

Ref #	Indicator	Metric(s) Monitored	Location (RECOVER Regions and/or Other Areas)
586	Alligators	Other - Reproductive effort; nest density and distribution; nest success/fate	SCS
213	American Crocodile		SWS
231	Crocodiles	Nest Success	SCS
232	Crocodiles	Nest Success - Nesting; spatial distribution	SCS
587	Crocodiles	Other - Juvenile Survival, Nest Success, Abundance	SCS
48	Exotic Fauna	Species Richness	All RECOVER Modules
589	Exotic Fauna	Other - Occupancy/detection	SCS
591	Exotic Fauna	Other - presence/absence	GE, SCS, Biscayne Bay
234	Exotic Fauna - Burmese Python	Species Abundance	SCS

396	Exotic Flora		All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
77	Fish	Species Abundance	SCS
79	Fish	Species Diversity	SCS
251	Fish	Density - Two fish species are followed routinely with abundance time series and analyses determining relationship to salinity and SAV (relationships to other water properties are also considered)	SCS

252	Fish	Species Abundance	Other - Florida Keys National Marine Sanctuary (south of the Southern Coastal System RECOVER region)
253	Fish	Species Abundance - reef fish diversity; distribution; size	Other - Florida's Coral Reef
598	Fish	Other - Relative density, community composition, distribution, and size structure	GE, SCS, Biscayne Bay
599	Fish	Other - Relative density, community composition, distribution, and size structure	GE, SCS, Biscayne Bay
600	Fish	Other - Relative density, community composition, distribution, and size structure	GE, SCS, Biscayne Bay
601	Fish	Other - Relative density, community composition, distribution, and size structure	GE, SCS, Biscayne Bay

602	Fish	Other - salinity, cond, water temp, depth, DO, pH, PAR, canopy height, abundance, occurrence, density	SCS - Biscayne Bay
603	Fish	Other - salinity, water temp, depth, DO, turbidity, habitat, water visibility, distribution, abundance	GE, SCS, Biscayne Bay
604	Fish	Other - salinity, water temp, depth, DO, turbidity, habitat, water visibility, distribution, abundance	GE, SCS, Biscayne Bay
605	Fish	Others - salinity, water temp, depth, DO, turbidity, habitat, water vis, distribution, abundance	GE, SCS, Biscayne Bay

606	Fish	Others - salinity, water temp, depth, DO, turbidity, habitat, water vis, distribution, abundance	GE, SCS, Biscayne Bay
608	Fish	Other - Relative density, relative frequency of occurrence, average size, and biological condition of adult spiny lobster	GE, SCS, Biscayne Bay
258	Fish - Smalltooth Sawfish	Species Abundance - Survey includes point measurements of water quality and habitat parameters at each sample site. All individual sawfish are assessed for health condition.	SCS, SWS (10,000 Islands)
81	Macroinvertebrates	Body Condition - Colony Size; Density; Recruitment	Other - Florida's Coral Reef
82	Macroinvertebrates	Percent Cover - Body condition; Colony Size; Abundance; Density; Diversity; Temperature	Other - Florida's Coral Reef

540	Macroinvertebrates	Species Diversity	SCS
607	Macroinvertebrates - Coral	Other - Percent cover, species diversity, community structure, rugosity, disease, bleaching, urchin presence	SCS
259	Macroinvertebrates - crustaceans; annelids; mollusks; echinoderms	Species Abundance	Other - Florida Keys National Marine Sanctuary (south of the Southern Coastal System RECOVER region)
260	Macroinvertebrates - Includes crabs and caridean and penaeid shrimp	Density - Pink shrimp ( <i>Farfantepenaeus</i> spp.) and one caridean taxon ( <i>Palaemon</i> ) are followed routinely with abundance time series and analyses determining relationships to salinity and seagrass (and other water properties).	SCS
610	Macroinvertebrates - Lobster	Other - Relative density, relative frequency of occurrence, average size, and biological condition of adult spiny lobster	GE, SCS, Biscayne Bay

611	Macroinvertebrates - Lobster	Other - Relative density, relative frequency of occurrence, average size, and biological condition of adult spiny lobster	GE, SCS, Biscayne Bay
329	Other - Bull sharks	Other - Body condition; distribution; relative density	GE, SCS
405	Other - Depth	Depth	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
410	Other - Dissolved Oxygen	Dissolved Oxygen	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
263	Other - eDNA Biodiversity	Species Diversity - chlorophyll a; nutrients; ocean acidification; eDNA; temperature; salinity	NE, SCS, SWS, Florida Keys
615	Other - Fire	Other - mapping outermost perimeter of fires	GE, SCS, Everglades National Park
727	Other - fish movement/ residence time in coastal lakes	Other - % time spent in lakes via tags acoustic receivers	SCS - West and Seven Palm chains of lakes

618	Other - Fish, SAV, water depth, water temp, water salinity	Other - Hydrology (depth, salinity, temp), SAV, aquatic prey/fishes, Roseate Spoonbill foraging	SCS - Florida Bay
620	Other - Fish; Exotic fauna; Macroinvertebrates; Water quality; Water depth; salinity; water depth; water quality; SAV	Other - Body Condition; Depth; Dissolved Oxygen; Percent Cover; Recruitment; Species Abundance; Species Diversity; Species Richness; Temperature	SCS
302	Other - Flow	Other	SCS
303	Other - Flow	Other	SCS
339	Other - Hydrologic connectivity	Other - Groundwater temperature, dissolved oxygen, salinity, discharge, velocity	GE, SCS
725	Other - lakes water/nutrient budgets	Other - groundwater-surface water exchange; nutrient conc.	SCS - West and Seven Palm chains of lakes
341	Other - Litter	Other - litter decomposition	GE, SCS



722	Other - marsh vegetation; soils	Other - species; density; biomass; soil nutrients, pH, % OC, salinity	SCS - 11 platforms Taylor Slough, C111 Basin, Model Lands
343	Other - Microbes	Other - bacterial abundance, biomass, productivity	GE, SCS
345	Other - Microbes	Other - community composition	GE, SCS
347	Other - Net ecosystem metabolism	Other	GE, SCS
417	Other - Nutrients	Nutrients	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
721	Other - nutrients; salinity	Other - concentrations/ stoichiometry	SCS - 11 platforms Taylor Slough, C111 Basin, Model Lands

349	Other - Organic matter	Other - particulate organic matter	GE, SCS
424	Other - Percent Cover	Percent Cover	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
430	Other - Phosphorus	Phosphorus	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
351	Other - Plankton pigment	Other - pigment concentrations	GE, SCS
726	Other - prey base for snook, tarpon in coastal lakes	Other - fish isotopic signatures	SCS - West and Seven Palm chains of lakes
728	Other - salinity; phytoplankton; water quality	Other - phosphorus; dissolved oxygen; CDOM; other nutrients	SCS - Everglades National Park

353	Other - Sawgrass, mangrove, seagrass	Other - aboveground biomass productivity	GE, SCS
355	Other - Soil	Other - porewater chemistry, nutrients and salinity	GE, SCS
357	Other - Soil	Other - soil chemistry	GE, SCS

359	Other - Soil elevation	Other	GE, SCS
624	Other - Soil Surface Elevation	Other - Soil accretion, erosion, hydrology	GE, SCS, Biscayne Bay
625	Other - Soil Surface Elevation	Other - Soil accretion, erosion, hydrology	GE, SCS, Biscayne Bay
437	Other - Species Abundance	Species Abundance	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
444	Other - Species Diversity	Species Diversity	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.

361	Other - Surface water chemistry	Other - salinity, dissolved and total nutrients, total carbon	GE, SCS
450	Other - Temperature	Temperature	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
723	Other - wetland hydrology, precipitation	Other - water depth; precip amount	SCS - 11 platforms Taylor Slough, C111 Basin, Model Lands
724	Other - wetland porewater salinity, nutrients	Other - PSU; nutrient conc.	SCS - 11 platforms Taylor Slough, C111 Basin, Model Lands
150	Other - White-crowned pigeon	Other - nesting	SCS

363	Periphyton	Other - Accumulation rates	GE, SCS
271	Phytoplankton	Density - chlorophyll a; nutrients; ocean acidification; eDNA; temperature; salinity	NE, SCS, SWS, Florida Keys
457	Phytoplankton	Other	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
628	Phytoplankton	Other - Water temp, dissolved oxygen, salinity, pH, turbidity, chlorophyll a, and dissolved organic matter.	SCS
629	Phytoplankton	Other - Water temp, dissolved oxygen, salinity, pH, turbidity, chlorophyll a, dissolved organic matter, secchi, TP, TN, TOC, NH4, NO2, SRP,	SCS
272	Phytoplankton - chlorophyll a	Density	SCS
306	Salinity	Other	SCS
307	Salinity	Other	SCS
463	Salinity	Other	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.

541	Salinity	Depth	SCS
542	Salinity	Depth	SCS
543	Salinity	Depth	SCS
544	Salinity	Depth - water level	SCS
545	Salinity	Other - Salinity	SCS
546	Salinity	Other - Salinity via temperature; conductivity	SCS

547	Salinity	Other - Salinity; Flow	SCS
548	Salinity	Other - Specific conductivity; surface water level; flow (water velocity)	SCS
549	Salinity	Temperature	SCS
550	Salinity	Temperature	SCS
551	Salinity	Temperature	SCS
552	Salinity	Temperature	SCS



553	Salinity	Temperature - Salinity	SCS
630	Salinity	Other - salinity, cond, water temp, depth	SCS
631	Salinity	Other - salinity, cond, water temp, depth, DO, turbidity	SCS - Biscayne Bay
661	Salinity	Other - Precipitation	SCS - Biscayne Bay Aquatic Preserves
662	Salinity	Other - Salinity	Kristin Jacobs Coral Reef Ecosystem Conservation Area (Coral ECA)

273	Salinity - Other water properties	Temperature	SCS
162	SAV	Percent Cover - Species Abundance; Species Diversity; Species Richness; Water Depth; Sediment Depth; Leaf Morphometrics; PAR; pH; DO; Temperature; Braun-Blanquet Score; Turtle grass Reproduction; Epiphyte Biomass; Salinity	SCS
163	SAV	Percent Cover - Species Abundance; Species Diversity; Species Richness; Water Depth; Sediment Depth; Leaf Morphometrics; PAR; pH; DO; Temperature; Braun-Blanquet Score; Turtle grass Reproduction; Epiphyte Biomass; Salinity; Shoot Density; Above/Belowground Biomass	SCS
187	SAV	Density	SCS

188	SAV	Density	SWS
469	SAV	Other	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.
554	SAV	Canopy Height	SCS
555	SAV	Dissolved Oxygen	SCS
556	SAV	Other - Distribution	SCS

557	SAV	Other - Distribution	SCS
558	SAV	Other - SAV distribution; sediment/bottom type; sediment depth, conductivity	SCS
559	SAV	Percent Cover	SCS
560	SAV	Percent Cover	SCS
561	SAV	Percent Cover	SCS
562	SAV	Species Abundance	SCS

563	SAV	Species Diversity	SCS
564	SAV	Species Richness	SCS
565	SAV	Temperature	SCS
634	SAV	Other - Health, distribution and spp	GE, SCS, Biscayne Bay
635	SAV	Other - Health, distribution and spp	GE, SCS, Biscayne Bay
636	SAV	Other - salinity, cond, water temp, depth, DO, pH, PAR, canopy height, percent cover, occurrence, abundance	SCS - Biscayne Bay

720	SAV	Other - species abundance; distribution; composition; PAR; water depth; sediment depth; temperature; salinity; pH; % dissolved oxygen	SCS
637	SAV - Queen conch	Other - Percent cover, community composition of SAV (including invasive species); presence of conch	SCS
665	Seagrass	Other - Density, abundance, & frequency, isotope analysis on seagrass to look at C, N, and P ratios	Florida Keys Aquatic Preserves
373	Vegetation	Other - Calcareous marine macroalgae biomass and abundance	Other - Florida Bay
477	Vegetation	Other	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.

