



**Existing RECOVER (and other)
monitoring as it pertains to the
CEPP monitoring and adaptive
management plan**

CEPP Specific Uncertainty	Hypothesis Keywords	RECOVER MAP Monitoring (unless otherwise noted)
<p>Will CEPP achieve timing and distribution of water to reduce soil oxidation and fire in NE 3A and 3B and SRS?</p>	<p>Defining characteristics: pre-drainage volume, timing, and distribution of sheet flow</p>	<p>SFWMD and ENP hydro-monitoring network</p> <p>EDEN</p> <p>Ridge & Slough (R&S) maintenance and degradation</p>
<p>Are the flow velocities enough to reestablish ridge/sloughs in 3B?</p>	<p>Elongated patterns of ridges, sloughs, and tree islands in the direction of water flow</p> <p>Spatial patterning and topographic relief of ridges and sloughs</p> <p>Sediment redistribution</p>	<p>Decomp Physical Model science plan</p> <p>R&S maintenance and degradation</p> <p>Landscape pattern – ridge, slough and tree islands</p>

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<p>Is CEPP likely to improve alligator abundance, body conditions and health in a measurable way?</p>	<p>Density and body condition</p> <p>Prey abundance</p> <p>Abundance and survival of juvenile alligators</p>	<p>Alligators and crocodiles (unfunded from FY11)</p> <p>EDEN</p> <p>Wading bird colony size, location and timing</p> <p>Marsh mangrove fishes</p> <p>Aquatic fauna and periphyton production – wet season</p>
<p>If tree islands do not respond, what could management response be?</p>	<p>Exotic invasion</p> <p>Hydrology</p> <p>Tree island species richness</p> <p>Resilience</p>	<p>SFWMD and ENP hydro-monitoring network</p> <p>EDEN</p> <p>Tree island condition in the southern Everglades</p> <p>Tree island monitoring</p>

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<p>In Northeast Shark Slough, how can operations most effectively optimize hydroperiod and minimize dry-outs with the proposed infrastructure to best restore ridge and slough landscape, including tree islands?</p>	<p>Defining characteristics: pre-drainage volume, timing, and distribution of sheet flow</p> <p>Elongated patterns of ridges, sloughs, and tree islands in the direction of water flow</p> <p>Spatial patterning and topographic relief of ridges and sloughs</p> <p>Sediment redistribution</p> <p>Exotic invasion Hydrology Tree island species richness Resilience</p>	<p>SFWMD and ENP hydro- monitoring network</p> <p>EDEN</p> <p>Tree island condition in the southern Everglades</p> <p>Tree island monitoring</p> <p>Landscape pattern – ridge, slough and tree islands</p> <p>R&S maintenance and degradation</p> <p>Marl prairie slough gradients</p> <p>ENP vegetation mapping</p>

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<p>Will hydrologic restoration and vegetation management in Northwest WCA 3A result in measurable increases in prey densities?</p>	<p>Hydrologic variation, including recession rates</p> <p>Wet season aquatic prey population</p> <p>Dry season aquatic prey concentrations</p>	<p>SFWMD and ENP hydro-monitoring network</p> <p>EDEN</p> <p>Aquatic fauna and periphyton collection – wet season</p> <p>Dry season aquatic prey concentrations</p>
<p>Will hydrologic restoration and vegetation management in Northwest WCA 3A result in measurable increases in wading bird foraging?</p>	<p>Hydrologic variation</p> <p>Wet season aquatic prey population</p> <p>Dry season aquatic prey concentrations</p>	<p>SFWMD and ENP hydro-monitoring network</p> <p>EDEN</p>

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Do reductions of high volume fresh water discharges result in measurable increases in SAV coverage in the St. Lucie?	<p>Timing, quantity, quality and distribution of freshwater releases</p> <p>Various salinity requirements of individual species and their communities</p>	SAV – IRL, SLE, LWL and Caloosahatchee
Do reductions of high volume fresh water discharges result in measurable increases in SAV coverage in the Caloosahatchee?	<p>Timing, quantity, quality and distribution of freshwater releases</p> <p>Various salinity requirements of individual species and their communities</p>	SAV – IRL, SLE, LWL and Caloosahatchee

