



**US Army Corps
of Engineers**®
Jacksonville District

BUILDING STRONG®

SITE 1 IMPOUNDMENT COMMUNITY NEWSLETTER

September-October 2011

The purpose of this bimonthly community newsletter is to keep citizens informed about Phase 1 of the Site 1 Impoundment/Fran Reich Preserve project, one component of the Comprehensive Everglades Restoration Plan (CERP). The U.S. Army Corps of Engineers, Jacksonville District and the South Florida Water Management District will provide information on current and future activities to the public throughout the construction phase.

COMMUNITY AWARENESS

Burning of Vegetative Debris

Burning of vegetative debris from on-site clearing and grubbing operations continues on weekdays when wind and other conditions are right.

Public Access Still Limited

The L-40 levee and canal remain closed for boating, hiking, bicycling and all other public use from Loxahatchee Road north for three miles until Oct. 9, 2012. For a map of the temporarily closed portions of the L-40 levee go to: http://www.fws.gov/loxahatchee/PDF_files/TemporaryClosure.pdf

NEW PHASES, NEW CHALLENGES AND NEW TOOLS



Top - Excavation of unsuitable material has begun on the south side of the L-40 levee to prepare for the new foundation. The yellow excavator removes soft peat from the slope of the levee, then the orange excavator loads it into articulated dump trucks for removal to an on-site storage area. The general profile of the existing levee is a limestone base with a layer of sandy shell, followed by an organic layer of dark peat (decayed sawgrass and other organic material), topped with spoil, likely taken from the L-40 canal.

Bottom - A front end loader dumps vegetative debris from clearing and grubbing operations into a burn pit. The red machine at right is called an air curtain. It blows air down into the pit to feed the fire and make it burn more quickly and with less smoke, so each burn is more efficient.



Phase 1 of the Site 1 Impoundment project has been funded by the American Recovery and Reinvestment Act (ARRA)

SITE 1 IMPOUNDMENT
Fran Reich Preserve

SITE 1 IMPOUNDMENT *Fran Reich Preserve*



Left - The removal of more than 18,000 cubic yards of material from three separate 500-foot excavations on the south side of the L-40 levee is complete. The earthen plug marking the end of the first dewatering section and beginning of the second section are shown in the upper right corner. Excavators are shown working at the design elevation for the new excavation floor, where limestone cap rock or shell sand provide a more stable base than peat. A dark band of peat, which is prone to decomposition and compression over time, is visible between the excavators. A dewatering trench is an additional tool to keep the excavation floor dry. Embankment fill is now being placed and compacted in the excavation areas. Excavation and placement of embankment fill occurs on one side of the levee at a time in order to ensure embankment stability.

Right - In addition to the 2,000 feet of sheetpile in the first dewatering section, more than 2,900 out of 3,000 feet of sheetpile has been driven for the second section.

Bottom - White-tailed deer graze near the soil cement batch plant.

Water challenges

Dangerous drought conditions this spring resulted in a burn ban, and debris had to be stockpiled until the ban was lifted in July. Drought conditions were substantially alleviated in the month of August, when eastern Palm Beach County saw 9.84 inches of rain, 1.78 inches above normal, and eastern Broward County received 9.71 inches of rain, 2.28 inches above normal. However, meteorologists are predicting a drier-than-normal dry season. If the remainder of the wet season does not provide significant rainfall, such as a well-placed tropical system, the water shortage is likely to continue through the spring season. In September, rainfall levels fell below normal again, when eastern Palm Beach County saw 7.06 inches of rain (83 percent of normal) and eastern Broward County received 6.41 inches of rain (80 percent of normal). In addition, rainfall is not evenly distributed throughout the state, so rainfall in south Florida does not necessarily mean that much-needed rain is falling in the Okeechobee basin to the north.



Fortunately, no construction time has been lost to tropical storms, but frequent rains still provide challenges to construction. More rain means more water to remove during dewatering operations and placement of fill in levee foundations can stall if the base becomes saturated. Even the placement of metal sheetpile may be halted temporarily due to safety concerns associated with lightning and the tall barge-mounted crane.

Information about water shortage orders and warnings, current weather and water conditions, and water-saving tips can be found at www.sfwmd.gov/waterwatch.

Creature feature

Is this the *Creature from the Black Lagoon*?



Photo by Glenn Gannon

Did an ancient living fossil drag itself out of the La Brea Tar Pits and onto the Site 1 Impoundment construction site?

This spiked prehistoric throwback looks like it might have crawled onto Fred Flintstone's construction site instead of the Site 1 Impoundment.

The creature is actually a Florida snapping turtle. They have long tails with three rows of spikes, making them look like modern-day dinosaurs. This one looks like he might have been caught in an oil spill, but his appearance is due to his behavior. Believe it or not, these turtles do not like to bask in the sun like most turtles. In fact, they are most active at night. They like to bury themselves in the muddy bottom so that only their eyes and nostrils are exposed. This behavior is used to surprise and ambush prey, and they will eat just about anything. Since they spend so much time lurking in the mud, the turtles may also have mossy-looking algae growing on their backs.

Fingers and toes, beware! It's a good thing that Glenn Gannon, the on-site Project Engineer for Site 1 Impoundment, was wearing his steel-toed boots when he took this photograph. These turtles have massive heads with sharp jaws that snap closed very quickly. They could easily take a finger off, and if disturbed, can release a foul-smelling musk, so leave them alone!



