHEREAS, rising sea levels and an increasing frequency of
25 adverse weather events pose a significant risk to people and
26 property along the coastline and threaten the public benefits
27 and functions offered by the coastline, and

28 WHEREAS, as identified in the Miami-Dade Back Bay Coastal
29 Storm Risk Management Feasibility Study, nature-based solutions,

36-00571-26

2026302__

including mangrove stands and living seawalls, can play an essential role in improving coastal resilience and mitigating harm to this state's coastlines, and

WHEREAS, the Legislature intends to promote state and local efforts to restore mangrove forests along the coastline and further study the impact of other nature-based solutions on this state's coastal resilience and economic development, NOW, THEREFORE,

Be It Enacted by the Legislature of the State of Florida:

Section 1. Section 380.0938, Florida Statutes, is created to read:

380.0938 Nature-based solutions for improving coastal resilience.-

(1) As used in this section, the term:

(a) "Gray infrastructure" means the use of conventionally engineered structures to manage stormwater and mitigate flooding.

(b) "Green infrastructure" means the use of natural systems to manage stormwater, improve water quality, and mitigate flooding.

(c) "Hybrid infrastructure" means infrastructure that combines the use of gray and green infrastructure to create resilient solutions that are more effective than either approach alone.

(d) "Nature-based solutions" means the use of natural features and processes to reduce risks from hazards, such as flooding and erosion.

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(2) The Department of Environmental Protection shall adopt rules and guidelines for the implementation of nature-based solutions to improve coastal resilience. The rules and guidelines must, at a minimum, do all of the following:

(a) Provide methods and practices to mitigate erosion in areas of critical state concern.

(b) Provide a framework for developers to avoid or mitigate impacts on existing mangrove stands.

(c) Encourage local governmental entities to develop or participate in:

1. Mangrove replanting and hydrological restoration programs; and

2. Oyster reef, salt marsh, and coral reef restoration.

(d) Create mechanisms that identify and monitor threats to mangroves.

(e) Provide for the protection of barrier and spoil islands.

(f) Provide a framework for the implementation of nature-based solutions, which must include, but need not be limited to, all of the following:

1. Beach renourishment.

2. Dune restoration and reinforcement.

3. Wetland restoration.

4. Reef restoration.

5. Living seawalls.

6. Shoreline and vegetation planting.

7. Stormwater planters.

8. Permeable pavements.

9. Ecologically sound building materials.

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2026302__

88 10. Green infrastructure.

89 (g) Provide a framework for local governments to identify
90 vulnerable public and private properties along coastlines so
91 that such entities may create local protection and restoration
92 zone programs or projects that implement nature-based solutions
93 through the Resilient Florida Grant Program pursuant to s.
94 380.093(3).

95 (h) Encourage local governments to promote awareness of the
96 value of nature-based solutions, including wetland and
97 floodplain preservation and restoration, through education
98 campaigns.

99 (i) Provide for the protection, maintenance, continued
100 access to, and navigation of the marked channel and the right-
101 of-way of the Florida Intracoastal Waterway as defined in s.
102 327.02.

103 (j) Create permitting incentives and approval processes for
104 the use of new strategies and technologies, such as 3D printing,
105 for living shorelines and nature-based solutions.

106 (k) Provide for the development of workforce training that
107 includes flood and sea level rise research methods, predictive
108 strategies, and adaptation and mitigation strategies. The
109 department shall provide incentives to local communities that
110 apply for funding through the Workforce Development
111 Capitalization Incentive Grant Program pursuant to s. 1011.801
112 to implement such workforce training.

113 (l) Develop methodology for determining whether a green
114 infrastructure project is not contrary to the public interest or
115 is clearly in the public interest pursuant to s. 373.414(1)(a).

116 (m) Streamline the permitting process under s. 373.4131 for

36-00571-26

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117 green infrastructure projects.

118 (n) Streamline permitting, after designated storm events or
119 disasters, for the replacement of failed coastal infrastructure
120 with hybrid infrastructure that follows established stormwater
121 infrastructure design guidelines.

