

Indirect and Cumulative Effects Task Group

Natural Resource Subgroup Desired Resource Data and Standard Analyses

DATA NEEDS

EPA

Resources of Interest - Air Quality, Floodplains, Water Quality, and Wetlands

- Forest coverage
- Agricultural lands/ prime farmland
- Wetland permit data by COE District (Trend loss of wetlands by watershed/basin)
- NWI data
- Water quality data
 - 303(d) lists
 - 305(b) reports
 - STORNET
 - TMDL info
- 100-year floodplain
- Historical aerial photography
- Land use maps, land use plans
- Transportation data: including regional traffic data/trends
- Adopted long range transportation plans
- Transportation Improvement Program (TIP) for given metropolitan areas

USFWS

- FLUCCS /vegetation
- Soils
- Canopy cover
- Species assessment area (drainage basin)
- Coverages for each species regulated:
 - Florida panther
 - Scrub jay
 - Red cockaded woodpecker
 - Sand skink/bluetail mole skink
 - Audubon's crested caracara
- US Army Corps permits
- Development orders under the State of Florida's Developments of Regional Impact program Water Management District Environmental Resource Permits
- Adopted County Comprehensive Plan Amendments
- Zoning Amendments
- Planned Unit Developments

NMFS

Assessment areas would typically be estuaries (e.g. Tampa Bay, Charlotte Harbor, Pensacola Bay, Biscayne Bay, Mosquito Lagoon), or in the Florida Keys might be the reef tract.

Essential Fish Habitat (EFH) in Florida is a composite of habitats utilized by Federally-managed fish and invertebrate species on the Gulf and Atlantic sides of the state. It includes the waters and substrate necessary for spawning, feeding, breeding, and growth to maturity.

Because EFH is defined by a suite of species, rather than a single species, it covers pretty much all the coastal habitats of Florida that might be affected by FDOT projects from the near shore up to the point where tidal influence ends. Because of this, cumulative effects analyses for EFH would be habitat-based, rather than based on the potential distribution of a single species.

Categories of EFH include:

Categories Crucial to Conserve

Estuarine and marine emergent wetlands (i.e. saltmarsh): FLUCCS codes 642, 6421, 6422

Mangrove wetlands: already exists as a separate database in FGDL or FLUCCS code 612

Subtidal and intertidal flats: FLUCCS 651

Oyster Reefs: FLUCCS code 654

Submerged aquatic vegetation (i.e. seagrasses): already exists as a separate database in FGDL or FLUCCS codes 911, 9111, 9112, 9113

Coral reefs: already exists as a separate database in FGDL

Other Categories

Mud, sand, and shell bottoms

Algal communities

Live bottoms (i.e. hard bottoms colonized by sponges, soft corals, and other sessile invertebrates)

Estuarine and marine water column

Needed Data Sets

- Seagrass bed scar damage
- Saltmarsh
- Mangroves
- Wetlands
- Florida coral reefs, patches and platforms
- Sea turtle activity and sea turtle nests
- Florida artificial reefs
- Gulf sturgeon
- Johnson's seagrass critical habitat
- Land use (present and projected future)
- DRI's
- Ocean dredged material disposal sites
- FDEP mitigation banks
- Florida marine facilities
- National estuarine research reserves, sanctuaries, parks and seashores

- Environmentally sensitive shorelines
- Census data from FWC's Fisheries Independent Monitoring Program
- Current and historic aerial photography of regulated waters
- Threatened and endangered species regulated by the Service
- Historic data for habitat of animal species, seagrass, corals, essential fish habitat, etc.

FDEP

- Water quality and quantity (this would be pretty difficult to quantify)
- Recreation areas/public lands
- Wildlife and habitat areas
- Drainage Basins 1997
- Floodplains
- National Wetlands Inventory
- Wetlands – Derived from Land Use 2000
- Major Rivers of Florida
- Streams and Springs
- Sinkholes
- Mangroves
- Seagrasses
- FNAI Element Occurrence
- Outstanding Florida Waters
- Aquatic Preserves
- Surface Water Class Boundaries
- FEMA Flood Zones
- Specific Soils
- Drastic Coverage for the Floridan Aquifer, Intermediate Aquifer, and Surficial Aquifer
- Impaired Waters
- FDEP TMDLs for Listed Waters
- FNAI Managed Areas
- Florida Forever Lands
- Public Lands
- Existing Trails 2005
- Strategic Habitat and Conservation Areas 2000
- FNAI Habitat Conservation Priorities
- Greenways Ecological Priority Linkages
- Brownfield Location Boundaries
- Hazardous Material Sites 1997
- Superfund Sites
- DRIs
- 2000 Florida WMD Land Use and Land Cover
- Future Land Use North and South

