

## **Florida Fish and Wildlife Conservation Commission (FWC)**

### **Data Resources and References for the Multi-Use Corridors of Regional Economic Significance (M-CORES) Program**

At the request of the Florida Department of Transportation and for use during the task force meetings as part of the Multi-Use Corridors of Regional Economic Significance (M-CORES) Program, we are providing the following information and data resources for your consideration. Resources are hyperlinked throughout this document.

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#### Efficient Transportation Decision Making Environmental Screening Tool (EST)

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FWC staff routine work with FDOT staff through the Efficient Transportation Decision Making Environmental Screening Tool (EST). There are multiple data resources compiled with the EST, a subset of which FWC staff consult when reviewing transportation planning projects. The full data set list is included in the attached, with the data sets routinely used by FWC staff highlighted, specifically on pages 1-5, 8-11, 28-40.

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#### CLIP - the Critical Lands and Waters Identification Project

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CLIP is a GIS database of statewide conservation priorities for a broad range of natural resources, including biodiversity, landscape function, surface water, groundwater, and marine resources.

CLIP is being used to inform the FWC Cooperative Conservation Blueprint.

<https://www.fnai.org/clip.cfm>

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#### Florida Wildlife Conservation Guide (FWCG)

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A collaborative online resource developed to inform effective land use planning, site assessments, and project designs to assist in the conservation of wildlife in Florida

The Florida Wildlife Conservation Guide's information and collection of resources about habitat and species found in Florida. The included natural history details, survey protocols, regulatory requirements, and management considerations can help users consider habitat and wildlife impacts when undertaking various land use planning processes.

<https://myfwc.com/conservation/value/fwcg/>

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#### FWCG Conservation and Development Planning

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With information on existing habitats and potential wildlife presence, a well-informed decision can be made about whether onsite assessments should be conducted to determine the likelihood and actual presence of protected wildlife. After the actual presence/absence of species is determined, options can be evaluated for avoiding or minimizing impacts to wildlife during project design, or for the improvement of wildlife habitat. This chapter provides an overview of wildlife survey considerations, planning tools, conservation opportunities, and strategies that can be considered when planning projects.

- [Site-Specific Wildlife Assessments](#)
- [Conservation Planning](#)
- [Development Planning](#)

FWCG Conservation Planning

### **Conservation Easements and Land Acquisition**

Conservation easements are voluntary agreements between a landowner and a government agency or conservation organization. In the case of most conservation easements, landowners continue to own their property, yet they donate or sell specific land use rights to one of these organizations to achieve a mutually agreed conservation objective and to secure tax benefits or direct payments. Not all property is right for conservation easements or purchase by the State.

The State purchases private property for conservation that is within a project on an approved Florida Forever acquisition list. If private property is within an existing Florida Forever project, there are state funds available, and the landowner would like to sell, the landowner should contact the [Bureau of Real Estate Services](#) to discuss the acquisition process and to learn whether the State of Florida is able to pursue the land acquisition.

#### **Resources:**

[Conservation Easements](#) (UF/IFAS) – webpage which generally describes conservation easements and outlines various types of tax benefits which can be received from selling or donating conservation easements.

[Conservation Easements: Options for Preserving Current Land Uses](#) (UF/IFAS) – document detailing important elements for landowners to consider before entering into a conservation easement agreement.

[Evaluating Private Lands for Conservation of Wildlife](#) (UF/IFAS) - document identifying criteria such as size, location, connectivity, and human activity that should be considered when prioritizing areas for wildlife conservation.

[Agricultural Conservation Easement Program](#) (NRCS) – provides details of the financial and technical resources available to private landowners to help conserve agricultural lands and wetlands.

[Rural and Family Lands Program](#) – an agricultural land preservation program designed to protect important agricultural lands through the acquisition of permanent land conservation easements.

[Critical Lands and Water Identification Project \(CLIP\) Planning Data](#) - CLIP priorities can help show how a local property fits into a larger regional and statewide context in terms of conservation priorities

[Florida Forever](#) (FDEP) – list of the types and acreages of areas that the state has protected through its conservation and recreation lands acquisition program.