122 (o) Provide guidance on the optimal combination of nature-
123 based solutions and hybrid infrastructure to address sea level
124 rise and mitigate the impact of storm surges.

125 (p) Model the projected effects, including flood risk
126 reduction, socioeconomic benefits, and environmental benefits,
127 of the integration of hybrid infrastructure designs.

128 (3) The department, in consultation with the Division of
129 Insurance Agent and Agency Services within the Department of
130 Financial Services, shall conduct a statewide feasibility study
131 to determine the value of nature-based solutions for coastal
132 flood risk reduction within coastal communities to reduce
133 insurance premiums and improve local governments' community
134 ratings in the National Flood Insurance Program Community Rating
135 System. The department shall submit a report on the findings of
136 the study to the Governor, the President of the Senate, and the
137 Speaker of the House of Representatives by July 1, 2027.

138 Section 2. For the 2026-2027 fiscal year, the sum of
139 \$250,000 in nonrecurring funds from the Resilient Florida Trust
140 Fund is appropriated to the Department of Environmental
141 Protection to conduct the feasibility study for coastal flood
142 risk reduction required by this act.

143 Section 3. This act shall take effect July 1, 2026.



OUR LANDS. OUR LEGACY.

THE PATH AHEAD: SECURING FLORIDA'S CONSERVATION LEGACY.

LAND RESOURCE MANAGEMENT

**Senate Committee on Environment and Natural Resources
December 2, 2025**

Bryan Bradner

**Deputy Secretary for Land and Recreation
Department of Environmental Protection**

FLORIDA PARK SERVICE

OVERVIEW



- Established in 1935, the Florida Park Service includes 175 state parks, trails and historic sites.
- The mission of the Florida Park Service is to provide resource-based recreation while preserving, interpreting and restoring natural and cultural resources.



FLORIDA PARK SERVICE

HIGHLIGHTS



America's First
**FOUR-TIME
WINNER**

- Florida Park Service is the first and only four-time gold medal award winner in the nation.
- Encompassing over 811,000 acres, Florida's state parks include:
 - 3,120 miles of trails.
 - 101 miles of sandy beaches.
- In Fiscal Year (FY) 2024-25, state parks:
 - Hosted over 28 million visitors.
 - Generated over \$75 million in revenue.
 - Contributed over \$3.6 billion in direct economic impact on local economies.

RESOURCE MANAGEMENT

OVERVIEW



- Management of resources in Florida State Parks encompasses natural resources such as forests, springs, seagrass beds and beach dunes, and cultural treasures that played a significant role in Florida's history.
- Active management of state park resources is necessary to preserve the natural and cultural values for which they were acquired.



NATURAL RESOURCES

ACTIVITIES



- **Natural resources are actively managed using a variety of methods including:**
 - **Conducting prescribed burns.**
 - **Removing invasive exotic plants.**
 - **Restoring hydrologic flow.**
- **In FY 2024-25:**
 - **66,398 acres were treated with prescribed fire.**
 - **44,752 gross acres were treated to remove invasive exotic plants.**

PRESCRIBED FIRE

OVERVIEW



- Prescribed fire is a safe way to apply a natural process, restore ecosystem health, and reduce wildfire risk.



Before



During



After

ALLEN DAVID BROUSSARD CATFISH CREEK PRESERVE STATE PARK



Allen David Broussard Catfish Creek Preserve State Park

- Over 48 miles of fire line maintenance occurs at Allen David Broussard Catfish Creek Preserve State Park each year.
- This management ensures the park is able to safely implement prescribed burning on over 1,100 acres to improve wildlife habitat and restore native communities.

CULTURAL RESOURCES

ACTIVITIES



- Parks preserve and maintain sites that honor Florida's historic heritage.
- Visitors engage daily with these cultural resources, which include historic structures and archaeological sites.