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<p>Will the increased frequency of low flow violations and timing in the SLE have a detrimental impact on oyster communities by increasing levels of predation and disease during extreme dry times?</p>	<p>Salinity flux</p> <p>Muck</p> <p>Nutrients and sediments</p> <p>Low flow</p>	<p>East coast oysters – SLE, LWL and Lox</p>
<p>Will the reduction in low flow violations in the CRE help re-establish healthy <i>Vallisneria</i> beds in the upper CRE?</p>	<p>Salinity flux</p> <p>Muck</p> <p>Nutrients and sediments</p> <p>Low flow</p>	<p>SAV – IRL, SLE, LWL and Caloosahatchee</p>

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To what extent will the slight reduction in the frequency and magnitude of high flows to the SLE stabilize conditions enough to improve benthic habitat in the SLE in the south fork?	<p>Irregular and extreme shifts in salinity</p> <p>Establishment of infaunal communities</p>	Benthic infauna in SLE and IRL
Will increased flows to northeastern Shark River Slough yield natural distribution of waters toward the southeastern Everglades (Taylor Slough and lower C-111 basin) and northeast Florida Bay without operation of the South Dade Conveyance System?	<p>Distribution of freshwater flows to coastal wetlands</p> <p>Surface and groundwater flow into the estuaries</p> <p>Gradient of increasing salinity from interior wetlands into the nearshore zone</p>	<p>SFWMD and ENP hydro-monitoring network</p> <p>SFWMD and ENP Marine Monitoring Network</p> <p>EDEN</p> <p>SFWMD ops in conjunction with the weekly ops calls</p>

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<p>Will there be downstream biogeochemical effects associated with modifying inflows and hydrologic conditions in ENP, including effects on nutrient movement, availability, and ecological responses? This includes consideration of hydrologic effects on nutrient loading and transport and water-quality related ecological indicators, such as periphyton tissue nutrients, cattail expansion, and algal bloom events.</p>	<p>Dominance of direct rainfall as the primary source of water and P</p> <p>Periphyton complex provides critical support of the oligohaline Everglades food web</p>	<p>Marsh mangrove fishes</p> <p>Sediment elevation tables (unfunded from FY11)</p> <p>ENP vegetation mapping</p> <p>Aquatic fauna and periphyton production – wet season</p>



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Will CEPP mitigate saltwater intrusion and associated coastal wetland vegetation, soil stability, and nutrient retention or release?	Salinity gradients Mangrove forest production Soil accretion	Sediment elevation tables (unfunded from FY11) Coastal gradients Hydro & salinity in Ten Thousand Islands ENP vegetation mapping



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<p>If salinity is affected by overland flow increases through ENP to Florida Bay, how much benefit is generated for SAV, sportfish, prey and coastal wading birds? Can operations be adjusted to improve estuarine performance in Florida Bay?</p>	<p>Seagrass cover, biomass, distribution, species composition and diversity</p> <p>Resuspension of sediments and stability of mud banks</p> <p>Intensity, duration, and spatial extent of hypersaline conditions</p> <p>Increased area of optimum habitat for nearshore fish and invertebrates</p>	<p>Ecologic parameters in the forested wetlands of southern Florida</p> <p>Marsh mangrove fishes</p> <p>Florida Bay juvenile sportfish</p> <p>SF FHAP</p> <p>SFWMD & ENP Marine Monitoring Network</p> <p>SFWMD ops in conjunction with the weekly ops calls</p>

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<p>Will CEPP improve flows to Florida Bay and the southwest coast resulting in more natural salinity patterns (magnitude, spatial distribution and timing)? Will results be consistent with the expectations from the evaluation?</p>	<p>Distribution of freshwater flows to coastal wetlands</p> <p>Surface and groundwater flow into the estuaries</p> <p>Gradient of increasing salinity from interior wetlands into the nearshore zone</p>	<p>Coastal gradients</p> <p>Hydro & salinity in Ten Thousand Islands</p> <p>SFWMD and ENP hydro-monitoring network</p> <p>SFWMD and ENP Marine Monitoring Network</p> <p>EDEN</p>

For further information:

RECOVER 2009 System Status Report see:

http://www.evergladesplan.org/pm/ssr_2009.aspx

RECOVER performance measures see:

[www.evergladesplan.org/pm/recover/eval_team
perf_measures.aspx](http://www.evergladesplan.org/pm/recover/eval_team_perf_measures.aspx)