

CRYSTAL RIVER/KINGS BAY PROJECTS TIME LINE

November 30, 2004

Year	Project Title	Responsible Agency	Results/Benefits	Status
MILESTONES				
1983	Designation of Crystal River/Kings (CR/KB) Bay as an Outstanding Florida Water	State of Florida	Identified waterbody as significant statewide resource and increased regulatory protection	Complete
1988	Identification of CR/KB as a SWIM priority water body	District ¹	Provided District/SWIM funding to restore and protect water quality and natural systems	Complete
1989	CR/KB Surface Water Improvement and Management Plan	District	Identified management issues and strategies to restore and protect the Crystal River/Kings Bay system	Complete
1992	Removal of Wastewater Treatment Plant Effluent Discharge	City of Crystal River (City)	Discontinued discharge of effluent from the City's Wastewater Treatment Plant; removed approximately 13 tons of total nitrogen and 4 tons of total phosphorus from annual nutrient load	Complete
1992	Kings Bay Channel Marking Project	DNR ² , District	Installed signs in CR/KB to identify idle/slow speed zones for manatee protection	Complete
1997	Coastal Springs Restoration Project 96-CZ-15-05-19-01-021 (<i>aka Springs Dredging Project</i>)	Citrus County	Dredged Tarpon Hole and Hunters Spring to remove sediments and <i>Lyngbya</i> mats; long-term improvements in water clarity were not realized	Complete
2000	Kings Bay Stormwater Projects	City and District	Implemented three stormwater improvement projects within the Kings Bay watershed to reduce nutrient and suspended solid loadings to the bay	Complete
2003	Effects of herbivores and competing primary producers on <i>Vallisneria americana</i> in Kings Bay: implications for restoration and management	District	Planted and monitored tapegrass (<i>Vallisneria americana</i>) plots; grazing by manatees prevented the successful establishment of newly planted tapegrass during this project	Complete
2003	Kings Bay Advisory Group	District and FDEP ³	Established an inter-agency working group that includes public participation to coordinate management efforts and identify management strategies to restore and protect CR/KB	Ongoing

CURRENT AND FUTURE WORK

Management Issue - Nutrient Management

2004	Mapping and Database for Springs in the Coastal Rivers Basin	District	Map springs, associated groundwater and surface water contributing areas and identify areas of elevated nutrients for prioritization of Best Management Practices (BMPs)	Ongoing
2004	CR/KB Watershed Education Plan: Research	District	Determine awareness level of local residents regarding BMPs to protect water resources	Ongoing
2005	CR/KB Watershed Education Plan: Design	District	Create materials to educate public on BMPs that improve water quality through simple changes in landscaping practices, septic tank maintenance and other homeowner practices	Budgeted for 2005
2005-2006	CR/KB Watershed Education Plan: Implementation	District	Distribute outreach material customized during the design phase of the Watershed Education Plan to target audiences	Budgeted for 2005/2006
2005	Springs Cleanup Initiative	District	Remove discarded materials from identified sinkholes within the five first magnitude springs systems: Weeki Wachee, Homosassa, Chassahowitzka, Kings Bay, and Rainbow River	Budgeted for 2005
2005	Crystal River (CR) Watershed Management Plan	District, Citrus County, FDOT ⁴ , City	Prepare watershed management plan including a list of projects and BMPs to be implemented in the CR/KB surface watershed.	Proposed
TBD	CR Watershed Management Plan - Implementation	District and City	Implement, with City participation, BMPs and stormwater improvement projects to reduce pollutants impacting Kings Bay	Proposed

Management Issue - Water Clarity

2003	Water Clarity and Quality Monitoring Program	District	Assess factors affecting water clarity and generate region-specific optical models for bay	Ongoing
2005	Kings Bay Sediment Evaluation and Mapping 2005	District	Compare results of current sediment mapping and evaluation to 1993 data to assess changes in composition, distribution, and accumulation of sediments; determine extent of nutrient loading from sediments and suitability of sediments to support aquatic plants	Budgeted for 2005

Management Issue - Aquatic Plants

2004	Evaluate Exotic and/or Nuisance Plant Control Methods	District	Determined that removing benthic mats of <i>Lyngbya</i> with mechanical harvesters (aka "grubbing") did not create short-term impacts on rooted aquatic plants; however, grubbing was not deemed effective in reducing <i>Lyngbya</i> in the bay	Complete (report in progress)
2004	Assessment of Light Availability for Submerged Aquatic Plants in Kings Bay	District	Indicated that light levels in Kings Bay are sufficient to support plant growth and aquatic plant restoration efforts	Complete (report in progress)
2004	CR/KB Vegetation Evaluation 2004	District	Compare changes in aquatic vegetation since 2001 and compare current aquatic plant coverage with water quality and sediment data collected in 2004/2005	Ongoing – Initiated 2004

¹Southwest Florida Water Management District, ²Department of Natural Resources (now Florida Department of Environmental Protection), ³Florida Department of Environmental Protection, ⁴Florida Department of Transportation