639	Vegetation	Other - Determination of ecotonal boundary using remote sensing and ground truth measurements	SCS
641	Vegetation	Other - species richness, species-specific cover and constancy, species-specific woody stem seedling/sapling counts, tree (greater than 5 centimeters [1.97 inches (in)]) diameter at breast height (DBH), site conditions and environmental covariates	SCS
644	Wading Birds	Other - Active nest counts via photo interpretation	SCS
646	Wading Birds	Other - Colony nesting locations and nesting numbers by species, monthly overall status by species, and overall outcome by species (via monthly or more frequent aerial surveys)	SCS
647	Wading Birds	Other - Nesting location, nesting success, and foraging locations. Hydrology and prey monitoring added to several Florida Bay island ponds	SCS

666	Wading Birds	Colony Size	SCS - Biscayne Bay Aquatic Preserves
277	Water Depth	Other	SCS
384	Water Depth	Depth	GE, SCS
483	Water Depth	Depth	GE, LO, SCS, SWS
485	Water Depth	Depth	SCS, SWS
491	Water Depth	Other	All RECOVER Modules and SFWMD North of Lake Okeechobee, Kissimmee and Caloosahatchee basins.



667	Water Depth	Depth	SCS - Biscayne Bay Aquatic Preserves
278	Water Quality	Dissolved Oxygen	SCS
281	Water Quality	Dissolved Oxygen - chlorophyll a; nutrients; ocean acidification; eDNA; temperature; salinity	NE, SCS, SWS, Florida Keys
282	Water Quality	Nutrients	SCS
285	Water Quality	Nutrients - chlorophyll a; dissolved oxygen; ocean acidification; eDNA; temperature; salinity	NE, SCS, SWS, Florida Keys
286	Water Quality	Other	SCS
289	Water Quality	Phosphorus - chlorophyll a; nutrients; ocean acidification; eDNA; temperature; salinity	NE, SCS, SWS, Florida Keys
292	Water Quality	Temperature - chlorophyll a; nutrients; ocean acidification; eDNA; temperature; salinity	NE, SCS, SWS, Florida Keys

293	Water Quality	Temperature - Depth	Other - Florida Keys National Marine Sanctuary (south of the Southern Coastal System RECOVER region)
294	Water Quality	Temperature - photomosaics; ocean acidification; nutrients; bioerosion	Other - Florida Keys National Marine Sanctuary (Cheeca Rocks)
390	Water Quality	Other - Surface water dissolved organic matter	GE, SCS
495	Water Quality	Dissolved Oxygen	GE, LO, SCS, SWS
651	Water Quality	Temperature	SCS

668	Water Quality	Dissolved Oxygen	SCS - Biscayne Bay Aquatic Preserves
669	Water Quality	Nutrients	Other - Kristin Jacobs Coral Reef Ecosystem Conservation Area (Coral ECA)
670	Water Quality	Nutrients	SCS - Biscayne Bay Aquatic Preserves
671	Water Quality	Other - ODO, conductivity, salinity, temperature, pH, turbidity, chl-a, and depth	Other - Florida Keys National Marine Sanctuary and Florida Keys Aquatic Preserves
672	Water Quality	Other - Secchi Depth	Kristin Jacobs Coral Reef Ecosystem Conservation Area (Coral ECA)
673	Water Quality	Other - total suspended solids	Kristin Jacobs Coral Reef Ecosystem Conservation Area (Coral ECA)

674	Water Quality	Other - Turbidity	Kristin Jacobs Coral Reef Ecosystem Conservation Area (Coral ECA)
675	Water Quality	Phosphorus	SCS - Biscayne Bay Aquatic Preserves
310	Wildlife - sea turtles and terrapins	Other - nesting trends, movements, etc	SCS

Description of Monitoring	Monitoring Objectives	Connection to CERP Purpose, Goals, and Objectives	Monitoring Frequency
Annual Alligator Systematic Reconnaissance Flights to determine nesting effort, distribution, and success.	Conduct long term, landscape level monitoring of trends in alligator reproduction and relate findings to changing hydrologic conditions.	High	wet season
		High	
Crocodile nesting surveys at Crocodile Lake National Wildlife Refuge.	To assess status of Federally listed American crocodiles occurring on refuge	Moderate	annually - April to September
Crocodile nesting surveys at FPL Turkey Point.	Document nesting and spatial distribution of crocodiles within the Cooling Canal System.	High	annually - April to September
American Crocodiles		High	annually
Opportunistic observations of nonnative wildlife.	The FWC (via FWC staff observations and the public observations via the Exotic Species Hotline) on collaboration with the University of Georgia's EddMAPs (IveGot1 application) record opportunistic observations of nonnative wildlife throughout the state of Florida. Both entities share data.	Moderate	daily
Monitoring invasive exotic plants (Corridors of Invasiveness) in EVER, BISC, and BICY	To detect newly emerging invasive plant species in the National Parks of South Florida along the most likely routes, or "corridors of invasiveness" (i.e., trails, roadways, campgrounds, and boat launches).	Moderate	annually
Lionfish distributions	Lionfish distributions and removal	Low/none	
GPS tracking through use of collared Virginia opossums. Pythons that eat collared opossums can be located and captured for euthanization.	To locate pythons within the refuge in order to capture and euthanize. The control of pythons is needed because predation by pythons is a threat to wildlife occurring at the refuge.	Moderate	daily

<p>Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).</p>	<p>Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.</p>	<p>Moderate</p>	<p>other - Two events</p>
<p>Fish communities are monitored using multiple net types (21.3-m seine, 183-m seine, 6.1-m otter trawl)</p>	<p>These are some of the first data collected of their kind in the Southern Coastal Systems. The measurable objective of this project is to document fish communities in areas where habitats may be altered as freshwater flows change in the Everglades.</p>	<p>High</p>	<p>biannually - dry season/wet season</p>
<p>Fish communities are monitored using multiple net types (21.3-m seine, 183-m seine, 6.1-m otter trawl)</p>	<p>These are some of the first data collected of their kind in the Southern Coastal Systems. The measurable objective of this project is to document fish communities in areas where habitats may be altered as freshwater flows change in the Everglades.</p>	<p>High</p>	<p>biannually - dry season/wet season</p>
<p>Monitoring and assessment of the small forage fishes that live primarily in the seagrass beds is twice yearly, wet season and dry season, at 47 sites within close proximity to shore (i.e., about 50 meters) between Shoal Point and Turkey Point. Sampling is with a solid aluminum 1-square-meter throw-trap with a heavy bar and weighted chain on short net skirt at the base and a net cover at the top to prevent escapement in water deeper than trap height, 45 inches (1.143 meters). Contents are removed with a sweep net of K55 mesh fit to the trap interior and T pulled four times across the bottom.</p>	<p>Objectives are to acquire information, including time series data, with which to select indicators, create performance measures and indices, determine influencing factors, and monitor the system to determine effectiveness of restoration efforts, as implemented and to check the system for possible indications of a need to modify plans to correct or improve performance.</p>	<p>High</p>	

Mission: Iconic Reefs (M:IR) Restoration Site Monitoring	Evaluate changes to coral reef function as a result of M:IR restoration. M:IR monitoring and research includes the evaluation of restoration actions (e.g., coral outplanting and introduction of herbivorous invertebrates), as well as actions taken prior to restoration implementation (e.g., site preparation). M:IR monitoring and research is being conducted at all seven M:IR reefs and will occur throughout all of the reef habitats, including within specific Restoration Monitoring Areas (RMAs) and Control Areas (CAs).	Low/none	annually
National Coral Reef Monitoring Program	This program is a strategic framework for conducting sustained observations of biological, climatic, and socioeconomic indicators in U.S. states and territories. The resulting data provide a robust picture of the condition of U.S. coral reef ecosystems and the communities connected to them.	Low/none	other - Every 2 years.
Documents trends in reef fish abundance, community composition, distribution, and size structure.	Documents trends in reef fish abundance, community composition, distribution, and size structure.	High	other - biennially
Documents trends in reef fish abundance, community composition, distribution, and size structure.	Documents trends in reef fish abundance, community composition, distribution, and size structure.	High	other - biennially
NCRMP/RVC reef fish in BISC and DRTO	Documents trends in reef fish abundance, community composition, distribution, and size structure.	High	other - biennially
NCRMP/RVC reef fish in BISC and DRTO	Documents trends in reef fish abundance, community composition, distribution, and size structure.	High	other - biennially

47 SAV-associated fish and invertebrate epifaunal communities IBBEAM	1) compare past and present SAV-associated epifauna (fish and invertebrate assemblages) to determine status and trends and enable before-after CERP comparisons 2) quantify key relationships with salinity (and other habitat variables) for the diversity, distribution, and abundance of epifauna 3) formulate appropriate performance measures and targets to assess the effectiveness of CERP projects and assist with adaptive management. 4) execute special analyses using IBBEAM tools to help evaluate CERP operations.	High	biannually - dry season/wet season
1) compare past and present and mangrove-associated fishes to determine status and trends and enable before-after CERP comparisons	1) compare past and present and mangrove-associated fishes to determine status and trends and enable before-after CERP comparisons	High	biannually - dry season/wet season
57 mangrove-associated fishes along the nearshore habitats of western Biscayne Bay IBBEAM	1) compare past and present and mangrove-associated fishes to determine status and trends and enable before-after CERP comparisons 2) quantify key relationships with salinity (and other habitat variables) for the diversity, distribution, and abundance of mangrove-shoreline fishes 3) formulate appropriate performance measures and targets to assess the effectiveness of CERP projects and assist with adaptive management. 4) execute special analyses using IBBEAM tools to help evaluate CERP operations.	High	biannually - dry season/wet season
1) compare past and present and mangrove-associated fishes to determine status and trends and enable before-after CERP comparisons	1) compare past and present and mangrove-associated fishes to determine status and trends and enable before-after CERP comparisons	High	biannually - dry season/wet season



