#11

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

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

1-4 annual
nutrient inflow
NN aquatic animals

recreational fish
SAB

uncertainty
Asian fish
move

A	Is CEPP likely to improve alligator abundance, body conditions and health in a measurable way?	Density and body condition Prey abundance Abundance and survival of juvenile alligators	Alligators and crocodiles (unfunded by RECOVER from FY11) EDEN Wading birds Marsh mangrove fishes Aquatic fauna and periphyton production – wet season		
A	If tree islands do not respond, what could management response be?	Exotic invasion Hydrology Tree island species richness Resilience	SFWMD and ENP hydro-monitoring network EDEN Tree island condition in the southern Everglades Tree island monitoring		
A	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	Defining characteristics: pre-drainage volume, timing, and distribution of sheet flow Elongated patterns of ridges, sloughs, and tree islands in the direction of water flow Spatial patterning and	SFWMD and ENP hydro-monitoring network EDEN Tree island condition in the southern Everglades Tree island monitoring Landscape pattern – ridge, slough and		

NE SRS
Nutrient effects
hydro period restoration
flow & connectivity
NN aquatic animals

Tamiami Trail
bridge
monitoring

	tree islands?	topographic relief of ridges and sloughs Sediment redistribution Exotic invasion Hydrology Tree island species richness Resilience	tree islands R&S maintenance and degradation Marl prairie slough gradients		
A	Will hydrologic restoration and vegetation management in Northwest WCA 3A result in measurable increases in prey densities?	Wet season aquatic prey population Dry season aquatic prey concentrations	SFWMD and ENP hydro-monitoring network EDEN Aquatic fauna and periphyton collection – wet season Dry season prey		
A	Will hydrologic restoration and vegetation management in Northwest WCA 3A result in measurable increases in wading bird foraging?	Wet season aquatic prey population Dry season aquatic prey concentrations	Aquatic fauna and periphyton collection – wet season Dry season prey		

3B & NESRS

B	Do reductions of high volume fresh water discharges result in measurable increases in SAV coverage in the St. Lucie?	Timing, quantity, quality and distribution of freshwater releases Various salinity requirements of individual species and their communities	SAV – IRL, SLE, LWL and Caloosahatchee		
B	Do reductions of high volume fresh water discharges result in measurable increases in SAV coverage in the Caloosahatchee?	Timing, quantity, quality and distribution of freshwater releases Various salinity requirements of individual species and their communities	SAV – IRL, SLE, LWL and Caloosahatchee		
B	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?	Salinity flux Muck Nutrients and sediments Low flow	East coast oysters – SLE, LWL and Lox		

B	Will the reduction in low flow violations in the CRE help re-establish healthy *Vallisneria* beds in the upper CRE?	Salinity flux Muck Nutrients and sediments Low flow	SAV – IRL, SLE, LWL and Caloosahatchee		
B	To what extent will the slight reduction in the frequency and magnitude of high flows to the SLE help reestablish historic oyster beds on the South Fork SLE?	Salinity flux Muck Nutrients and sediments Low flow	East coast oysters – SLE, LWL and Lox		
B	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?	Irregular and extreme shifts in salinity Inhibition of the establishment of infaunal communities	Benthic infauna in SLE and IRL		

B	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?	Distribution of freshwater flows to coastal wetlands Surface and groundwater flow into the estuaries Gradient of increasing salinity from interior wetlands into the nearshore zone	SFWMD and ENP hydro-monitoring network SFWMD and ENP Marine Monitoring Network EDEN SFWMD ops in conjunction with the weekly ops calls		

B	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.	Dominance of direct rainfall as the primary source of water and P Periphyton complex provides critical support of the oligohaline Everglades food web	Marsh mangrove fishes Sediment elevation tables (unfunded by RECOVER from FY11) ENP vegetation mapping Aquatic fauna and periphyton production – wet season		

B	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		
B	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?	Seagrass cover, biomass, distribution, species composition and diversity Resuspension of sediments Stability of mud banks Intensity, duration, and spatial extent of hypersaline conditions Increased area of optimum habitat for nearshore fish and invertebrates	Ecologic parameters in the forested wetlands of southern Florida Marsh mangrove fishes Florida Bay juvenile sportfish SF FHAP fish habitat assessment project SFWMD & ENP Marine Monitoring Network SFWMD ops in conjunction with the weekly ops calls		

B	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?	Distribution of freshwater flows to coastal wetlands Surface and groundwater flow into the estuaries Gradient of increasing salinity from interior wetlands into the near-shore zone	Coastal gradients Hydro & salinity in Ten Thousand Islands SFWMD and ENP hydro-monitoring network SFWMD and ENP Marine Monitoring Network EDEN		