Fort Clinch State Park

ORMAN HOUSE HISTORIC STATE PARK



- To protect the historic structure, the park:
 - Replaced the house's roof to address water intrusion.
 - Repaired foundational elements.
 - Replaced porch decking.
- Made ADA upgrades to the walkways and ramp to ensure access for all visitors.
- Restored historic elements inside and outside of the structure.

RESOURCE MANAGEMENT

FY 2025-26 FUNDING ALLOCATIONS



Honeymoon Island State Park

CATEGORY	ALLOCATION
Fire Management	\$1,254,000
Invasive Species Management	\$4,846,226
Natural Community Management	\$6,426,973
Land Management Equipment	\$1,218,940
Hydrological Restoration	\$503,861
Cultural Resource Management	\$4,750,000
TOTAL	\$19,000,000



THANK YOU

**For any questions contact:
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Alex.Cronin@FloridaDEP.gov
850-245-2092**

FWC Land Management



Senate Environment & Natural Resources Committee

December 2, 2025

Melissa Tucker, Director, Habitat and Species Conservation

Florida Fish and Wildlife Conservation Commission



Wildlife Management Area System

FWC Lead Areas

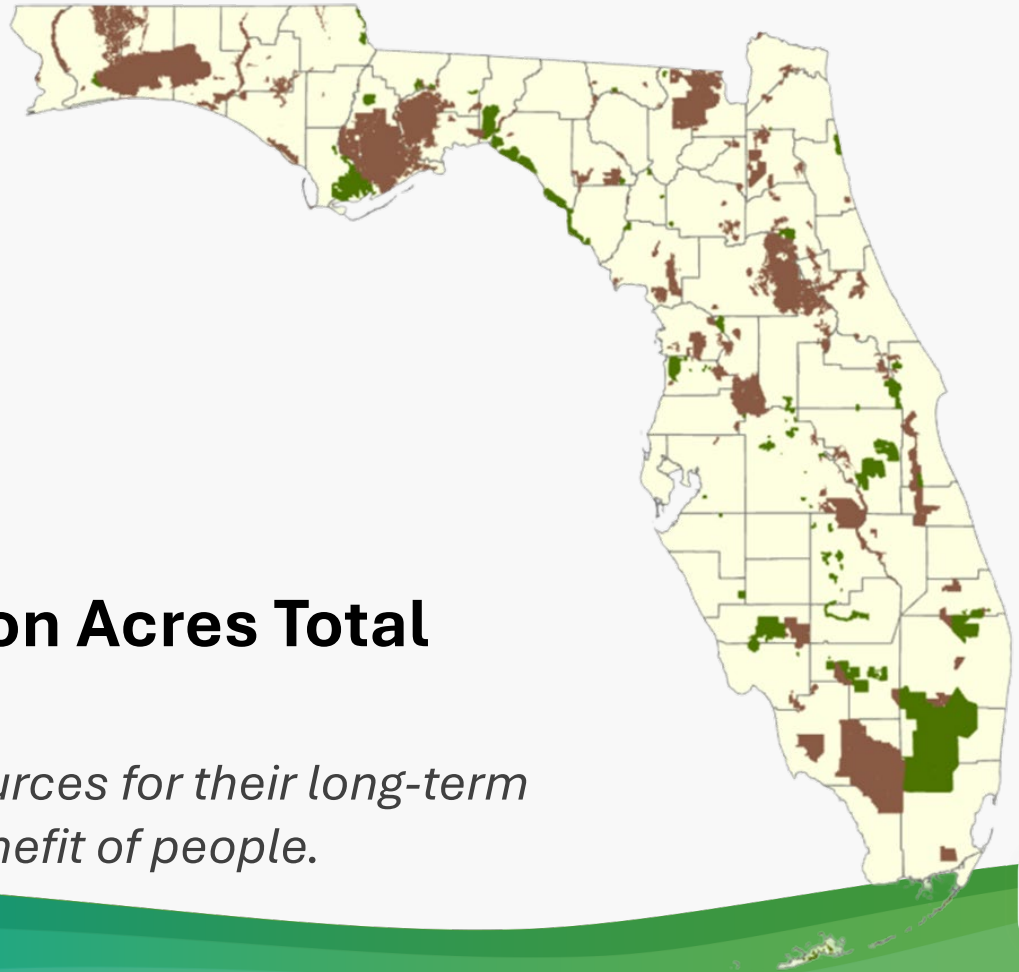
- 1.5 Million Acres
- 59 Areas

FWC Cooperative Areas

- 4.6 Million Acres
- 105 Areas

Over 6.1 Million Acres Total

Managing fish and wildlife resources for their long-term well-being and the benefit of people.



