

Corps of Engineers

Bigwater News

Volume 1, Issue 5

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Tow Ditch Backfill Update

Special points of interest:

- Steps involved in Toe Ditch Backfilling
- Biologists take initiative in protecting Bulrush
- Royal Palms—which is which?
- Lake level comparison of 2001 & 2007 droughts.

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Backfilling 600 feet of toe ditch recently has been completed north of Pahokee Airport. Work crews will now focus their efforts on a 400 ft stretch near Canal Point.

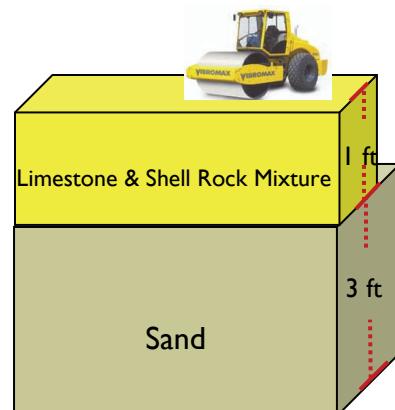
Backfilling a section of toe ditch begins with removing muck—decayed vegetation—from the existing trench. The trench is then filled with approximately 3 ft of sand and topped with a 1ft layer of a limestone and shell stone mixture. The fill material is then compressed using a vibratory compacting roller, which makes the top surface virtually impermeable. Water entering the toe ditch will now remain on the surface of the toe ditch and flow until it intersects one of many canals along the Lake.



Foreground shows section of Toe Ditch that has been recently de-mucked. A dozer spreads sand in the background.



A Vibratory Compact Roller packs the fill material.



Profile view of fill material added to Toe Ditch



A completed section of Toe Ditch demonstrates its ability to hold and direct water.

Various Efforts Taken to Protect Bulrush

The environmental stewardship section is currently testing the effectiveness of a new herbicide to control invasive aquatic plants on Lake Okeechobee. Approximately 30 acres of marsh in Fisheating Bay infested with Water Hyacinth—a free floating weed—have been sprayed with the herbicide Clearcast. This herbicide has been touted to control broad leaf plants while causing little harm to Bulrush, a large grass-like plant esteemed for its high ecological value. Effects of Clearcast take between 3-5 weeks to observe, so the “jury is out” on whether this herbicide has lived up to its favorable reputation.

Earlier this year, Biologist Jon Morton initiated a project to survey and calculate the total acreage of Bulrush established along the lakeshore. To date, GPS coordinates and maps have been generated and recorded for Bulrush stands at the East Wall, Coots Bay, and Indian Prairie Marsh, with ongoing work at the West Wall. Documenting the location and total acreage of Bulrush in the Lake will allow biologists to track changes in total plant coverage over time and adjust management strategies accordingly. Biologists will also provide contracted herbicide applicators with maps that highlight Bulrush stands to avoid during spraying.



The parallel tracks in the photo (left) were left by six-wheeled ATVs (All Terrain Vehicles) that are commonly used when applying herbicides in especially shallow water areas. Not visible in the photo, a multitude of Water Hyacinth seedlings grow just below the greenish-brown canopy of Cockspur Grass.

(Photo taken at Fisheating Bay by Jon Morton)