- ERPpa, a Statewide coverage of Permit Application Tracking System (PA) for Environmental Resource Permits (ERPs) – *could be offline data set*
<http://appprod.dep.state.fl.us/parep/default.asp>
- Adopted Local Government Future Land Use Maps (FLUMs)

ACOE

Resources under purview: Waters of the United States (including wetlands) which may be subdivided by FLUCFCS or other unit classifier (floodplain wetlands, palustrine emergent, estuarine, etc)

Assessment area: watersheds defined by the US Army Corps of Engineers.

- USGS GIRAS
- USGS NLCD
- FLUCCS 1995
- FLUCCS 2000
- FLUCCS1
- SSURGO
- NWIP – National Wetland Inventory – Polygons
- NWIL – National Wetland Inventory - Lines
- Brownfields
- District Generalized Land Use (1-7)
- DRI
- Florida Forever BOT Projects 2005
- FLFIA – Florida Forest Inventory and Analysis
- FTRLUN – North Florida Future Land Use
- FTRLUS – South Florida Future Land Use
- LU95 – 1995 Florida WMD Land Use and Land Cover
- Mangroves – Florida Mangroves
- MJRIVP – Major Rivers of Florida - polygons
- PUBLICLAND – Public Lands – Subset of FNAIMA
- SENSHR – Florida’s Environmentally Sensitive Shorelines
- SPOWTR – Special Outstanding Florida Waters
- CORALN – Florida Coral Reefs
- CORALP – Florida Coral Patches
- CSTHAZ – Coastal Hazards
- EPADRDG – Ocean Dredged Material Disposal Sites
- FLNERR – Florida National Estuarine Research Reserves
- LU00 – 2000 Florida WMD Land Use and Land Cover
- NMARSA – National Marine Sanctuary
- NPS – National Parks and Seashores
- SGSCAR – Florida Sea Grass Bed Scar Damage
- WTLNDS95 – Wetlands – Derived from Land Use 1995

- WTLNDS_00 – Wetlands – Derived from Land Use 2000
- EPANPL – US EPA National Priority Sites From CERCLIS
- EPATRI – EPA Toxic Release Inventory
- HAZ97 – Hazardous Material Sites 1997
- PWRPLT – Power plant Locations
- SLDWST – Solid Waste Facilities
- SUPERFUND – Superfund Sites
- TOPO5 – Topography – 5 ft Contour Lines
- AGRICULTURE95 – Agriculture Land Cover 1995
- AGRICULTURE00 - Agriculture Land Cover 2000
- HY100P – USGS 1:100,000 Hydrography – Polygons
- HY24P – USGS 1:24,000 Hydrography – Polygons
- CEMMGT – Coastal Emergency Management Flood Data
- COAST – Florida Coastline including Estuaries and Tidal Rivers
- FEMA96 – FEMA Flood Insurance Rate Maps 1996
- SFHA – Special Flood Hazard Areas (Subset of FEMA96)
- BATHYM – Bathymetric Contours
- CELLUR – Registered Cellular Antenna Structure Locations
- RAILRD – Railway Lines, Sidings and Yards
- SEWTRT – Sewage Treatment Facilities
- TVBCST – Registered Television Broadcast Structure
- AQUAP – Florida Aquatic Preserve Boundaries
- WILDRIVER – Wild and Scenic Rivers
- RCHARG – Recharge Areas of the Floridian Aquifer (SWFWMD)
- SJSPGS – Springs within SJRWMD
- SPRINGS – First Magnitude Springs
- WATQUAL303D – Impaired waters
- WMDL – Water Management District Owned Lands
- GFCWET – FFWCC Priority Wetland Habitats
- CROCODILE_CH – American Crocodile Critical Habitat
- CS_SPARROW_CH – Cape Sable Sparrow Critical Habitat
- EAGLE_NESTS – Bald Eagle Nesting Territories
- FWCMA – Fish and Wildlife Conservation Commission Management Areas
- GFCHOT – FFWCC Biodiversity Hot Spots
- GSTGCH_M_FL_FNL – Gulf Sturgeon Critical Habitat
- HYDRIC – Hydric Soils – Subset of Specific Soils
- MANATEE – Florida Manatee Zones
- NESTS – Sea Turtle Nests 98-99
- NWRFLA – Florida National Wildlife Refuges
- OKALOOSA_DARTER_RANGE – Okaloosa Darter Sub Basins
- PANTHER_ZONES – Panther Zones
- PIPL – Piping Plover Critical
- PLSS - Perdido Key Beach Mouse Critical Habitat
- SNAIL_KITE_CH – Snail Kite Critical Habitat