FWC's Land Management Approach

Lands must be managed to continue to have value to wildlife and people.

- Habitat Management
- Wildlife Management
- Ranch Management
- Public Use and Enjoyment



Habitat Management Priorities and Outcomes

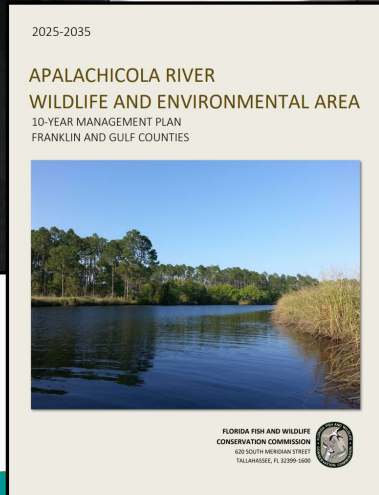
- Actions and priorities are identified in:
 - Management Plans
 - Wildlife Conservation Prioritization and Recovery Plans
 - Aquatic Habitat Restoration Plan
- Results are monitored using:
 - Objective-Based Vegetation Management
 - Land Management Reviews



Management Plan Process



- Guide actions for a 10-year period
- Input and guidance from
 - Legislature (Statutes and Code)
 - Public
 - Agencies and Local Governments
- Processes for input
 - Management Advisory Group
 - Public Hearing
- Review and approval through the Acquisition and Restoration Council