[Working to Sustain Florida's Rural and Natural Lands: A Call to Action](#) (1000 Friends of Florida) – report identifying elements of visioning and public policy, economic strategies, planning strategies, and citizen involvement which can help to protect Florida's rural and natural lands.

FWCG Development Planning

## Wetland, Riparian, and Wildlife Buffers

Riparian buffers are vegetated areas between development and rivers, streams, and wetlands to preserve water quality, reduce erosion and sedimentation, limit stormwater discharge, and provide wildlife habitat. Often in development planning, these buffer zones are only planned for the protection of water quality as required by a local government or state water management district. However, buffers that protect water quality may not be sufficient in size to protect wetland-dependent wildlife species. When planning for wetland buffers, considerations may need to be made for wetland-dependent wildlife and aquatic species home ranges and movement patterns.

Upland wildlife species also benefit from buffers between development and their nests, burrows, and other important habitats. In some instances, the incorporation of these buffers is required by law to prevent the “take” of listed species and must be maintained to receive a development permit.

### Resources:

[Planners Guide to Wetland Buffers for Local Governments](#) (Environmental Law Institute) – a guide that identifies current practices in the protection of wetland buffers by local governments, and provides information needed to manage land use and development in these areas.

[Creating Effective Local Riparian Buffer Ordinances](#) (University of Georgia) – resource for those considering establishing or improving riparian buffer ordinances, including planning, implementation, and enforcement.

[Buffers: An Efficient Tool for Watershed Protection](#) (USFWS) – A document describing the recommended buffer distance for protecting water resources and vulnerable species based on several studies.

[Riparian Buffer Width, Vegetative Cover, and Nitrogen Removal Effectiveness](#) (EPA) – research focused on the effectiveness of riparian buffers to improve water quality by removing access nitrogen from surface and ground waters.

[Silviculture Best Management Practices](#) (FFS) – protection of water resources from degradation and sedimentation that may result from forest operations.

[Conservation Measures and Permitting Guidelines](#) (FWC) - provide detailed and concise information regarding recommended buffers for state-threatened species.

## Erosion and Sediment Control Planning

Temporary and permanent methods are used on development sites for erosion control, revegetation, and bank stabilization. These practices are important for preventing the

impairment of natural waterbodies from sedimentation, yet certain erosion and sediment control practices can create hazards for wildlife. Erosion control products that use plastic netting can lead to the entanglement, injury and death of a variety of species including federally or state-listed reptiles and birds. Cost-competitive and wildlife-friendly alternatives are readily available, including coconut coir, straw, and jute. These alternatives are more wildlife-friendly in design because they use organic-based materials/fibers which biodegrade after accomplishing their purpose in comparison to synthetic plastics, which remain in place long after exceeding their utility.

To reduce wildlife entanglement and plastic debris resulting from erosion control and sediment stabilization, biodegradable alternatives such as jute or coir netting or loose straw can be used. This can be particularly beneficial near wetlands and natural areas with burrowing and ground wildlife. If plastic netting must be used, take steps to reduce its potential entanglement of wildlife by limiting its use to those sites most in need of erosion control, trimming loose netting during regular maintenance, and removing the netting when it is no longer needed. In addition, netting can have a loose-weave design with movable joints between the horizontal and vertical twines to allow the individual twines to move independently and wildlife to escape entanglement.

**Resources:**

[Erosion and Sediment Control Designer and Reviewer Manual](#) – technical manual which aids in the implementation of stormwater pollution prevention plans (SWPPPs) in Florida and contains specific information regarding acceptable alternatives to erosion control practices which use plastic netting.

[Guidelines for Use of Snake-Friendly Erosion Control Blankets](#) (NRCS) – factsheet which compares material and design alternatives for erosion and sediment control BMPs and provides recommendations for reducing wildlife impacts.

## Transportation Planning

Roadways are a necessary resource for people and goods to travel across the state. Informed decision making in the design, construction, and operation of roadways large and small can be used to help protect fish and wildlife and their habitats.

