

WQPP Management Committee Recommended Priority Topics for 2022 EPA Special Studies Funding

Aquatic Habitat Restoration in South Florida: Within the South Florida ecosystem, oysters, seagrass, mangroves, and sponge communities play a vital role supporting healthy and resilient estuaries, bays, and nearshore waters by providing food, habitat, nutrient removal, water filtration, storm attenuation, carbon storage and shoreline stabilization. Design and implement on-the-ground habitat restoration to reestablish, rehabilitate or enhance oysters, seagrass, sponges, or mangroves ecosystems.

Improve Water Quality in South Florida Residential Canals: Demonstrate “test or prove” activities to improve water quality in marine residential canals that may include canal master planning; canal restoration demonstration projects and design; pilot projects proving or testing feasibility or efficacy of innovative technologies; education and outreach program for canal homeowners and marinas; collecting bathymetric data for restoration; and monitoring to evaluate effectiveness of canal restoration techniques. Water quality results should be disseminated to the public as part of the outreach and education component. Innovative technologies or management practices identified must comply with all applicable regulations and water quality standards.

Wastewater and Stormwater Shallow Injection Well Potential Impacts: Research/monitor central wastewater or stormwater shallow injection wells in South Florida to determine the impact to freshwater and coastal waters. Develop a study to determine if, and how, shallow injection well effluent travels through groundwater and surfaces in fresh and coastal nearshore waters. Project will identify pollutants, locations, quantify volume, movement, mixing and contribution to fresh and coastal waters.

Water Reuse: Investigate opportunities to improve wastewater systems beyond advanced treatment standards and repurpose purified wastewater for beneficial use in south Florida. This may include an updated review of innovative wastewater treatment technologies or processes such as reverse osmosis, omni-processing and/or nanofiltration, pilot projects to test or prove the effectiveness of innovative technologies for removing pharmaceuticals and other contaminants of emerging concern, or feasibility studies on potable reuse of wastewater in south Florida.

Florida Keys Nearshore Water Quality Monitoring: Design and implement a study to optimize monitoring approaches for investigating water quality impacts from local, land-based sources within the Florida Keys. Establish water quality monitoring transects within the 500-meter ‘Halo Zone’ to determine the optimal distance from shore for measuring the influence of Key's-based versus regional and far-field impacts to water quality. This information will help evaluate water quality targets within the Florida Keys Reasonable Assurance Plan and the effectiveness of local efforts to reduce pollution in adjacent marine waters.

Florida Keys Water Quality Monitoring Program Evaluation: Support the planning and execution of an independent evaluation of the long-term water quality monitoring programs within Florida Keys National Marine Sanctuary. The objective of this effort is to assess the programs’ effectiveness in supporting evolving resource management priorities and identify opportunities to improve data collection to better inform management decision-making. In consultation with the sanctuary’s Water Quality Protection Program, this effort should include designing a robust evaluation process, facilitating meetings of an evaluation committee, and collating the outcomes of the evaluation into a final recommendations document.

Transport of fertilizers, pesticides and herbicides to groundwater: Conduct a defensible assessment of the amount, fate, and transport of pollutants such as fertilizers, pesticides, and herbicides into groundwater in south Florida.

Water Quality Monitoring at Coral Reef Restoration Sites: Implement a pilot water quality monitoring program at the seven Mission: Iconic Reef coral reef restoration sites. The pilot program should: a) be designed to effectively capture both episodic events and seasonal changes in water quality at these restoration sites, and b) should at a minimum measure the same parameters as the existing water quality monitoring efforts conducted throughout Florida Keys National Marine Sanctuary in order to compare the water quality at these restoration sites to broader spatial and temporal patterns.

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