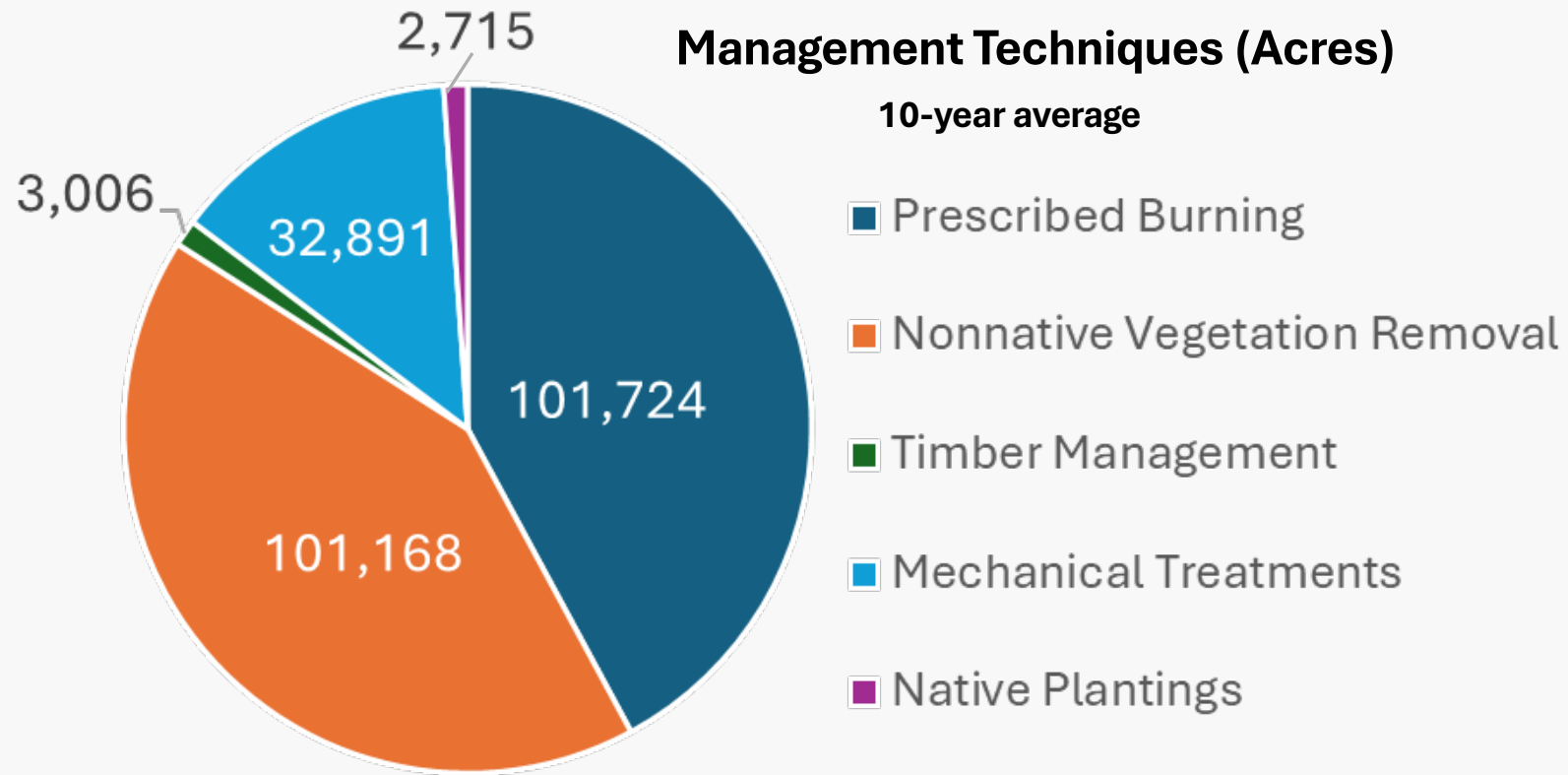


Land Management Reviews

- Conducted every 5 years
- Assess specific criteria
- Reviews involve:
 - A tour of the Wildlife Management Area (WMA)
 - An evaluation of the lands and a 10-year management plan
- FWC staff host land management reviews on WMAs
- FWC staff serve as review team members on lands managed by the Florida Department of Agriculture and Consumer Services and the Florida Department of Environmental Protection



Habitat Management on WMAs



Hydrological Restoration Projects



- Restore hydrological connections and functions
- Improve land management
- Prevent flooding
- Provide access

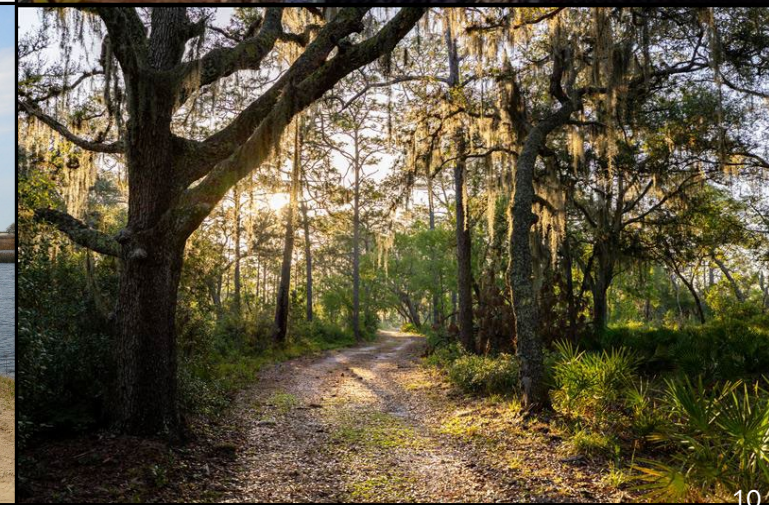
Wildlife Management

- Wildlife Conservation Prioritization and Recovery Program
 - Imperiled, game and nongame species
 - Focus on land management techniques
- Wildlife surveys and monitoring
 - Species-specific monitoring
 - Reintroductions and translocations
- Monitor for disease and parasites



