

KISSIMMEE RIVER RESTORATION PROJECT

FACT AND TOUR SHEET

THE KISSIMMEE RIVER RESTORATION PROJECT

- The Kissimmee Basin is the headwaters of the greater Kissimmee-Okeechobee-Everglades (KOE) system. The basin is comprised of a diverse group of wetland and aquatic ecosystems in its upper and lower basins, including more than two dozen lakes in the Upper Kissimmee Basin - known as the Kissimmee Chain of Lakes - and the Kissimmee River and floodplain in the Lower Kissimmee Basin (see maps).
- In the 1960s, as part of the Central and South Florida Project, much of the original Kissimmee River floodplain was drained when canal C-38 was constructed through the meandering river to prevent catastrophic flooding. The canal was successful in significantly reducing flood impacts.
- However, channelization of the river had pronounced environmental impacts on the river and its floodplain. In the river, flow was ended, and the floodplain underwent drastic declines in wetlands as well as in its populations of waterfowl, wading birds, fish, and other animals.
- Concerns about habitat loss and environmental degradation were the impetus for the Kissimmee River Restoration Project (KRRP). The 1992 Water Resources Development Act authorized restoration of the river to restore ecological integrity to a portion of the ecosystem while retaining existing levels of flood protection to surrounding communities. Construction features in the Upper Kissimmee Basin were also authorized to provide for the hydrologic needs of the restoration.
- The KRRP involves land acquisition, backfilling approximately 22 miles (over one-third) of the canal and reconnecting disrupted river channels in the Lower Kissimmee Basin, infrastructure changes in the river's headwaters lakes in the Upper Kissimmee Basin, and a comprehensive monitoring program to evaluate the success of the project in meeting its ecological goals.
- Headwaters construction and land acquisition components are designed to improve water management to better-approximate historical flow for the restoration, while retaining existing levels of flood protection. These changes will allow a 1.5 ft increase in high water levels in four headwaters lakes, which will increase their water storage capacity by approximately 100,000 acre-feet (ac-ft).
- In addition to improved water management for the restoration project, an additional expected benefit of increased lake levels is the improvement of the quantity and quality of lake littoral zone habitat in Lakes Kissimmee, Hatchineha, Tiger, and Cypress.
- When most project components are in place, the current water regulation schedule from the Upper Kissimmee Basin will be replaced with a new schedule, which will better simulate pre-channelization hydrologic conditions in the restoration area. The Headwaters Revitalization schedule is scheduled for implementation in 2014 when all KRRP construction features are projected to be completed.

FEDERAL-STATE PARTNERSHIP

- Projected project cost: \$980 million, 50-50 cost-shared by the U.S. Army Corps of Engineers and the South Florida Water Management District.
- SFWMD and The U.S. Army Corp of Engineers entered into a Project Cooperation Agreement in 1994.
- The U.S. Army Corp of Engineers is responsible for construction of the project and the South Florida Water Management District is responsible for land acquisition and restoration evaluation monitoring.

RESTORATION PROJECT STATUS

- Restoration construction (backfilling the canal and reconnecting and recarving river channels) in the Lower Basin started in 1999 and is being implemented in four phases. Phase I construction was completed in 2001, Phase IVA construction in 2007, and Phase IVB construction in 2009 (see table below). Phase II/III is expected to be completed in 2014.
- Land acquisition is mostly complete – over 100,000 acres of land needed for the restoration and other purposes have been acquired at a cost of \$300 million.
- Approximately 97 percent of the 36,612 acres of land that will be impacted by the higher water levels in the Upper Kissimmee Basin have been acquired.
- Most Upper Kissimmee Basin construction work is complete.