57 mangrove-associated fishes along the nearshore habitats of western Biscayne Bay IBBEAM	<p>1) compare past and present and mangrove-associated fishes to determine status and trends and enable before-after CERP comparisons</p> <p>2) quantify key relationships with salinity (and other habitat variables) for the diversity, distribution, and abundance of mangrove-shoreline fishes</p> <p>3) formulate appropriate performance measures and targets to assess the effectiveness of CERP projects and assist with adaptive management.</p> <p>4) execute special analyses using IBBEAM tools to help evaluate CERP operations.</p>	High	biannually - dry season/wet season
Provide an understanding of current conditions and trends for adult Caribbean spiny lobster in the network's parks.	Provide an understanding of current conditions and trends for adult Caribbean spiny lobster in the network's parks.	High	other - Every 4 years; rotate among BISC, DRTO, VIIS, BUIS/SARI
Long-term smalltooth sawfish monitoring surveys in south Florida	Tracking population abundance of an endangered species in response to management decisions aimed at restoring the population	High	quarterly
The Disturbance Response Monitoring (DRM) program is a multi-partner effort that documents the extent and severity of coral bleaching and disease (including stony coral tissue loss disease) along the reef tract.	<p>(1) Assess coral bleaching and disease prevalence along the reef tract during the months of peak thermal stress (August through October)</p> <p>(2) Conduct 1 juvenile abundance assessment of the coral families most heavily impacted by SCTLD</p> <p>(3) Assess the remaining population of SCTLD susceptible species in areas previously effected by the disease</p>	Low/none	annually
The Coral Reef Evaluation and Monitoring Project (CREMP) tracks changes in coral reef communities at >70 fixed stations from Martin County to the Dry Tortugas, excluding Biscayne National Park and the Marquesas using a camera survey, which collects percent cover information, and demographic surveys, which collect data on coral population abundance and condition.	<p>Monitor changes in coral populations</p> <p>(1) Photographic Transects for Estimating Benthic Cover &amp; Coral Demographic Surveys</p> <p>(2) Octocoral Demographic Surveys</p>	Low/none	annually

Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.	The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.	High	biannually - dry season/wet season
Monitoring coral reef communities in DRTO and BISC	1) Determine whether percent cover of major taxonomic groups (e.g. coral, algae [turf, calcareous, macroalgae], gorgonians, sponge, substrate), coral species diversity, coral community structure, and rugosity are changing through time within selected coral reef sites; 2)Track trends and severity in reef-associated covariates such as coral bleaching, coral disease and presence of the herbivorous sea urchin, <i>Diadema antillarum</i> .	High	annually
Mission: Iconic Reefs (M:IR) Restoration Site Monitoring	Evaluate changes to coral reef function as a result of M:IR restoration. M:IR monitoring and research includes the evaluation of restoration actions (e.g., coral outplanting and introduction of herbivorous invertebrates), as well as actions taken prior to restoration implementation (e.g., site preparation). M:IR monitoring and research is being conducted at all seven M:IR reefs and will occur throughout all of the reef habitats, including within specific Restoration Monitoring Areas (RMAs) and Control Areas (CAs).	Low/none	annually
The seagrass faunal community monitored in IBBEAM includes crabs and caridean and penaeid shrimps. These are captured in the same throw-trap samples with the small forage fish.	Objectives are to acquire information, including time series data, with which to select indicators, create performance measures and indices, determine influencing factors, and monitor the system to determine effectiveness of restoration efforts, as implemented and to check the system for possible indications of a need to modify plans to correct or improve performance.	High	
Monitoring lobster populations in BISC and DRTO	Provide an understanding of current conditions and trends for adult Caribbean spiny lobster in the network's parks.	High	other - Every 4 years; rotate among BISC, DRTO, VIIS, BUIS/SARI

Monitoring lobster populations in BISC and DRTO	Provide an understanding of current conditions and trends for adult Caribbean spiny lobster in the network's parks.	High	other - Every 4 years; rotate among BISC, DRTO, VIIS, BUIS/SARI
Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Low/none	other - continuously
Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).	Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.	Moderate	other - Different for every waterbody segment (WBID). Typically 5-6 events annually for 2 - 5 years.
Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).	Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.	Moderate	other - Different for every waterbody segment (WBID). Typically 5-6 events annually for 2 - 5 years.
Monitoring of water quality and other chemistry and biodiversity metrics in the Florida Keys and southwest Florida shelf	To determine how Everglades restoration affects water quality in the nearshore and downstream FKNMS. Also, systematically measure oceanographic conditions and water quality in areas where red tide frequently blooms	High	other - every other
Fire perimeter mapping	To track and record fire occurrence on the landscape	Moderate	other - as fires occur
Florida Bay Trophic Dynamics and Habitat Use	Evaluate restoration effect on environmental/habitat quality and use	High	

Physical and Ecological Parameter Monitoring at Coastal Mangrove Wetland Sites in Northeastern Florida Bay. A long-term study that has examined the interaction between the hydrology (depth, salinity, temperature), submerged aquatic vegetation (SAV), prey base fishes, and Roseate Spoonbills within the mangrove ecosystems of northeastern Florida Bay and southern Biscayne Bay	Examining the interaction between the hydrology (depth, salinity, temperature), submerged aquatic vegetation (SAV), prey base fishes, and Roseate Spoonbills within the mangrove ecosystems of northeastern Florida Bay and southern Biscayne Bay.	High	other - Hourly hydro data, Bi-monthly SAV, fish/prey samples 8x/year
Assessment of marine fish and macroinvertebrates throughout Everglades National Park including Florida Bay, Whitewater Bay, and west coast river systems. Species abundance, size class, and distribution are primary metrics; water quality, benthic composition, and mercury analysis are secondary.	Evaluate marine fish and macroinvertebrate community composition with Wet (October) and Dry (April) season sampling using FWC's FIM statewide protocols.	High	biannually
Monitoring along the northeast coastline of Florida Bay.		High	other - 15 minute time-series
Monitoring along the southwest coast of ENP.		High	other - 15 minute time-series
Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		High	other - minute
Florida Bay Lakes Eco-Hydrology	Evaluate hydrology change and SLR effects on groundwater interactions and nutrient budgets	High	
Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Moderate	other - periodically

C-111 Ecological Monitoring- sample network	Evaluate restoration effects on marsh health, species composition	High	
Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Moderate	monthly
Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Moderate	quarterly
Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Moderate	other - minute
Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).	Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.	Moderate	other - Different for every waterbody segment (WBID). Typically 5-6 events annually for 2 - 5 years.
C-111 Ecological Monitoring- sample network	Evaluate restoration effects on wetland salinity, nutrient loads to Florida Bay	High	

Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Moderate	monthly
Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).	Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.	Moderate	other - Two events
Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).	Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.	Moderate	other - Different for every waterbody segment (WBID). Typically 5-6 events annually for 2 - 5 years.
Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Moderate	monthly
Florida Bay Trophic Dynamics and Habitat Use	Evaluate restoration effects on prey-base quality	High	
Florida Bay freshwater, nutrient, phytoplankton mapping	Map and maintain up to date water quality data of spatial and temporal hydrologic conditions to monitor/examine 1) changes to the Florida Bay ecosystem, 2) document/evaluate restoration efforts, 3) conditions preceding, following, and/or coinciding with any ecological/ environmental events (e.g., seagrass die-offs, hurricanes, emergency water releases) on the bay.	High	

<p>Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.</p>		<p>High</p>	<p>other - annually, bimonthly</p>
<p>Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.</p>		<p>Moderate</p>	<p>annually</p>
<p>Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.</p>		<p>Moderate</p>	<p>annually</p>

<p>Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.</p>		High	annually
<p>Soil Surface Elevation Tables (SETs) periodic monitoring to see if soil accretion keeps up with environmental factors</p>	<p>The objective is to monitor rates of soil accretion and erosion to determine if soil processes are keeping pace with the rate of relative sea level rise.</p>	High	biannually
<p>Soil Surface Elevation Tables (SETs) periodic monitoring to see if soil accretion keeps up with environmental factors</p>	<p>The objective is to monitor rates of soil accretion and erosion to determine if soil processes are keeping pace with the rate of relative sea level rise.</p>	High	biannually
<p>Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).</p>	<p>Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.</p>	Moderate	other - Two events
<p>Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).</p>	<p>Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.</p>	Moderate	other - Two events



<p>Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.</p>		High	other - 3-5 days, monthly
<p>Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).</p>	<p>Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.</p>	Low/none	other - Different for every waterbody segment (WBID). Typically 5-6 events annually for 2 - 5 years.
<p>C-111 Ecological Monitoring- sample network</p>	<p>Evaluate restoration effects on wetland hydrology</p>	High	
<p>C-111 Ecological Monitoring- transects</p>	<p>Evaluate hydrology and SLR effects on wetland soils and groundwater salinity</p>	High	
<p>Nesting surveys.</p>	<p>Collect nesting data for the state-Threatened white-crowned pigeon on the northern Key Largo area near Florida Bay.</p>	Low/none	other - depends on area surveyed

Periphyton accumulation rates are measured bimonthly at Florida Coastal Everglades Long Term Ecological Research sites in Shark River Slough, Taylor Slough, and Florida Bay. See data package(s) linked in Comments column for more detailed description.		High	other - bimonthly
Monitoring of water quality and other chemistry and biodiversity metrics in the Florida Keys and southwest Florida shelf	To determine how Everglades restoration affects water quality in the nearshore and downstream FKNMS. Also, systematically measure oceanographic conditions and water quality in areas where red tide frequently blooms	High	other - every other month
Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).	Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.	Moderate	other - 4 events, quarterly for 3 consecutive years.
Water quality monitoring network consists of instrumentation deployed in Garfield Bight, Terrapin Bay, Buoy Key, Whipray keys, Johnson Key, and Peterson Keys.	Objectives are to document changing water quality conditions within the bay with an emphasis on phytoplankton blooms.	High	other - Every 30 minutes
Monitoring of algal blooms across Florida Bay	Provide a snapshot of various water quality parameters across Florida Bay (77 sites) describing bloom intensity and spatial distribution	High	other - Every other month
Monitoring Water Quality in the Government Cut Inlet Contributing Area of Biscayne Bay	Determine if water quality is degrading around Government Cut and what might be responsible for this degradation	High	biweekly
Monitoring along the northeast coastline of Florida Bay.		High	other - 15 minute time-series
Monitoring along the southwest coast of ENP.		High	other - 15 minute time-series
Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).	Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.	High	other - Different for every waterbody segment (WBID). Typically 5-6 events annually for 2 - 5 years.