Ranch Management

- 2,217 miles of roads
- 1,213 miles of trails
- Facilities occupying 1,556 acres



Public Use and Enjoyment

- Hunting
- Fishing
- Environmental Education
- Wildlife Watching
- Horseback Riding
- Paddling
- Photography
- Hiking
- Bicycling
- Camping



Public Use Infrastructure



Public Use and Economics

Lead WMAs were visited by the public over 1.4 million times during the 2024-25 fiscal year

Economic Benefit:

- More than \$144 million for lead areas
- Most important in rural communities
- Supports 123,061 jobs annually



How Management Activities Are Accomplished

- Core FWC staff
- Contractual services
- Volunteers and partners

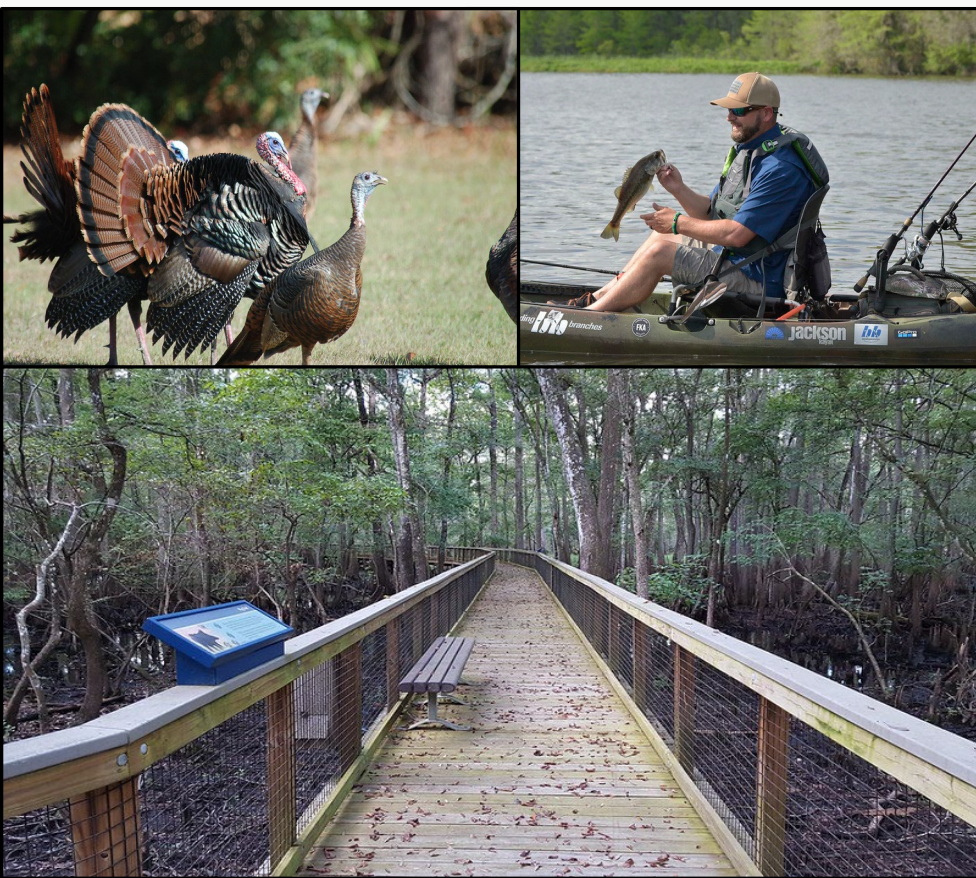


WMA Additions



- Nearly 90,000 acres added to FWC lead areas within the last 5 years
- Major additions and new areas:
 - Creek Ranch - 1,342 acres
 - Cypress Creek - 1,621 acres
 - Orange Hammock - 5,766 acres
 - St. Andrews Flatwoods - 10 acres
 - Telogia Creek - 12,424 acres

The Value of Wildlife Management Areas



- Ensure long-term well-being of fish and wildlife habitat and species
- Annual economic benefit: \$144M
- Ecosystem services
- Public access and enjoyment



Thank You

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Florida Forest Service

Land Management Overview

Rick Dolan

Director



**FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
COMMISSIONER WILTON SIMPSON**

Florida Forest Service

Mission Statement

To protect Florida and its people from the dangers of wildland fire and manage the forest resources through a stewardship ethic to assure they are available for future generations.



FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
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- 38 State Forests and 1 Ranch totaling over 1.2 million acres
- 6.7 million visitors in Fiscal Year 2024-25
- 302,579 tons of timber harvested for over \$4.24 million in revenue
- Total state lands derived revenue was \$7.11 million for FY 24-25



FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
COMMISSIONER WILTON SIMPSON

Florida Forest Service

FY 25/26 Project Highlights

- State Forest Land Management Equipment
- Road and Facility Enhancements
- Recreation Area Upgrades
- Invasive Species Eradication
- Reforestation Enhancement
- Habitat Restoration/RX Burning
- Boundary Marking, Surveying, and Forest Inventory



FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
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FY 25/26 Project Highlights



- **Road and Facility Enhancements**

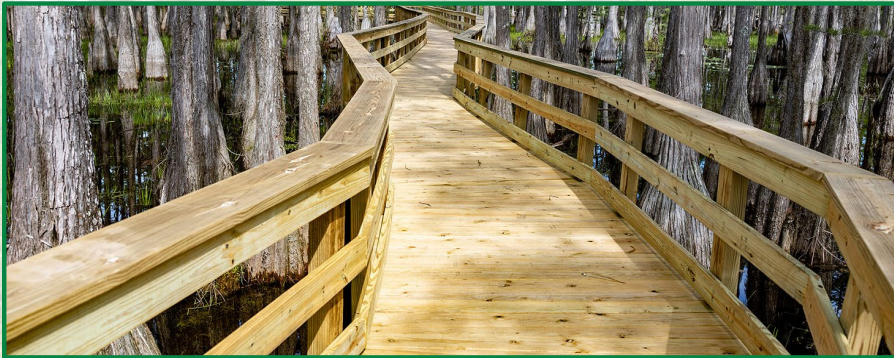
- Sandy Creek SF – Replace/Repair Roads & Culverts
- Cary SF – Overhaul 1.6 Miles of Primary Roads
- Goethe SF – Repair & Cap 2 Miles of Primary Roads
- Okaloacoochee Slough SF – Repair & Cap 3 Miles of Primary Roads



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FY 25/26 Project Highlights



- **Recreation Area Upgrades**

- Point Washington SF – Peach Creek Walking Bridge
- Lake Talquin SF – High Bluff Campground Bathhouse
- Myakka SF – Wetland Observation Platform



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FY 25/26 Project Highlights



- **Invasive Species Eradication**

- Withlacoochee SF – Treat 200 Acres of Cogon Grass
- Babcock Ranch – Treat 2,250 Acres of Melaleuca, Brazilian Pepper, Climbing Fern, and Cogon Grass
- Picayune Strand SF – Aerial Treatment of 2,291 Acres of Melaleuca



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FY 25/26 Project Highlights



- **Reforestation Enhancements**
 - 3,667 Acres of Reforestation Across 12 State Forests
 - 2,517,000 Tree Seedlings and 42,000 Wiregrass Plugs



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FY 25/26 Project Highlights



- **Habitat Restoration**

- Tates Hell SF – 915 Acres of Hazardous Fuel Reduction (Rx Burn Prep)
- Indian Lake SF – 200 Acres of Hardwood Understory Treatment
- Lake Wales Ridge SF – 58 Acres Ground Cover Restoration (Wire/Sawgrass)



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FY 25/26 Project Highlights



- **Boundary Marking & Surveying**

- Lake Talquin SF – Replace 4 Miles of Damaged/Destroyed Fence
- Jennings SF – Reestablish 4 Miles of Boundary Line
- Picayune Strand SF – Survey and Mark 12 Miles of Boundary



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Questions?



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