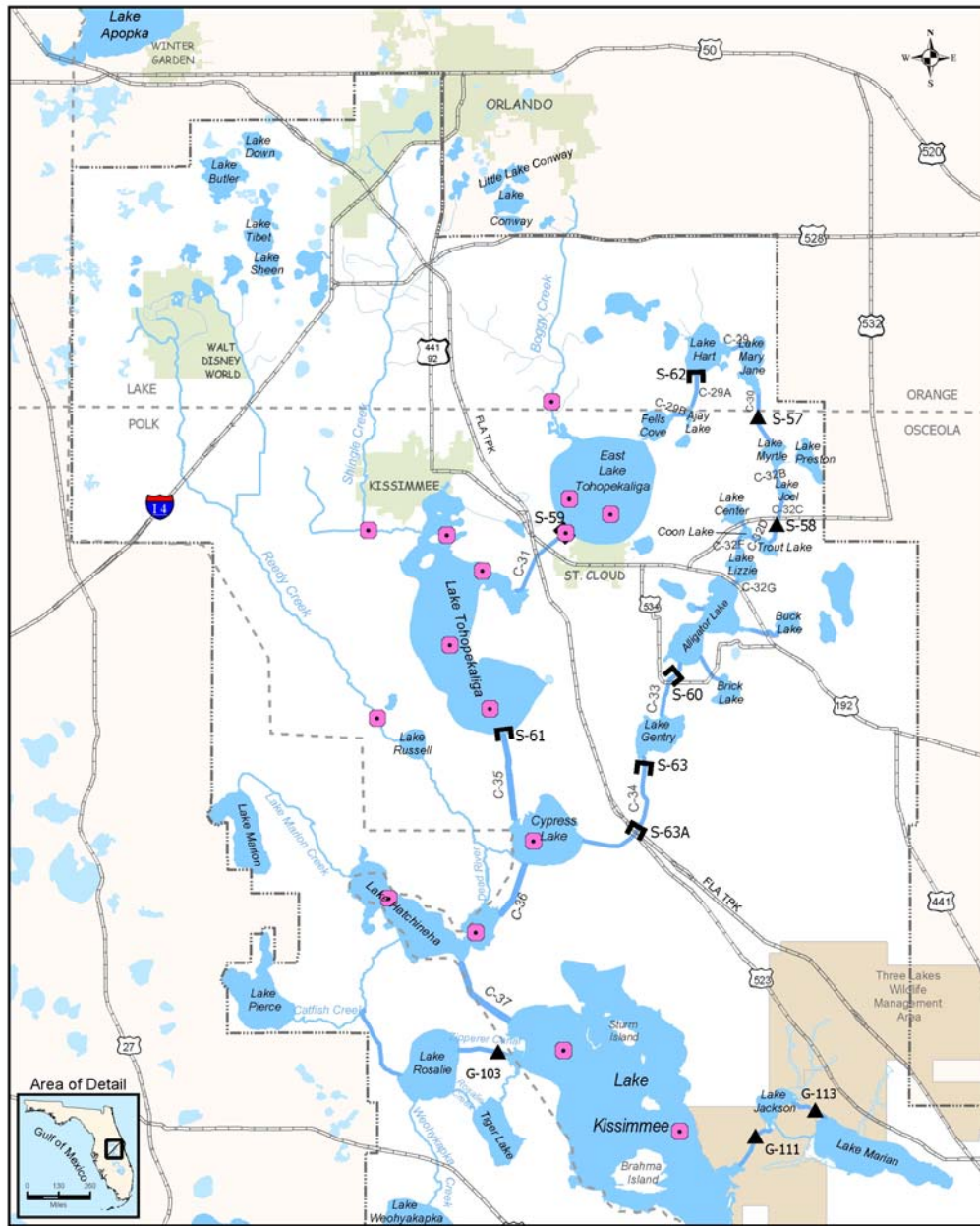
INTERIM RESPONSES TO PHASE I RESTORATION CONSTRUCTION

- A key element of the KRRP is a comprehensive restoration evaluation program which tracks environmental responses to restoration.
- The Kissimmee River Restoration Evaluation Program (KRREP) uses performance measures to predict ecological changes that are expected to result from the project, including changes in hydrology, water quality, and major biological communities such as plants, invertebrates, fish, and birds.
- Prior to the first phase of restoration construction, monitoring was conducted for all of these components to establish a baseline for evaluating future changes.
- Continued monitoring since completion of Phase I has documented promising increases in dissolved oxygen levels (essential for aquatic life), reductions in river channel floating plant cover and accumulated sediments on the river bottom, recovery of wetlands, and increased populations of waterfowl, wading birds, and bass and other sunfishes.
- Full ecological response to the physical aspects of restoration construction is expected after implementation of the Headwater Revitalization water regulation schedule in 2014, which will allow better simulation of pre-channelization hydrologic conditions.
- For this reason, ecological monitoring will continue for at least 5 years after implementation of the Headwaters regulation schedule (or until responses stabilize), at which time final evaluations of project success will be conducted.
- Promising monitoring results from the first phase of restoration construction indicate that after hydrologic conditions are fully restored in 2014, the Kissimmee River Restoration Project is on track to achieve its goal of restored ecological integrity in the Kissimmee River and its floodplain.