Demersal fishes are monitored to determine prey base fish abundance, diversity, and distribution in mangrove wetlands in 6 mainland dwarf mangrove habitats in southern Biscayne Bay and Florida Bay.	Monitoring objectives are to assess relationships and identify linkages between water levels, salinity, SAVs, and prey based fish communities.	High	hourly
Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.	The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.	High	other - 15-min intervals
Hydrological and water quality are monitored to evaluate Everglades restoration in the Ten Thousand Islands area of Florida at Pumpkin River, Faka Union Canal, and East River and to monitor the manatee mitigation feature associated with PSRP.	The monitoring objectives are to describe the hydrodynamic characteristics and the temporal and spatial salinity variability in Ten Thousand Islands. And monitor the salinity and temperature conditions of the water column in the manatee mitigation feature.	High	dry season - winter months (November- April)
Hydrological and water quality are monitored to evaluate Everglades restoration in the Ten Thousand Islands area of Florida at Pumpkin River, Faka Union Canal, and East River and to monitor the manatee mitigation feature associated with PSRP.	The monitoring objectives are to describe the hydrodynamic characteristics and the temporal and spatial salinity variability in Ten Thousand Islands. And monitor the salinity and temperature conditions of the water column in the manatee mitigation feature.	High	hourly
Demersal fishes are monitored to determine prey base fish abundance, diversity, and distribution in mangrove wetlands in 6 mainland dwarf mangrove habitats in southern Biscayne Bay and Florida Bay.	Monitoring objectives are to assess relationships and identify linkages between water levels, salinity, SAVs, and prey based fish communities.	High	hourly
Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.	The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.	High	other - 15-min intervals

Hydrological and water quality are monitored to evaluate Everglades restoration in the Ten Thousand Islands area of Florida at Pumpkin River, Faka Union Canal, and East River and to monitor the manatee mitigation feature associated with PSRP.	The monitoring objectives are to describe the hydrodynamic characteristics and the temporal and spatial salinity variability in Ten Thousand Islands. And monitor the salinity and temperature conditions of the water column in the manatee mitigation feature.	High	hourly
Hydrological conditions are monitored along major flow paths from the Everglades wetlands to the southern coastal estuaries to establish baseline hydrological conditions and provide information on the freshwater-saltwater interface.	Measuring hydrological conditions in the major flow paths from the Everglades to the southern coastal estuaries provides real-time data along coastal transects of the coastal zone of ENP between the Everglades transitional zone and mangrove areas of Florida Bay and the southwest coast.	High	other - 15-min intervals
Demersal fishes are monitored to determine prey base fish abundance, diversity, and distribution in mangrove wetlands in 6 mainland dwarf mangrove habitats in southern Biscayne Bay and Florida Bay.	Monitoring objectives are to assess relationships and identify linkages between water levels, salinity, SAVs, and prey based fish communities.	High	hourly
Hydrological conditions are monitored along major flow paths from the Everglades wetlands to the southern coastal estuaries to establish baseline hydrological conditions and provide information on the freshwater-saltwater interface.	Measuring hydrological conditions in the major flow paths from the Everglades to the southern coastal estuaries provides real-time data along coastal transects of the coastal zone of ENP between the Everglades transitional zone and mangrove areas of Florida Bay and the southwest coast.	High	other - 15-min intervals
Hydrological and water quality are monitored to evaluate Everglades restoration in the Ten Thousand Islands area of Florida at Pumpkin River, Faka Union Canal, and East River and to monitor the manatee mitigation feature associated with PSRP.	The monitoring objectives are to describe the hydrodynamic characteristics and the temporal and spatial salinity variability in Ten Thousand Islands. And monitor the salinity and temperature conditions of the water column in the manatee mitigation feature.	High	dry season - winter months (November- April)
Hydrological and water quality are monitored to evaluate Everglades restoration in the Ten Thousand Islands area of Florida at Pumpkin River, Faka Union Canal, and East River and to monitor the manatee mitigation feature associated with PSRP.	The monitoring objectives are to describe the hydrodynamic characteristics and the temporal and spatial salinity variability in Ten Thousand Islands. And monitor the salinity and temperature conditions of the water column in the manatee mitigation feature.	High	hourly

<p>Juvenile spotted seatrout and other economically valuable sportfish abundance is monitored in West Basin, Rankin, Basin, Whipray Basin, and Crocodile Dragover of the Florida Bay coastal environment.</p>	<p>Larval and juvenile seatrout densities and frequencies of occurrence are monitored to determine correlations and relationships with environmental parameters collected (e.g., seagrass, temperature, and salinity) to assess Everglades restoration of functional Florida Bay for nursery habitat.</p>	<p>High</p>	<p>monthly - May through November</p>
<p>27 Water quality monitoring sites deployed in Biscayne Bay, Card Sound, Barnes Sound and Manatee Bay.</p>	<p>Objectives are to document changing salinity and other parameters conditions</p>	<p>High</p>	<p>other - Every 15 minutes</p>
<p>17 IBBEAM Water quality monitoring sites deployed along the western shoreline in Biscayne Bay</p>	<p>1) compare past and present salinity regimes to determine status and trends and enable before-after CERP comparisons  2) quantify key relationships with salinity  3) formulate appropriate performance measures and targets to assess the effectiveness of CERP projects and assist with adaptive management.  4) execute special analyses using IBBEAM tools to help evaluate CERP operations.</p>	<p>High</p>	<p>other - Every 15 minutes</p>
<p>Discrete and continuous water quality monitoring occurs. For the discrete program 23 sites are monitored monthly. The Continuous program has 8 YSI data sondes placed through the bay and take data every 15 min. In addition to water quality monitoring BBAP does semi annual SAV monitoring in 35 sites in the bay. Lastly, BBAP does monthly bird rookery monitoring in the Northern Bay.</p>	<p>Monitor and track changes in bay health.</p>	<p>High</p>	
<p>Salinity, nutrients, turbidity, and other water quality parameters are monitored monthly at targeted inlet and ocean outfall sites and random reef sites.</p>	<p>The goal is to identify both the constituents and impacts of land-based sources of pollution (LBSP) on coral reef ecosystems, and to provide water quality data to resource managers to make effective and informed decisions regarding the amount of LBSP reaching estuarine and marine ecosystems.</p>	<p>Moderate</p>	

<p>Water properties recorded every 15 minutes continuous, year around, at 17 data sonde sites in western nearshore Biscayne Bay between Shoal Point and Turkey Point</p>	<p>Objectives are to acquire information, including time series data, with which to select indicators, create performance measures and indices, determine influencing factors, and monitor the system to determine effectiveness of restoration efforts, as implemented and to check the system for possible indications of a need to modify plans to correct or improve performance.</p>	<p>High</p>	
<p>Annual: Florida Bay Fisheries Habitat Assessment Program (FHAP) provides an assessment of the distribution and status of vegetated fisheries habitats (seagrasses and macroalgae) in Florida Bay.</p>	<p>(1) further develop an understanding of the relationships among salinity, water quality and seagrass and macroalgal species distribution and abundance in south Florida, (2) provide data to separate anthropogenically induced changes from natural ecosystem variation, and (3) verify model predictions on species- and ecosystem-level responses to system perturbations.</p>	<p>High</p>	<p>annually</p>
<p>Biannual Permanent Transects: Florida Bay Fisheries Habitat Assessment Program (FHAP) provides an assessment of the distribution and status of vegetated fisheries habitats (seagrasses and macroalgae) in Florida Bay.</p>	<p>(1) further develop an understanding of the relationships among salinity, water quality and seagrass and macroalgal species distribution and abundance in south Florida, (2) provide data to separate anthropogenically induced changes from natural ecosystem variation, and (3) verify model predictions on species- and ecosystem-level responses to system perturbations.</p>	<p>High</p>	<p>Other - wet season and dry season</p>
<p>Seagrass seascape state, stability, and function in relation to water quality in Biscayne Bay</p>	<p>1) Quantify the spatiotemporal patterns of the state and stability of seagrass seascapes, 2) Quantify the relationship between seagrass seascape state and stability and seagrass function, and 3) Determine the relationship between water quality and seagrass seascape state, stability, and function</p>	<p>High</p>	

<p>Provide a greater understanding of effects of Caloosahatchee River Estuary (CRE) discharges on large areas of offshore benthic habitats by combining improved quantitative analyses of existing data (simulation modeling) with benthic nutrient flux and monitoring focused on both biotic and physicochemical aspects of the ecosystem.</p>	<p>Map the distribution and species composition of offshore soft bottom (including Halophila and macroalgae) and hard bottom (including corals) offshore; determine whether the biota of offshore communities are more adapted to oligotrophic conditions than those closer to shore; determine whether microbial and macrobenthic diversity increase with distance from the Caloosahatchee; and determine the response of offshore benthic communities to seasonal periods of high CRE discharge.</p>	<p>High</p>	
<p>Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).</p>	<p>Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.</p>	<p>Moderate</p>	<p>other - Two events</p>
<p>Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.</p>	<p>The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.</p>	<p>High</p>	<p>biannually - dry season/wet season</p>
<p>Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.</p> <p>Demersal fishes are monitored to determine prey base fish abundance, diversity, and distribution in mangrove wetlands in 6 mainland dwarf mangrove habitats in southern Biscayne Bay and Florida Bay.</p>	<p>The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.</p> <p>Monitoring objectives are to assess relationships and identify linkages between water levels, salinity, SAVs, and prey based fish communities.</p>	<p>High</p>	<p>biannually - dry season/wet season</p> <p>other - bimonthly (July, Sept, Nov, Jan, Mar, May)</p>

<p>Juvenile spotted seatrout and other economically valuable sportfish abundance is monitored in West Basin, Rankin, Basin, Whipray Basin, and Crocodile Dragover of the Florida Bay coastal environment.</p>	<p>Larval and juvenile seatrout densities and frequencies of occurrence are monitored to determine correlations and relationships with environmental parameters collected (e.g., seagrass, temperature, and salinity) to assess Everglades restoration of functional Florida Bay for nursery habitat.</p>	<p>High</p>	<p>monthly - May through November</p>
<p>Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.</p>	<p>The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.</p>	<p>High</p>	<p>biannually - dry season/wet season</p>
<p>Demersal fishes are monitored to determine prey base fish abundance, diversity, and distribution in mangrove wetlands in 6 mainland dwarf mangrove habitats in southern Biscayne Bay and Florida Bay.</p>	<p>Monitoring objectives are to assess relationships and identify linkages between water levels, salinity, SAVs, and prey based fish communities.</p>	<p>High</p>	<p>other - bimonthly (July, Sept, Nov, Jan, Mar, May)</p>
<p>Juvenile spotted seatrout and other economically valuable sportfish abundance is monitored in West Basin, Rankin, Basin, Whipray Basin, and Crocodile Dragover of the Florida Bay coastal environment.</p>	<p>Larval and juvenile seatrout densities and frequencies of occurrence are monitored to determine correlations and relationships with environmental parameters collected (e.g., seagrass, temperature, and salinity) to assess Everglades restoration of functional Florida Bay for nursery habitat.</p>	<p>High</p>	<p>monthly - May through November</p>
<p>Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.</p>	<p>The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.</p>	<p>High</p>	<p>biannually - dry season/wet season</p>
<p>Demersal fishes are monitored to determine prey base fish abundance, diversity, and distribution in mangrove wetlands in 6 mainland dwarf mangrove habitats in southern Biscayne Bay and Florida Bay.</p>	<p>Monitoring objectives are to assess relationships and identify linkages between water levels, salinity, SAVs, and prey based fish communities.</p>	<p>High</p>	<p>other - bimonthly - July, Sept, Nov, Jan, Mar, May</p>



Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.	The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.	High	biannually - dry season/wet season
Juvenile spotted seatrout and other economically valuable sportfish abundance is monitored in West Basin, Rankin, Basin, Whipray Basin, and Crocodile Dragover of the Florida Bay coastal environment.	Larval and juvenile seatrout densities and frequencies of occurrence are monitored to determine correlations and relationships with environmental parameters collected (e.g., seagrass, temperature, and salinity) to assess Everglades restoration of functional Florida Bay for nursery habitat.	High	monthly - May through November
Salinity and biota (SAV and fish and epifauna communities) are monitored in the shallow waters near south-central Biscayne Bay's western shore from Shoal Point to Turkey Point.	The monitoring objectives are to measure SAV, fish, and faunal communities along with water conditions/properties provides seasonal and spatial characterizations of salinity regimes and the biotic assemblages in the nearshore of south-central Biscayne Bay and relate biotic assemblages to salinities.	High	biannually - dry season/wet season
Seagrass Focused Condition Assessment (FCA) evaluate the health and distribution of seagrass	Seagrass Focused Condition Assessment (FCA) evaluate the health and distribution of seagrass	High	other
Seagrass Focused Condition Assessment (FCA) evaluate the health and distribution of seagrass	Seagrass Focused Condition Assessment (FCA) evaluate the health and distribution of seagrass	High	other
47 SAV communities IBBEAM	1) compare past and present SAV communities to determine status and trends and enable before-after CERP comparisons 2) quantify key relationships with salinity (and other habitat variables) for the diversity, distribution, and abundance of SAV 3) formulate appropriate performance measures and targets to assess the effectiveness of CERP projects and assist with adaptive management. 4) execute special analyses using IBBEAM tools to help evaluate CERP operations.	High	biannually - dry season/wet season

Fish Habitat Assessment Program (FHAP)	1) develop an understanding of the relationships among water quality parameters (e.g., salinity, water clarity, nutrient levels) and seagrass species distribution and abundance in south Florida, 2) provide baseline data for parsing anthropogenically induced changes from natural system variation, and 3) help verify model predictions on species and ecosystem-level responses to water quality changes associated with CERP	High	
Monitoring seagrass communities in DRTO and BISC	1) Monitor trends in seagrass cover, community composition and the presence of invasive exotic species within mapped seagrass habitat in network parks.; 2) Determine presence of queen conch within study sites.	High	other - Every 3 years
Other	Seagrass monitoring provides us with a baseline of resources found within LKAP; necessary for proper long term management and management plans. Isotope analysis coupled with water quality data helps to paints a picture of true ecosystem health for both short and long-term management planning.	Moderate	
Macroalgae biomass and abundance are measured at Florida Coastal Everglades Long Term Ecological Research sites in Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Moderate	other - bimonthly
Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).	Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.	Moderate	other - Two events

Monitoring mangrove-marsh ecotone in BICY and EVER	1) Determine the spatial and temporal movement of the mangrove-marsh ecotone at systematically selected segments. 2) Document the composition of vegetation communities at field verification locations. Collect vegetation data, e.g., composition, percent cover and canopy height of dominant species within herbaceous, shrub, and forest strata, in order to document composition of vegetation communities on both the “mangrove” and “marsh” sides of the ecotone.	High	other - Every 10 years as new imagery is available
Forest monitoring of hardwood hammocks, cypress, mangroves, and pineland forest, in BISC, BICY, and EVER	Detecting change in forest vegetation community structure and composition	High	every 5 years
Monitoring colonial birds in BISC	Determine the status and trends in colony size, distribution, and active nests of colonial nesting birds	High	monthly
Monitoring Florida Bay islands for nesting wading birds, Bald Eagle, Osprey, and Brown Pelican.	Monitor numbers of nesting pairs, timing of nesting, location of nesting, and nesting outcome	High	dry season - monthly
Using Satellite/Cellular Tracking of Roseate Spoonbills to Assess Ecological Changes in Coastal Habitats of Taylor Slough and C-111 Basin Due to Sea Level Rise	By repeating a 2005-2006 Roseate Spoonbill tracking project, Audubon hopes to gain information on how sea level rise has affected their traditional area of use on an ecological scale and how this indicator species is adapting to the changes. In combination with Audubon's prey and vegetation monitoring program in the mangrove ecotone, the findings will have implications on how restoration success is evaluated within the southern coastal and estuarine areas of EVER.	High	dry season - annually

<p>Discrete and continuous water quality monitoring occurs. For the discrete program 23 sites are monitored monthly. The Continuous program has 8 YSI data sondes placed through the bay and take data every 15 min. In addition to water quality monitoring BBAP does semi annual SAV monitoring in 35 sites in the bay. Lastly, BBAP does monthly bird rookery monitoring in the Northern Bay.</p>	<p>Monitor and track changes in bay health.</p>	<p>Moderate</p>	
<p>Water properties recorded every 15 minutes continuously, year around, at 17 data sonde sites in western nearshore Biscayne Bay between Shoal Point and Turkey Point</p>	<p>Objectives are to describe continuous levels and variability of salinity, temperature, and water depth in the very nearshore area between Shoal point and Turkey Point and to acquire salinity data to use to develop salinity-based indicators of restoration progress in CERP and BBCW.</p>	<p>High</p>	
<p>Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.</p>		<p>High</p>	<p>other - minute</p>
<p>A statewide probabilistic water quality monitoring network that collects samples from lakes, rivers, streams, canals, confined and unconfined aquifers.</p>		<p>High</p>	
<p>A trend monitoring network examining long-term changes consisting of fixed stations based on USGS drainage basins.</p>		<p>High</p>	
<p>Surface water chemistry and biological monitoring for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code). These data are used to assess the waterbody health and for those waterbodies that are verified as impaired, provides data used to develop Total Maximum Daily Loads (TMDLs) and evaluate implementation of Basin Management Action Plans (BMAPs).</p>	<p>Meet data sufficiency for Impaired Waters Rule (Chapter 62-303, Florida Administrative Code) and EPA CWA Section 303(d) surface water assessments. Meets data sufficiency for Total Maximum Daily Loads (TMDLs) development in impaired waterbody segments.</p>	<p>Moderate</p>	<p>other - Different for every waterbody segment (WBID). Typically 5-6 events annually for 2 - 5 years.</p>

Discrete and continuous water quality monitoring occurs. For the discrete program 23 sites are monitored monthly. The Continuous program has 8 YSI data sondes placed through the bay and take data every 15 min. In addition to water quality monitoring BBAP does semi annual SAV monitoring in 35 sites in the bay. Lastly, BBAP does monthly bird rookery monitoring in the Northern Bay.	Monitor and track changes in bay health.	Moderate	
Monitoring Water Quality in the Government Cut Inlet Contributing Area of Biscayne Bay	Determine if water quality is degrading around Government Cut and what might be responsible for this degradation	Moderate	biweekly
Monitoring of water quality and other chemistry and biodiversity metrics in the Florida Keys and southwest Florida shelf	To determine how Everglades restoration affects water quality in the nearshore and downstream FKNMS. Also, systematically measure oceanographic conditions and water quality in areas where red tide frequently blooms	Moderate	other - every other month
Monitoring Water Quality in the Government Cut Inlet Contributing Area of Biscayne Bay	Determine if water quality is degrading around Government Cut and what might be responsible for this degradation	Moderate	biweekly
Monitoring of water quality and other chemistry and biodiversity metrics in the Florida Keys and southwest Florida shelf	To determine how Everglades restoration affects water quality in the nearshore and downstream FKNMS. Also, systematically measure oceanographic conditions and water quality in areas where red tide frequently blooms	Moderate	other - every other month
Point measurement of water properties at each of 47 biological sampling sites on each sampling visit (dry season and wet season)		Moderate	
Monitoring of water quality and other chemistry and biodiversity metrics in the Florida Keys and southwest Florida shelf	To determine how Everglades restoration affects water quality in the nearshore and downstream FKNMS. Also, systematically measure oceanographic conditions and water quality in areas where red tide frequently blooms	Moderate	other - every other month
Monitoring of water quality and other chemistry and biodiversity metrics in the Florida Keys and southwest Florida shelf	To determine how Everglades restoration affects water quality in the nearshore and downstream FKNMS. Also, systematically measure oceanographic conditions and water quality in areas where red tide frequently blooms	Moderate	other - every other month

Continuous bottom temperature measurements along coral reefs in the Florida Keys.	Document bottom seawater temperatures in strategic areas of the Florida Reef Tract to understand conditions on the sea floor that are indicative of actual environmental exposures for benthic organisms.	Moderate	other - Every 2 hours.
National Coral Reef Monitoring Program	To determine how climate change is affecting Florida Keys coral reefs	Moderate	monthly - some parameters are measured every 15-minutes, other - s are monthly, and other - s are annual.
Since 2000, the Florida Coastal Everglades Long Term Ecological Research program has monitored 14 core sites across Shark River Slough, Taylor Slough/Panhandle, and Florida Bay in Everglades National Park. See data package(s) linked in Comments column for more detailed description.		Moderate	monthly
A statewide probabilistic water quality monitoring network that collects samples from lakes, rivers, streams, canals, confined and unconfined aquifers.		Low/none	
Monitoring coral reef water temperature in DRTO and BISC	1) Determine occurrence, duration, and depth of warm and cold water events that exceed thresholds known to cause stress (e.g., coral bleaching) to coral species; 2) Assess any correlations of warm water events and/or cold water events with coral bleaching and/or disease outbreaks	Moderate	hourly

<p>Discrete and continuous water quality monitoring occurs. For the discrete program 23 sites are monitored monthly. The Continuous program has 8 YSI data sondes placed through the bay and take data every 15 min. In addition to water quality monitoring BBAP does semi annual SAV monitoring in 35 sites in the bay. Lastly, BBAP does monthly bird rookery monitoring in the Northern Bay.</p>	<p>Monitor and track changes in bay health.</p>	<p>Moderate</p>	
<p>Salinity, nutrients, turbidity, and other water quality parameters are monitored monthly at targeted inlet and ocean outfall sites and random reef sites.</p>	<p>The goal is to identify both the constituents and impacts of land-based sources of pollution (LBSP) on coral reef ecosystems, and to provide water quality data to resource managers to make effective and informed decisions regarding the amount of LBSP reaching estuarine and marine ecosystems.</p>	<p>Moderate</p>	
<p>Discrete and continuous water quality monitoring occurs. For the discrete program 23 sites are monitored monthly. The Continuous program has 8 YSI data sondes placed through the bay and take data every 15 min. In addition to water quality monitoring BBAP does semi annual SAV monitoring in 35 sites in the bay. Lastly, BBAP does monthly bird rookery monitoring in the Northern Bay.</p>	<p>Monitor and track changes in bay health.</p>	<p>Moderate</p>	
<p>WQ monitoring throughout the Keys, data sondes monitor continuously to observe both long term and daily WQ changes. Grab samples are used to observe WQ in areas most likely experiencing anthropogenic affects</p>	<p>One of the publics biggest concerns and top priorities in the FL Keys is WQ, grab samples are taken within the halo-zone or in areas of high boater/swimmer activity, continuous data sonde monitoring allows us daily data that can be used for long-term management planning and emergent action if noticeable decline is observed</p>	<p>Low/none</p>	
<p>Salinity, nutrients, turbidity, and other water quality parameters are monitored monthly at targeted inlet and ocean outfall sites and random reef sites.</p>	<p>The goal is to identify both the constituents and impacts of land-based sources of pollution (LBSP) on coral reef ecosystems, and to provide water quality data to resource managers to make effective and informed decisions regarding the amount of LBSP reaching estuarine and marine ecosystems.</p>	<p>Low/none</p>	
<p>Salinity, nutrients, turbidity, and other water quality parameters are monitored monthly at targeted inlet and ocean outfall sites and random reef sites.</p>	<p>The goal is to identify both the constituents and impacts of land-based sources of pollution (LBSP) on coral reef ecosystems, and to provide water quality data to resource managers to make effective and informed decisions regarding the amount of LBSP reaching estuarine and marine ecosystems.</p>	<p>Low/none</p>	