All other photos by Mark Bias

Behind the scenes

1. Interlocking steel sheetpile is driven into the ground to create a continuous barrier that allows for levee improvements. The cofferdam holds back the waters of the L-40 canal.
2. Walers, also known as tie-backs, are bolted along the top of the sheetpile to provide additional support.
3. Batter piles are installed at an angle and brace the sheetpile against the tremendous pressure of the water on the other side.
4. Turbidity barriers and ongoing turbidity monitoring protect the Arthur R. Marshall Loxahatchee National Wildlife Refuge, designated as an Outstanding Florida Water.
5. A wingwall cuts back to create the first 2,000-foot dewatering section.
6. A built-up earthen plug at the end of the sheetpile wingwall protects the integrity of the existing levee.
7. Power packs with diesel motors are used to pump water out of the first dewatering section.
8. Double-walled diesel fuel tanks have an additional containment system.
9. In the dewatering area, water is continually pumped through large, flexible pipelines to a holding area for dewatering effluent. The water is held there on the job site until it eventually percolates into the ground.

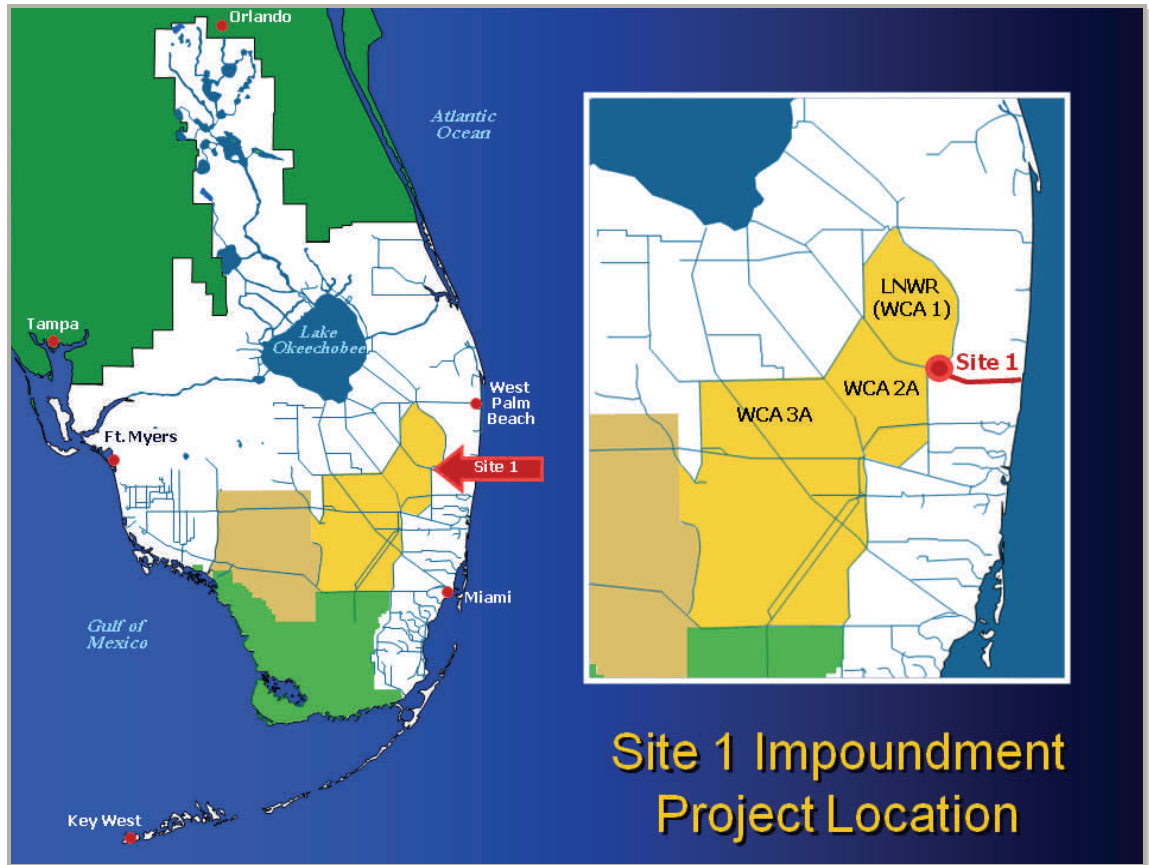
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Scan it and go!



There's an app for that!

Scan this tag with your mobile phone to view additional information from the Site 1 Impoundment project web site. QR or "Quick Response" codes, such as the image above, can be scanned with an application from your mobile provider.



Site 1 Impoundment Project Location

A LOOK BACK: MOVING FROM PROPOSED DUMP SITE TO EVERGLADES RESTORATION CONSTRUCTION SITE

In the 1980s, a triangle of land at the south end of the Arthur R. Marshall Loxahatchee National Wildlife Refuge was the preferred location for a proposed solid waste dump and incinerator (hence the name "Site 1"). Today, it is known as the Fran Reich Preserve, in honor of Fran Reich, a dedicated Boca Raton citizen, community leader and Everglades supporter whose vibrant energy and steadfast commitment drove efforts to preserve the area for Everglades restoration.

The Site 1 Impoundment/Fran Reich Preserve project is one component of the Comprehensive Everglades Restoration Plan (CERP). The 1,660-acre impoundment will capture and store water that is currently discharged to the Intracoastal Waterway. The impounded water may be used to reduce seepage from adjacent natural areas, prevent saltwater intrusion and reduce demands on the natural system in the Loxahatchee National Wildlife Refuge.

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