**Resources:**

[Environmental Review Toolkit](#) Federal Highway Administration (FHWA)] – resources available to improve roadway projects to be more wildlife friendly.

[Office of Environmental Management](#) (FDOT) – information regarding FDOT's environmental review process for planning, creating, and maintaining roadway projects.

[Pollinators and Roadsides: Best Management Practices](#) (FHWA) – strategies to improve roadside habitat for pollinators, including vegetation management, native plant information, and training resources.

[Transportation Planning](#) (USFWS) – policy and guidance to facilitate in transportation planning.

[Transportation Planning for Wildlife](#) (1000 Friends of Florida) – ideas to improve roadway projects for environmental and economic sustainability.

[Water, Wetlands, and Wildlife: Program Overview](#) (FHWA) – central source of information about incorporating natural environmental protection and enhancement into the transportation decision-making process.

### **Wildlife Crossing Design**

Wildlife crossings can be an especially important design component for reducing conflicts where roads cross important fish and wildlife habitats and travel corridors. It is important to develop long-term conservation goals for wildlife crossings upon implementation. Some of the primary purposes for crossings are to: maintain habitat connectivity within natural landscape linkages bisected by roadways; avoid habitat loss and degradation; reduce wildlife roadway mortality; promote genetic connectivity for the target wildlife species; and, maintain public safety.

There are numerous wildlife crossing designs to suit both aquatic and terrestrial species movement and habitat connectivity. Structure types include wildlife underpasses such as bridges extended over wetland, floodplains and natural areas, and enlarged box culverts, and drainage pipes under roadways. Wildlife overpasses are bridges designed to connect wildlife habitat and animal paths over a roadway. Appropriately designed fencing is also needed to exclude animals from the roadway and funnel them to the crossing structure. Signs to alert people of wildlife crossings can prevent car accidents in areas of heavy animal use and near underpass structures.

### **Resources:**

[Wildlife Crossing Guidelines](#) (FDOT) – guidelines developed for use by FDOT to evaluate the appropriateness of including wildlife crossings and associated features for proposed projects on the State Highway System or retrofit projects on the SHS

[Wildlife-vehicle Collision Reduction Study: Best Practices Manual](#) (USDOT FHWA) – a manual developed for practitioners responsible for addressing the problem of collisions between vehicles and wildlife.

[Ecological Corridors Minimal Standards and Design](#) (Pasco County) – a document containing language by the county government for required design standards, and typical engineering drawings, for wildlife crossings.

[Lake Jackson Culvert System Study](#) (Florida State University) – study investigating the effectiveness of drift fences around roadways to prevent road mortality of reptiles and amphibians.

[Wildlife Crossings Toolkit](#) (National Park Service) – information to assist in maintaining or restoring habitat connectivity across transportation infrastructure on public lands.

[Use of Highway Underpasses by Florida Panthers and Other Wildlife](#) (UF) – effectiveness of fencing and underpasses around I-75 to allow panther movement across the road while preventing road mortalities.

[Wildlife and Roads Decision Guide](#) – resource for mitigating the effects of roads on wildlife by constructing crossings such as overpasses, underpasses, and crosswalks.

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FWCG Site-Specific Wildlife Assessments

### **Wildlife Survey Planning Tools**

November 27, 2019  
Alston, FDOT

Collecting detailed maps of the site and surrounding areas is a key first-step in project planning. Aerial photos or satellite maps can provide a birds-eye view of the project and the surrounding area. These resources can help to determine the effort that will be required to adequately assess a site for potential wildlife occupancy.

[Florida Conservation Planning Atlas \(Peninsular Florida Landscape Conservation Cooperative\)](#) – is a data discovery and analytical platform for stakeholders throughout Florida which assists visualizing a site in the context of surrounding conservation assets (rare habitats, etc.) and conservation actions.

[Official Geographic Data Portal of the State of Florida](#) – a comprehensive resource of GIS and mapping data, including aerial imagery and base maps, throughout Florida.