<p>Salinity, nutrients, turbidity, and other water quality parameters are monitored monthly at targeted inlet and ocean outfall sites and random reef sites.</p>	<p>The goal is to identify both the constituents and impacts of land-based sources of pollution (LBSP) on coral reef ecosystems, and to provide water quality data to resource managers to make effective and informed decisions regarding the amount of LBSP reaching estuarine and marine ecosystems.</p>	<p>Low/none</p>	
<p>Discrete and continuous water quality monitoring occurs. For the discrete program 23 sites are monitored monthly. The Continuous program has 8 YSI data sondes placed through the bay and take data every 15 min. In addition to water quality monitoring BBAP does semi annual SAV monitoring in 35 sites in the bay. Lastly, BBAP does monthly bird rookery monitoring in the Northern Bay.</p>	<p>Monitor and track changes in bay health.</p>	<p>Moderate</p>	
<p>Habitat use of threatened and endangered sea turtles and Diamondback terrapins in the Greater Everglades</p>	<p>Quantitatively determine patterns of sea turtle habitat use inside and outside of protected area boundaries;</p>	<p>Low/none</p>	<p>biannually - nesting season - spring</p>



Start Date	End Date	To be Monitored in the Future?	Comments	Tribe/Agency
1985	Present	Yes		NPS-SFNRC
			No formal monitoring at this time, just keeping an eye on a nesting location	
	Present	Funds Dependent	Data collected at Crocodile Lake National Wildlife Refuge, Key Largo, Florida.	USFWS
2019	Present	Yes	FPL's Turkey Point Power Plant and adjacent Everglades Mitigation Bank near Homestead, Florida (Latitude 25.433057° Longitude -80.335430°). Mitigation and conservation measure agreed to by FPL as listed in project description of Service's biological opinion to the U.S. Nuclear Regulatory Commission dated July 25, 2019 for license renewal of Units 3 and 4 at the Turkey Point Power Plant.	USFWS/FPL
	Present	Yes	Relation to CERP and/or RECOVER: Juvenile Crocodiles are a southern coastal systems indicator	NPS-SFNRC
	Present	Yes		FWC
2011	Present	Yes		NPS SFCN
		Yes		NPS Biscayne National Park/UM
	Present	Funds Dependent		USFWS

2002	Present	Yes	Lake Condition index (LVI) per DEP SOP LVI 1000 and DEP SOP LVI 2000, in lakes. <a href="https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes">https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes</a>	FDEP/DEAR
2020	2024	Funds Dependent	Not currently used as a RECOVER performance measure. Sampling occurs in April and October in Florida Bay, Whitewater Bay, Shark River, Broad River, and Lostmans River.	FWC
2020	2024	Funds Dependent	Not currently used as a RECOVER performance measure. Sampling occurs in April and October in Florida Bay, Whitewater Bay, Shark River, Broad River, and Lostmans River.	FWC
				NOAA/NMFS

2022	present	Yes	There are three major M:IR monitoring themes. These include 1) M:IR monitoring complementary to ongoing monitoring efforts that span the Florida reef tract, 2) M:IR-specific monitoring at permanent fixed sites in RMAs and CAs, and 3) M:IR monitoring by restoration practitioners	NOAA
2014 in southeast Florida; 1978 in the Florida Keys	Current	Yes	A stratified random survey design is used to conduct a multispecies, fishery independent diver visual survey, for population-level abundance, density and size structure of more than 250 exploited and non-target fishes in the Florida coral reef ecosystem. The same survey design is also used to assess the benthic communities for population-level coral diversity, distribution, abundance, colony size, and condition. Data are collected through diving surveys of shallow-water (0-30 meters) areas throughout the Florida reef tract (Southeast Florida, Florida Keys, Tortugas)	NOAA
2008	Present	Yes		NPS SFCN, NPS Biscayne National Park and Dry Tortugas National Park
2008	Present	Yes		NPS SFCN, NPS Biscayne National Park and Dry Tortugas National Park
2008	Present	Yes		NPS SFCN, NPS Biscayne National Park and Dry Tortugas National Park
2008	Present	Yes		NPS SFCN, NPS Biscayne National Park and Dry Tortugas National Park

2008	Present	Yes		NPS Biscayne National Park/UM
1998	Present	Yes		NPS Biscayne National Park/UM
1998	Present	Yes		NPS Biscayne National Park/UM
1998	Present	Yes		NPS Biscayne National Park/UM

1998	Present	Yes		NPS Biscayne National Park/UM
2019	Present	Yes		NPS SFCN, NPS Biscayne National Park and Dry Tortugas National Park
2003	present	Yes	Surveys are expected to continue on a quarterly interval provided federal funding can continue to support the effort.	NOAA
2005	Present	Funds Dependent	Currently funded by EPA Water Quality Protection Program. In 2023-2024, DRM is funded by State Wildlife Grants (FWC). If funding is available in 24/25, FL DEP may support DRM. A juvenile census of the most SCTL D-susceptible coral families was added in 2020 to assess survivorship and/or post-SCTL D recruitment.	FWC
1996: Florida Keys (FWC) 1999: Dry Tortugas (FWC) 2003: Southeast Florida (SECREMP) (Nova Southeastern University, FWC)	Present	Funds Dependent	Currently funded by EPA Water Quality Protection Program, NOAA Coral Program, and Dry Tortugas National Park	FWC

2005	Present	Yes	Spatial extend of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM
2000	Present	Yes		NPS SFCN
2022	present	Yes	There are three major M:IR monitoring themes. These include 1) M:IR monitoring complementary to ongoing monitoring efforts that span the Florida reef tract, 2) M:IR-specific monitoring at permanent fixed sites in RMAs and CAs, and 3) M:IR monitoring by restoration practitioners	NOAA
				NOAA/NMFS
2019	Present	Yes		NPS SFCN,NPS Biscayne National Park and Dry Tortugas National Park

2019	Present	Yes		NPS SFCN, NPS Biscayne National Park and Dry Tortugas National Park
2009	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. Acoustic telemetry, radio telemetry along SRS 4-6 in ENP. These data are not publicly accessible because they could be used to target/exploit sensitive species. They are considered Type II data per the LTER Network Data Access Policy. Detailed metadata from a similar dataset can be found at <a href="https://doi.org/10.6073/pasta/8404e7ecccc4622c6175bfa8283639f8">https://doi.org/10.6073/pasta/8404e7ecccc4622c6175bfa8283639f8</a>	FIU
2002	Present	Yes	Current waterbody segments and analytes can be found on DEP Strategic Monitoring Program webpage. <a href="https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans">https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans</a>	FDEP/DEAR
2002	Present	Yes	Current waterbody segments and analytes can be found on DEP Strategic Monitoring Program webpage. <a href="https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans">https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans</a>	FDEP/DEAR
1998	present	Yes	We monitor 2 indicators; water quality and phytoplankton.	NOAA
1948	present	Yes	fire perimeters are mapped for all prescribed fire and wildland fires within the Park that are above 10 acres in size. Smaller fires may have a perimeter mapped or point location recorded.	NPS-Fire
2016	Present	Yes		SFWMD

1987	Present	Funds Dependent	Three of the ten sites will be decommissioned in May 2023 due to lack of funding. The three sites are: EC in Little Madeira Bay, WJ in Joe Bay, and SB in Long Sound.	NPS-SFNRC
2020	Present	Funds Dependent		NPS-SFNRC
1995	Present	Funds Dependent		USGS
1995	Present	Funds Dependent		USGS
2004	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-3, TS/Ph 1-7 in ENP [select marsh sites for velocity] Chekika velocity data: <a href="https://doi.org/10.6073/pasta/f0a076ef1cdb35abafab8b0b61fde59f">https://doi.org/10.6073/pasta/f0a076ef1cdb35abafab8b0b61fde59f</a> Gumbo Limbo Island velocity data: <a href="https://doi.org/10.6073/pasta/bdc327b2f493cfd4f51e3820fcbe4a0c">https://doi.org/10.6073/pasta/bdc327b2f493cfd4f51e3820fcbe4a0c</a> Mangrove sites salinity, temperature SRS 4-6; TS/Ph 7-8 data: <a href="https://doi.org/10.6073/pasta/285bc87dc9418e5f0579f72d1e00b6d9">https://doi.org/10.6073/pasta/285bc87dc9418e5f0579f72d1e00b6d9</a> SRS 1-3 Salinity and Nutrients data: <a href="https://doi.org/10.6073/pasta/bfbf714b3ba522be424f0b5678886a13">https://doi.org/10.6073/pasta/bfbf714b3ba522be424f0b5678886a13</a>	FIU
2015	Present	Yes		SFWMD
2001	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP Litter decomposition rate data: <a href="https://doi.org/10.6073/pasta/913c2e48833bd96849a4a7eb5f0571a8">https://doi.org/10.6073/pasta/913c2e48833bd96849a4a7eb5f0571a8</a>	FIU



1996	Present	Yes		SFWMD
2001	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP Bacterial abundance, biomass, and productivity data: <a href="https://doi.org/10.6073/pasta/fbf6aabf1ca59dede0a3989bc950f34c">https://doi.org/10.6073/pasta/fbf6aabf1ca59dede0a3989bc950f34c</a>	FIU
2019	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP Bulk soil prokaryotic microbiome data: <a href="https://www.ncbi.nlm.nih.gov/bioproject/?term=PRJNA804243">https://www.ncbi.nlm.nih.gov/bioproject/?term=PRJNA804243</a> Bulk soil fungal microbiome data: <a href="https://www.ncbi.nlm.nih.gov/bioproject/?term=PRJNA804246">https://www.ncbi.nlm.nih.gov/bioproject/?term=PRJNA804246</a> Soil microbiome at different depths data: <a href="https://www.ncbi.nlm.nih.gov/bioproject/?term=PRJNA804228">https://www.ncbi.nlm.nih.gov/bioproject/?term=PRJNA804228</a> Phylogenetic profiling of aquatic microbial communities data: <a href="https://www.ncbi.nlm.nih.gov/bioproject/PRJNA525456">https://www.ncbi.nlm.nih.gov/bioproject/PRJNA525456</a>	FIU
various	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 2 (2009-P), SRS-6 (2004-P), TS/Ph-1 (2009-P), TS/Ph-7 (2017-P), TS/Ph-10 (2019-P) in ENP Eddy Covariance Tower data (SRS 2, SRS 6, TS/Ph 1b, TS/Ph 7 & TS/Ph 10): <a href="https://doi.org/10.6073/pasta/417f2954c3cd043e73004e89aff83b5e">https://doi.org/10.6073/pasta/417f2954c3cd043e73004e89aff83b5e</a>	FIU
2002	Present	Yes	Current waterbody segments and analytes can be found on DEP Strategic Monitoring Program webpage. <a href="https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans">https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans</a>	FDEP/DEAR
1996	Present	Yes		SFWMD