- SNPL – Snowy Plover Critical Habitat
- STPARK – Florida State Parks
- Current and Historical Aerials
- Corps Regulatory Database Information (RAMS & ORM)
- All Available Local and Regional Planning Information
- Soils data
- Census data
- USACE permitting (FILL)
- FDEP & Water Management Permitting (FILL)
- National Land Cover Data (USGS)
- USGS Quads

SRWMD

- Wetlands
- Rivers
- Lakes
- Springs
- Canals/ditches
- Other surface waters
- Floodplains
- Sink holes, coastal and marine,
- Tributaries
- Recreational/public lands
- Water quality and quantity
- Special designations
- Assessment area: drainage basins/sub-basins, watersheds
- SRWMD Drainage Basins
- SRWMD District Lands
- SRWMD Permit points/boundaries
- ACOE and FDEP Permit points/boundaries
- Other agencies permit points/boundaries
- FEMA Maps
- River Miles
- 10 year and 100 year flood contour lines (SRWMD)
- Historic aerials: Landuse 1995, Landuse 2000, and current data

Additional data sets available at SRWMD:

- basins usgs (drainage basins)
- femadep24 (already on EST)
- SRWMD permit data set
- fp_fwsuw (floodway data of the rivers in SRWMD)
- fp_10yr (10 year flood data line of rivers in the SRWMD)
- fp_100yr (100 year flood data line – rivers in the SRWMD)

SJRWMD

The SJRWMD spatial data and resources information are available at <http://www.sjrwmd.com/programs/data.html>. Click on "Geographic Information Systems (GIS) maps and data." Go to "GIS Data," then "Download GIS Data." Scroll down to "Available GIS Data" and you will see the layers divided into categories - Basemap, Imagery, Index Map, Natural Resources, Planning, and Regulatory. Click on the GIFs to preview the layers, then download the data. Land use data are located under the Natural Resources category. Regionally Significant Habitats (developed from the statewide Gap Analysis project) are listed under Planning.

STANDARD ANALYSES

EPA

- Trend analysis: land use, water quality, change in floodplains
- Community comparative analysis: compare traffic, growth, development (quantity & type) of a similar past project location with similar variables and that similar transportation improvements made 10 years ago to the current proposed project area; look at land use changes and development that has occurred in the past location (corridor, community, etc.) and the effect on resources (both positive and negative), and then see if a comparative analysis can be made to the current project.

USFWS

- Qualification of each listed species that may occur in the project area
- Quantification of total acreage of habitat types in assessment area
- *Assessment areas would include county and defined resource area*

NMFS

- Loss of habitat of threatened and endangered species under the Service's purview
- Rate of habitat loss: compare historical and present map data
- Analysis depicting changes in the acreage (e.g. mangrove habitat) or numbers (e.g. smalltooth sawfish sightings) of the resource in question over time for the assessment area

FDEP

- Assessment area: depict as FDOT District(s), the Water Management District, the respective County, the drainage basin, the Hydrologic Unit Code (HUC) Basins, and/or the FDEP Ecosystem Management Areas.

ACOE

- Land Cover percentages to identify trends for analysis. This would include percentage of developed vs. undeveloped, overall percentage of wetlands, and percentage of wetland type (classification) within a given watershed.
- A preliminary desktop functional assessment of the watershed. The assessment would be similar in approach to the recognized functional assessment methodology currently utilized for individual project review. However, the purpose of the desktop assessment is to provide a pre-project inventory of the various classes, and conditions, of the aquatic resources in the watershed. The assessment will identify lower quality wetland areas within the watershed which may be better suited for the proposed action and also identify whether a particular watershed has the availability of compensatory mitigation to offset unavoidable and minimized proposed impacts. The lack of compensatory mitigation or within a given watershed may suggest the aquatic resources have reached their carrying capacity.
- Baseline cumulative Impact Analysis (Sample resource: hardwood floodplain resource)
- Evaluation/analysis between baseline and proposed project for potential effect upon sustainability of resource.
- Breakdown of data or identification, classification, and reduction to classes for change analysis (Palustrine hardwood wetlands within 1000 feet from a waterbody).

SRWMD

- Land use breakdowns over time using historic aerials and current data