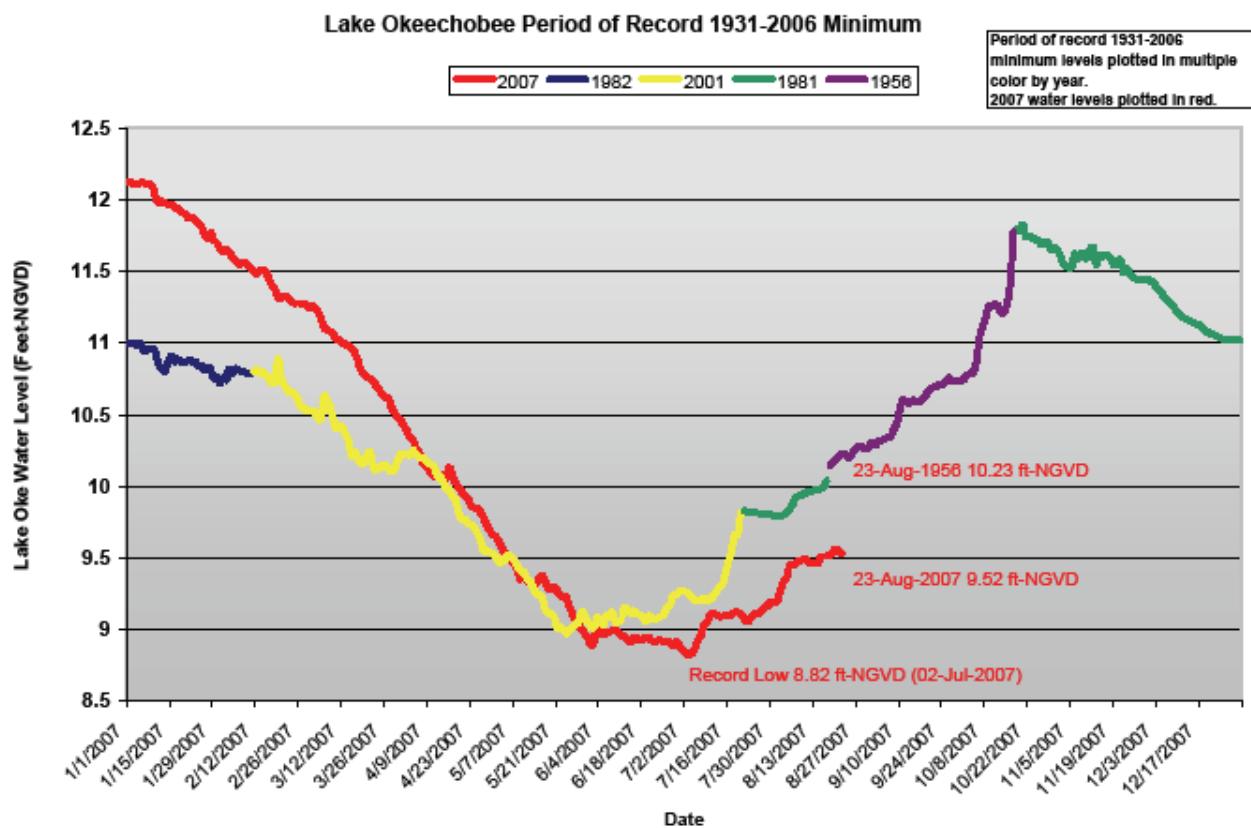


Biologist Tyson Zobrist returns from mapping Bulrush using a handheld PDA at Torrey Island.



Soft-stem Bulrush

2001 & 2007 Droughts—A Comparison of Lake Levels



Gators Hole-up In Tow Ditch

Aside from swamps, marshes and lakes, drainage canals are a favorite habitat of alligators. This fact is evident by the numerous run-ins that construction crews have had with gators while working on the Toe Ditch Backfill Project.



Alligators create small ponds, called alligator holes, by excavating substrate and vegetation. Sometimes, alligators expand these holes by digging beneath an overhanging bank to create a hidden den. After tunneling as far as 20 feet, they enlarge the end, making a chamber with a ceiling high enough above water level to permit breathing. This is not the alligator's nest, but a den, and a way for the reptile to survive the dry season and winter. (continued on back page)

Alligator hole in embankment of Toe Ditch

The Royal Palm- Florida or Cuban?

The name says it all, Royal Palm! Truly an aristocrat of the plant kingdom, this palm makes a memorable impression wherever it is grown. Massive and symmetrical with a smoothly sculpted trunk this palm looks almost artificial, like a denizen of an idealized Disney landscape. But it is real and lends a distinctive air to parkways and boulevards all over South Florida and the Caribbean. In older references you may see this genus referred to as *Oreodoxa* but the genus name was changed some years ago to *Roystonea* (in honor of General Roy Stone an army engineer who served in the Caribbean at the turn of the century).

Imported into Florida in great numbers during the 20's and 30's, the Cuban Royal palm (*Roystonea regia*) is the species most often encountered. The trunk of the Cuban Royal Palm (bottom, left) is swollen at the base. It constricts about halfway up and then bulges again just below the crownshaft creating a dramatic profile. The Florida Royal Palm (*Roystonea elata*) is very similar to the Cuban except that the trunk is a simple column that lacks the Cuban's curvaceous figure. The trunks of both are a smooth light gray that looks as if it had been cast from concrete.

The Florida Royal Palm (*Roystonea elata*) is native to the cypress swamps of south Florida. It is disappearing from the wild but nice stands can still be seen at the Royal Palm Visitors Center near Homestead, Florida in the Everglades National Park. The Cuban Royal Palm (*Roystonea regia*) is of course native to Cuba.



Cuban Royal Palm

The diagram below nicely shows the curvaceous features of the Cuban Royal Palm.



Florida Royal Palm



South Florida Operations Office
525 Ridgelawn Road
Clewiston, FL 33440

Phone: 863-983-8101
Fax: 863-983-8579

Help Wanted:

If you would like to contribute ideas, information or photographs to the BigWater News email or phone the newsletter editor, Michael Boles:

michael.e.boles@usace.army.mil
863-983-8101 x222

Notable September Dates

3rd Labor Day
4th Newspaper Carrier Day
6th Read a Book Day
8th International Literacy Day
9th National Grandparents Day
17th Citizenship Day
21st World Gratitude Day
23rd First Day of Autumn
23rd Good Neighbor Day
26th Johnny Appleseed's B-Day
28th Native American Day

Thank you to the following staff members for their contributions to this month's newsletter:

Russ Burkett
Jon Cichoski
Jeremy Crossland
Jon Morton
Tyson Zobrist
Tom Loftis

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Gators Hole-up In Toe Ditch

Unfortunately, when work crews encounter active gator holes or dens, they must have the alligators removed. The process begins with notifying the Florida Fish and Wildlife Conservation Commission who will usually issue a "take" permit. At this point, the Corps can hire trapping contractors to capture and remove alligators from work sites.



This huge gator measured 12.6 feet. The longest recorded length for an alligator is 19' 2", which was trapped in the early 1900's in the State of Louisiana. Most wild alligators do not get above 13 feet in length, but may weigh 600 pounds or more.

<http://home.cfl.rr.com/gatorhole/#Habitat>



Alligators are placed in wooden crates for transport.



Photos taken by Tom Loftis

September Calendar

Saturday, September 15—North American Migration Count. The rules are simple: spend a day in the field counting birds in a specified area, and keep track of hours and miles on foot, car, boat, or feeder watching. Contact Margaret England of Hendry-Glades Audubon Society at sta5birding@earthlink.net for additional information.

Saturday, September 22—National Public Lands Day. Volunteers are needed to help build a 5K trail and maintain an existing nature trail at St. Lucie Lock Recreation Area. For more details contact park rangers Adam Tarplee or Paula Bratschi at 863-227-3609



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Phases of the moon: Sept. 3: ☽ 11: ☿ 19: ☽ 26: ☽

<http://www.saj.usace.army.mil/sfoo/BigWater/BigWaterNewsArchives.htm>