2000	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP Fluorescence data: <a href="https://doi.org/10.6073/pasta/3938d3bb664d57584afc749c6a768f31">https://doi.org/10.6073/pasta/3938d3bb664d57584afc749c6a768f31</a> <a href="https://doi.org/10.6073/pasta/d1abed5732fe4f4b086e092fb85bf431">https://doi.org/10.6073/pasta/d1abed5732fe4f4b086e092fb85bf431</a>	FIU
2002	Present	Yes	Lake Condition index (LVI) per DEP SOP LVI 1000 and DEP SOP LVI 2000, in lakes.	FDEP/DEAR
2002	Present	Yes	Current waterbody segments and analytes can be found on DEP Strategic Monitoring Program webpage. <a href="https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans">https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans</a>	FDEP/DEAR
2000	2019	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP Plankton pigment concentration data: <a href="https://doi.org/10.6073/pasta/49adea692415666d289eac906be41b57">https://doi.org/10.6073/pasta/49adea692415666d289eac906be41b57</a>	FIU
2016	Present	Yes		SFWMD
1996	Present	Yes		SFWMD

2000	Present	Funds Dependent	<p>See "FCE Sites" tab for map of FCE-LTER sites.  SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP  TS/Ph 7-11 Physical data:  <a href="https://doi.org/10.6073/pasta/1b688d21d16bedea573c45be568e4ba7">https://doi.org/10.6073/pasta/1b688d21d16bedea573c45be568e4ba7</a>  SRS Grab Samples data:  <a href="https://doi.org/10.6073/pasta/4c6a5c2382bf376c8872560fc32be14e">https://doi.org/10.6073/pasta/4c6a5c2382bf376c8872560fc32be14e</a>  TS Grab Samples data:  <a href="https://doi.org/10.6073/pasta/08e1dc1ccee9901ae57e404f0319b789">https://doi.org/10.6073/pasta/08e1dc1ccee9901ae57e404f0319b789</a>  <a href="https://doi.org/10.6073/pasta/29ee3caca5def4c4a69a4612fa7e90fa">https://doi.org/10.6073/pasta/29ee3caca5def4c4a69a4612fa7e90fa</a>  TS Extensive data:  <a href="https://doi.org/10.6073/pasta/344a61ef6aff48148cad361878f6adfb">https://doi.org/10.6073/pasta/344a61ef6aff48148cad361878f6adfb</a>  SRS extensive data:  <a href="https://doi.org/10.6073/pasta/91b8b1f55986af8a3ee20f19576e7b42">https://doi.org/10.6073/pasta/91b8b1f55986af8a3ee20f19576e7b42</a>  TS and Florida Bay Extensive data:  <a href="https://doi.org/10.6073/pasta/49adea692415666d289eac906be41b57">https://doi.org/10.6073/pasta/49adea692415666d289eac906be41b57</a></p>	FIU
2000	Present	Funds Dependent	<p>See "FCE Sites" tab for map of FCE-LTER sites.  SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP  Mangrove sites salinity data (SRS 4-6;TS/Ph 7-8):  <a href="https://doi.org/10.6073/pasta/285bc87dc9418e5f0579f72d1e00b6d9">https://doi.org/10.6073/pasta/285bc87dc9418e5f0579f72d1e00b6d9</a>  SRS 1-3 salinity and nutrient data:  <a href="https://doi.org/10.6073/pasta/bfbf714b3ba522be424f0b5678886a13">https://doi.org/10.6073/pasta/bfbf714b3ba522be424f0b5678886a13</a>  Mangrove site nutrient data (SRS 4-7, TS/Ph 6-8):  <a href="https://doi.org/10.6073/pasta/71579955fc6cb2b099879c15b583317a">https://doi.org/10.6073/pasta/71579955fc6cb2b099879c15b583317a</a></p>	FIU
2004	Present	Funds Dependent	<p>See "FCE Sites" tab for map of FCE-LTER sites.  SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP  Soil Nutrient data (All FCE Sites):  <a href="https://doi.org/10.6073/pasta/8660289b8c1e9f2ca01ee503f0d9ecda">https://doi.org/10.6073/pasta/8660289b8c1e9f2ca01ee503f0d9ecda</a></p>	FIU

various	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. marsh sites (2020-P) and mangrove sites (1999-P) in ENP Soil elevation change data (TS/Ph 6-7): <a href="https://doi.org/10.6073/pasta/1755e84862607d90e33bcef e6ce997e2">https://doi.org/10.6073/pasta/1755e84862607d90e33bcef e6ce997e2</a> <a href="https://doi.org/10.6073/pasta/0edc80f91191e66eea6b4b0 ebd407a0d">https://doi.org/10.6073/pasta/0edc80f91191e66eea6b4b0 ebd407a0d</a> Soil elevation change data (SRS 4 & 6): <a href="https://www.sciencebase.gov/catalog/item/58f65df4e4b0 bd52222f7818">https://www.sciencebase.gov/catalog/item/58f65df4e4b0 bd52222f7818</a>	FIU
2011	Present	Yes		NPS SFCN
2011	Present	Yes		NPS SFCN
2002	Present	Yes	Lake Condition index (LVI) per DEP SOP LVI 1000 and DEP SOP LVI 2000, in lakes. <a href="https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes">https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes</a>	FDEP/DEAR
2002	Present	Yes	Lake Condition index (LVI) per DEP SOP LVI 1000 and DEP SOP LVI 2000, in lakes. <a href="https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes">https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes</a>	FDEP/DEAR

2000	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP TS/Ph 7-11 Physical data: <a href="https://doi.org/10.6073/pasta/1b688d21d16bedea573c45be568e4ba7">https://doi.org/10.6073/pasta/1b688d21d16bedea573c45be568e4ba7</a> SRS Grab Samples data: <a href="https://doi.org/10.6073/pasta/4c6a5c2382bf376c8872560fc32be14e">https://doi.org/10.6073/pasta/4c6a5c2382bf376c8872560fc32be14e</a> TS Grab Samples data: <a href="https://doi.org/10.6073/pasta/08e1dc1ccee9901ae57e404f0319b789">https://doi.org/10.6073/pasta/08e1dc1ccee9901ae57e404f0319b789</a> <a href="https://doi.org/10.6073/pasta/29ee3caca5def4c4a69a4612fa7e90fa">https://doi.org/10.6073/pasta/29ee3caca5def4c4a69a4612fa7e90fa</a> TS Extensive data: <a href="https://doi.org/10.6073/pasta/344a61ef6aff48148cad361878f6adfb">https://doi.org/10.6073/pasta/344a61ef6aff48148cad361878f6adfb</a> SRS extensive data: <a href="https://doi.org/10.6073/pasta/91b8b1f55986af8a3ee20f19576e7b42">https://doi.org/10.6073/pasta/91b8b1f55986af8a3ee20f19576e7b42</a> TS and Florida Bay Extensive data: <a href="https://doi.org/10.6073/pasta/49adea692415666d289eac906be41b57">https://doi.org/10.6073/pasta/49adea692415666d289eac906be41b57</a>	FIU
2002	Present	Yes	Current waterbody segments and analytes can be found on DEP Strategic Monitoring Program webpage. <a href="https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans">https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans</a>	FDEP/DEAR
1996	Present	Yes		SFWMD
2009	Present	Yes		SFWMD
2021	Present	Yes		FWC

2001	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS1, SRS2, SRS3, TS/Ph1b,TS/Ph2,TS/Ph3, TS/Ph4, TS/Ph5, TS/Ph9, TS/Ph10, and TS/Ph11 in ENP Data: <a href="https://doi.org/10.6073/pasta/b3debdca5457a909a4b5087579596073">https://doi.org/10.6073/pasta/b3debdca5457a909a4b5087579596073</a>	FIU
1998	present	Yes	We monitor 2 indicators; water quality and phytoplankton.	NOAA
2002	Present	Yes	Phytoplankton is collected in lakes that are verified as impaired for nutrients and or Chlorophyll-a Corrected. The results will be used for data models used for TMDL development.	FDEP/DEAR
2011	Present	Yes	Continuous data	NPS
2017	2022	Maybe	Discrete data	NPS
2020	present	Maybe	Surveys are expected to continue provided federal funding (NOAA) remains in place.	NOAA
1995	Present	Funds Dependent		USGS
1995	Present	Funds Dependent		USGS
2002	Present	Yes	Current waterbody segments and analytes can be found on DEP Strategic Monitoring Program webpage. <a href="https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans">https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans</a>	FDEP/DEAR

Monitoring start dates vary site to site ranging from 1992 to 2005.	Present	Yes	Funding for all sites by multiple agencies has been reduced resulting in sites dropped from overall monitoring with reduced monitoring spatial footprint. Recent funding loss resulted in swapping monitoring sites listed in MAP and other funding source.	USACE/Audubon MAP Ecological Parameters in Forested Wetlands
2004	Present	Yes	Spatial extend of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM
2015	Present	Yes	Port-of-the-Islands boat basin manatee mitigation feature	USACE/USGS MAP Hydrodynamics and Salinity in TTI
2015	Present	Yes	Pumpkin River, Faka Union Canal, and East River	USACE/USGS MAP Hydrodynamics and Salinity in TTI
Monitoring start dates vary site to site ranging from 1992 to 2005.	Present	Yes	Funding for all sites by multiple agencies has been reduced resulting in sites dropped from overall monitoring with reduced monitoring spatial footprint. Recent funding loss resulted in swapping monitoring sites listed in MAP and other funding source.	USACE/Audubon MAP Ecological Parameters in Forested Wetlands
2005	Present	Yes	Spatial extend of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM

2015	Present	Yes	Pumpkin River, Faka Union Canal, and East River	USACE/USGS MAP Hydrodynamics and Salinity in TTI
			Coastal Gradients monitoring leverages GEPES stations and EDEN funds. Continued funding for some monitoring by Coastal Gradients provided through GEPES is expected but not guaranteed. Coastal Gradients MAP monitoring previously included water quality parameters (nutrients) that were dropped during the 2010-2011 optimization.	USACE/USGS MAP Coastal Gradients
Monitoring start dates vary site to site ranging from 1992 to 2005.	Present	Yes	Funding for all sites by multiple agencies has been reduced resulting in sites dropped from overall monitoring with reduced monitoring spatial footprint. Recent funding loss resulted in swapping monitoring sites listed in MAP and other funding source.	USACE/Audubon MAP Ecological Parameters in Forested Wetlands
2001	Present	Yes	Coastal Gradients monitoring leverages GEPES stations and EDEN funds. Continued funding for some monitoring by Coastal Gradients provided through GEPES is expected but not guaranteed. Coastal Gradients MAP monitoring previously included water quality parameters (nutrients) that were dropped during the 2010-2011 optimization.	USACE/USGS MAP Coastal Gradients
2015	Present	Yes	Port-of-the-Islands boat basin manatee mitigation feature	USACE/USGS MAP Hydrodynamics and Salinity in TTI
2015	Present	Yes	Pumpkin River, Faka Union Canal, and East River	USACE/USGS MAP Hydrodynamics and Salinity in TTI



2004	Present	Yes		USACE/NOAA MAP - Juvenile Sportfish
2004	Present	Yes		NPS Biscayne National Park/UM
2004	Present	Yes		NPS Biscayne National Park/UM
2019	Present	Yes		FDEP ORCP Southeast Region - Biscayne Bay Aquatic Preserves
2016	Present	Funds Dependent	Most of the data is available on WIN and SEACAR databases. Funded by the DEP CPR Program.	FDEP ORCP Southeast Region - Coral Reef Conservation Program

				NOAA/NMFS
1995	Present	Funds Dependent	Currently funded by South Florida Water Management District The Florida Keys National Marine Sanctuary (FKNMS) uses FHAP protocols in their benthic vegetation monitoring programs	FWC
2006	Present	Funds Dependent	Currently funded by South Florida Water Management District In addition to the annual regional sampling effort, it was decided after 2006 that more intensive sampling was necessary to assess changes due to CERP activities. Fifteen (15) permanent transects were established within Florida Bay and southern Biscayne Bay at locations associated with SERC water quality monitoring stations. Each 50-m transect will be sampled twice a year: once at the end of the dry season (May-June) and once at the end of the wet season (October- November).	FWC
2022	2024	Funds Dependent	Using FL DERM long-term water quality data set	USEPA

2022	2024	Funds Dependent		USEPA
2002	Present	Yes	Lake Condition index (LVI) per DEP SOP LVI 1000 and DEP SOP LVI 2000, in lakes. <a href="https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes">https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes</a>	FDEP/DEAR
2008	Present	Yes	Spatial extend of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM
2008	Present	Yes	Spatial extend of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM
Monitoring start dates vary site to site ranging from 1992 to 2005.	Present	Yes	Funding for all sites by multiple agencies has been reduced resulting in sites dropped from overall monitoring with reduced monitoring spatial footprint. Recent funding loss resulted in swapping monitoring sites listed in MAP and other funding source.	USACE/Audubon MAP Ecological Parameters in Forested Wetlands

2004	Present	Yes		USACE/NOAA MAP - Juvenile Sportfish
2008	Present	Yes	Spatial extent of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM
Monitoring start dates vary site to site ranging from 1992 to 2005.	Present	Yes	Funding for all sites by multiple agencies has been reduced resulting in sites dropped from overall monitoring with reduced monitoring spatial footprint. Recent funding loss resulted in swapping monitoring sites listed in MAP and other funding source.	USACE/Audubon MAP Ecological Parameters in Forested Wetlands
2004	Present	Yes		USACE/NOAA MAP - Juvenile Sportfish
2008	Present	Yes	Spatial extent of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM
Monitoring start dates vary site to site ranging from 1992 to 2005.	Present	Yes	Funding for all sites by multiple agencies has been reduced resulting in sites dropped from overall monitoring with reduced monitoring spatial footprint. Recent funding loss resulted in swapping monitoring sites listed in MAP and other funding source.	USACE/Audubon MAP Ecological Parameters in Forested Wetlands

2008	Present	Yes	Spatial extend of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM
2004	Present	Yes		USACE/NOAA MAP - Juvenile Sportfish
2008	Present	Yes	Spatial extend of monitoring within Biscayne Bay for all parameters was reduced in 2010-2011 which removed sites south of Turkey Point.	USACE/NOAA/NPS MAP IBBEAM
2023	2024	Funds Dependent		NPS Biscayne National Park/UM
2023	2024	Funds Dependent		NPS Biscayne National Park/UM
2008	Present	Yes		NPS Biscayne National Park/UM

1995	Present	Yes	This project receives funding from RECOVER but also requires additional funding from ESA to support all of the necessary monitoring	SFWMD
2022 (started in VIIS; no data for DRTO or BISC yet)	Present	Yes		NPS SFCN
Seagrass = 2021 Isotope analysis = 2022	Present	Yes	Seagrass monitoring is currently taking place in LKAP but matches Dr. Fourqurean from FIU's seagrass program which takes place in other areas of the FL Keys	FDEP ORCP Southeast Region - Florida Keys
2007	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. TS/Ph9, TS/Ph10 and TS/Ph11 in ENP Data: <a href="https://doi.org/10.6073/pasta/0648326d435de9ae615de0448e291dc1">https://doi.org/10.6073/pasta/0648326d435de9ae615de0448e291dc1</a>	FIU
2002	Present	Yes	Lake Condition index (LVI) per DEP SOP LVI 1000 and DEP SOP LVI 2000, in lakes. <a href="https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes">https://floridadep.gov/dear/bioassessment/content/bioassessment-methods#Lakes</a>	FDEP/DEAR

2019	Present	Yes		NPS SFCN
2020	Present	Yes		NPS SFCN
2009	Present	Yes		NPS SFCN
Annual reporting via SFWBR	Present	Funds Dependent	Audubon previously conducted ground checks of islands but aerial monitoring (when aircraft available for overwater flights) is the main method for monitoring now	NPS-SFNRC
2019	2024	Maybe		NPS-SFNRC

2020	Present	Yes		FDEP ORCP Southeast Region - Biscayne Bay Aquatic Preserves
				NOAA/NMFS
2000	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-6, TS/Ph 1-7 in ENP SRS 1-6 data: <a href="https://doi.org/10.6073/pasta/472cfad9e0de0c8a7e4aad4eae84b8bc">https://doi.org/10.6073/pasta/472cfad9e0de0c8a7e4aad4eae84b8bc</a> SRS 4-6 and TS/Ph 6-8 data: <a href="https://doi.org/10.6073/pasta/590267a4b46755c34b230d35b60d1004">https://doi.org/10.6073/pasta/590267a4b46755c34b230d35b60d1004</a> TS/Ph 1,2,3,8 data: <a href="https://doi.org/10.6073/pasta/d15f229207c2f8505f0be52c415bd7e7">https://doi.org/10.6073/pasta/d15f229207c2f8505f0be52c415bd7e7</a>	FIU
				FDEP/DEAR
				FDEP/DEAR
2002	Present	Yes	Current waterbody segments and analytes can be found on DEP Strategic Monitoring Program webpage. <a href="https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans">https://floridadep.gov/dear/watershed-assessment-section/content/strategic-monitoring-plans</a>	FDEP/DEAR



2019	Present	Yes		FDEP ORCP Southeast Region - Biscayne Bay Aquatic Preserves
2020	present	Maybe	Surveys are expected to continue provided federal funding (NOAA) remains in place.	NOAA
1998	present	Yes	We monitor 2 indicators; water quality and phytoplankton.	NOAA
2020	present	Maybe	Surveys are expected to continue provided federal funding (NOAA) remains in place.	NOAA
1998	present	Yes	We monitor 2 indicators; water quality and phytoplankton.	NOAA
				NOAA/NMFS
1998	present	Yes	We monitor 2 indicators; water quality and phytoplankton.	NOAA
1998	present	Yes	We monitor 2 indicators; water quality and phytoplankton.	NOAA

1988	Current	Yes	A total of 38 subsurface recording thermographs (Ryan Industries, Inc. and Sea-Bird Electronics, Inc. thermographs) have been deployed in the Florida Keys National Marine Sanctuary (FKNMS) and at other selected locations on the Florida Reef Tract and associated hydrologic ecosystems. These instruments have been programmed to record at 2 hour intervals and are placed in permanent housings attached to suitable substrate. Data retrieval, servicing and reprogramming for continuous deployment have occurred, on average, annually. Due to mechanical problems with some instruments, there are occasional gaps in the data streams from some of the monitoring stations.	NOAA
2012	present	Yes	<a href="https://www.aoml.noaa.gov/ncrmp/">https://www.aoml.noaa.gov/ncrmp/</a>	NOAA
2000	Present	Funds Dependent	See "FCE Sites" tab for map of FCE-LTER sites. SRS 1-6, TS/Ph 1-3, 6-7, 9-11 in ENP Fluorescence data: <a href="https://doi.org/10.6073/pasta/3938d3bb664d57584afc749c6a768f31">https://doi.org/10.6073/pasta/3938d3bb664d57584afc749c6a768f31</a> <a href="https://doi.org/10.6073/pasta/d1abed5732fe4f4b086e092fb85bf431">https://doi.org/10.6073/pasta/d1abed5732fe4f4b086e092fb85bf431</a>	FIU
				FDEP/DEAR
1990	Present	Yes		NPS SFCN

2019	Present	Yes		FDEP ORCP Southeast Region - Biscayne Bay Aquatic Preserves
2016	Present	Funds Dependent	Most of the data is available on WIN and SEACAR databases. Funded by the DEP CPR Program.	FDEP ORCP Southeast Region - Coral Reef Conservation Program
2019	Present	Yes		FDEP ORCP Southeast Region - Biscayne Bay Aquatic Preserves
Continuous data sonde monitoring = 2021 Monthly grabs = 20__ Bi-monthly grabs = 2022 Quarterly grabs = 2022	Present	Yes	Currently have a permanent sonde in LKAP and a temporary sonde in CBAP (permanent sonde is to be installed soon). Have 2 sondes located a FWC's sponge nurseries. And will have additional sonde at 7-mile bridge, Sombrero deep, Pennekamp, and Curry Hammock in the near future. All grab samples are through DEAR.	FDEP ORCP Southeast Region - Florida Keys
2016	Present	Funds Dependent	Most of the data is available on WIN and SEACAR databases. Funded by the DEP CPR Program.	FDEP ORCP Southeast Region - Coral Reef Conservation Program
2016	Present	Funds Dependent	Most of the data is available on WIN and SEACAR databases. Funded by the DEP CPR Program.	FDEP ORCP Southeast Region - Coral Reef Conservation Program

2016	Present	Funds Dependent	Most of the data is available on WIN and SEACAR databases. Funded by the DEP CPR Program.	FDEP ORCP Southeast Region - Coral Reef Conservation Program
2019	Present	Yes		FDEP ORCP Southeast Region - Biscayne Bay Aquatic Preserves
2018	Present	Funds Dependent	additional work with isotopes, genetics, in water captures, etc	USGS

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