Lower Kissimmee Basin



Upper Kissimmee Basin



- Major Roads
- WMD Boundary
- County Boundary
- Spillway
- Water Control Structure
- Water Quality Sites
- Hydrography



Construction Sequence	Name of Construction Phase	Timeline	Backfilled Canal (miles)	River Channel Recarved (miles)	River Channel to Receive Reestablished Flow (miles)	Total area (acres)	Wetland Gained (acres)	Location and Other Notes
1	Phase I	June 1999 - February 2001 (complete)	8	1	14	9,506	5,792	Most of Pool C, small section of lower Pool B
2	Phase IVA	June 2006 - September 2007 (complete)	2	1	4	1,352	512	Upstream of Phase I in Pool B to Wier #1
3	Phase IVB	June 2008 - December 2009 (complete)	4	4	6	4,183	1,406	Upstream of Phase IVA in Pool B (upper limit approximately at location of Wier #3)
4	Phase II/III	April 2012 - October 2014 (projected)	9	4	16	9,921	4,688	Downstream of Phase I (lower Pool C and Pool D south to the CSX Railroad bridge)
Restoration Project Totals			22	10	40	24,963	12,398	
						(40 sq mi)	(20 sq mi)	
NA	Headwaters lakes (Lakes Kissimmee, Cypress, Hatchineha, and Tiger)		NA	NA	NA	63,585	7,200	Total area includes entire area of the lakes; wetlands gained includes only the acres of improved littoral zone vegetation expected to be gained by increased high stage.
NA	Kissimmee River Pools A-D		NA	NA	NA	38,207	12,398	Total area includes all of pools A-D within 100-year floodline, including areas that will not be restored. Wetlands gained is the total area of wetlands that will be restored in KRR project area.
Area totals						101,793	19,598	

Contract	Number	Description	Start	Finish
1	1	Test Backfilling – A short section of C-38 backfilled as a test.	COMPLETE	
2b1	1a	C-37 Dredging - Increase discharge capacity	7/1/2010	7/3/2012
4	2	Degrade Local Levees in Pool A, B & C.	COMPLETE	
5	3	S-65A Tieback Levee Modification – S-65A tieback levee gap and culverts.	COMPLETE	
6a1a	4	S-83/84 Spillway Additions - Increase discharge capacity.	COMPLETE	
6a1b	5	S-68 Spillway Addition - Increase discharge capacity.	COMPLETE	
6a2	6	Istokpoga Canal Improvements - Replace G-85 with new structure S-67, construct tieback levee, dredge canal and degrade spoil to floodplain elevation, construct public boat ramp.	9/1/2006	8/1/2010
6b	7	Basinger Grove - Construct levees and detention area.	COMPLETE	
7	8	Reach 1 Backfilling - Backfill 7.5 miles of C-38, recarve 1 mile of river channel, degrade spoil to floodplain elevation, remove S-65B.	COMPLETE	
7b	9	Radio Tower - Build new radio tower to replace S-65B tower.	COMPLETE	
8	10	U.S. Highway 98 Bridge - Elevate, resurface and add box culverts under US98.	COMPLETE	
9	11	CSX Bridge - Elevate CSX Railroad Bridge.	9/1/2010	9/1/2012
10/12	12	Reach 2/3 Backfilling - Backfill 8.5 miles of C-38, degrade spoil to floodplain elevation, remove S-65B.	4/1/2012	10/1/2014
11	13	S-65D Spillway Additions - Increase discharge capacity at S-65D, remove S-65DX and replace with S-65DX1	COMPLETE	
13a	14	Reach 4a Backfilling - Backfill 1.9 miles of C-38, recarve 0.9 miles of river channel, remove weirs 1-3, degrade spoil to floodplain elevation, build section of Avon Park fence.	COMPLETE	
13b	15	Reach 4b Backfilling - Backfill 3.9 miles of C-38, recarve 4.3 miles of river channel, build section of Avon Park fence.	COMPLETE	
14a	16	Pool A Spoil Mound Removal	COMPLETE	
14b	17	Pool A Spoil Mound Removal	COMPLETE	
15	18	River Acres - Flood mitigation.	12/10/2009	12/12/2011
15a	19	Hidden Acres - Flood mitigation.	COMPLETE	
18	20	Recarve Oxbows - Recarve 4 miles of river channel in Pool D.	9/1/2010	3/15/2012
12A	21	S-69 U-Shaped Weir	5/1/2012	11/2/2013
18A	22	S-65E Overflow Weir	5/1/2012	5/2/2013
18B	23	Pool D Boat Ramp	9/1/2011	9/1/2012