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Lake O dike problems not new to federal officials

By Kate Spinner

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Despite warnings from a panel of experts that the levee encircling Lake Okeechobee could give way during a hurricane and flood 40,000 people and the Everglades, officials with the U.S. Army Corps of Engineers said they are aware of the problems and have the situation under control.

"The contents of the report did not contain any great revelations," said Steve Duba, chief of engineering for the Corps office in Jacksonville.

Meanwhile, Gov. Jeb Bush is working with municipalities south of the lake, from Moore Haven to Pahokee, to impose mandatory evacuation zones before the arrival of strong hurricanes this year.

The South Florida Water Management District hired a team of three experts in January to evaluate the integrity of the dike. Officially released Tuesday, the report stated the dike had a one in six chance of collapsing without constant monitoring and repair.

The report called for keeping the lake 2 feet lower, re-evaluating current repair work, bringing the levee up to dam standards and helping local officials update their disaster response preparations.

While the Corps has not agreed to abide by the report's recommendations, keeping the lake below 15.5 feet above sea level this hurricane season could reduce the lake's capacity to store water and could ultimately result in more releases to the Caloosahatchee River.

Anatomy of the Herbert Hoover Dike

The Corps built the dike in response to a hurricane in 1928 that pushed the lake over a flimsy muck levee, killing an estimated 2,500 people who lived south of the lake.

Since the 1930s, the dike, which was technically reclassified as a dam last April, has been extended almost entirely around the lake and reinforced.

Though the structure is 140 miles long, 100 feet wide at the base and an average of about 35 feet tall, it's still just an earthen levee.

"What we're dealing with is a 70-year-old muck levee that is now classified as a dam," Duba said.

Dams, defined as structures that continuously hold back water, require higher safety standards than levees. But to evaluate whether the Herbert Hoover Dike meets dam standards would take an act of Congress.

Virtually every step the Corps takes and every dollar it spends requires congressional authorization.

Corps studies are never quick, either. Duba said the quickest studies are completed in seven years but more often last 15 to 20 years.

Analyzing the dike's safety compared with dam safety standards, he said, would not take care of any imminent problems. The Corps has known for decades about many of the problems the water management district consultants pointed out, he said.

A review of the lake levee pinpointed structural problems in 1986 and the Corps used that report to justify further review in 1999. Eventually, Congress authorized funding for a phased rehabilitation of the dike, which is now in progress.

For 2007, the Corps is authorized to spend about \$40 million on structural improvements, which include inserting a cement-bentonite wall into the dike.

That rehabilitation work, however, is based on shoring up the dike to meet levee safety standards, not dam standards.

Duba said the Corps recognizes the dike is not in excellent shape, but he said engineers work around the clock to make sure residents near the lake are safe from flooding.

"We've been managing this thing since 1930 and we haven't had any problem with it," Duba said, meaning there have been no catastrophes.

Responding to criticism

Duba said the Corps does not plan to react to the report or the list of recommendations laid out in a April 28 letter Bush sent to John Paul Woodley Jr., assistant secretary of the U.S. Army for Civil Works.

Bush asked Woodley, who oversees the Corps, to consider some technical improvements to the dike, as well as keeping the lake lower, accelerating repair work and requesting congressional approval to bring the levee up to dam safety standards.

"He asked us to look at some things, to consider some things. He didn't ask us to do anything," Duba said, referring to Bush's letter.

While the report is mostly critical, it lauded the Corps' ability to avert catastrophe each year.

"Their in-depth knowledge, first-hand experience and sustained vigilance are all that has stood between the dike and catastrophe. Commendable as it is, this cannot go on indefinitely, any more than a chronically ill patient can continue to be treated by 911 calls," the report stated.

Les Bromwell, one of the engineers who worked on the report, said the Corps' dependence on finding problem areas and fixing them creates a worrisome situation.

"It becomes more and more difficult to ensure 100 percent success as time goes on," Bromwell said. "You only need one miss to have a problem that could have been fixable turn into a breach that turns into a very serious event." Duba said he did not disagree, but until repairs are made that's the only way to make sure the dike doesn't breach.

The report also questioned the repairs in the works and called for an evaluation to ensure they were adequate. Duba and Richard Bonner, deputy district engineer for project management with the Army Corps, said they will study the repairs, but they do not intend to stop work to do so.

While repairs continue, the key to safety, Corps officials said, will be keeping the lake elevation low.

"The risk of the dike and the risk of failure, and everything, is highly correlated with the lake level," Duba said.

The report suggests keeping the lake two feet lower than it is kept now under the Corps' complicated regulation schedule. The Corps tries to keep the lake between 13.5 and 15.5 feet

above sea level, but it is reviewing that schedule now with an eye toward managing the lake lower starting next year.

Bromwell said he had not run models to see how the lake would be affected by a two foot drop, but he said the lake should not rise above 15.5 feet.

Now, Corps officials become concerned when the lake rises above 17.5 feet.

Duba said public safety is a higher priority, but the Corps has to weigh all the demands that are placed on the lake, not just flood protection. Otherwise, he said, the lake could be dropped to zero feet for ultimate safety.

The lake is used for navigation, farm irrigation and water supply. While it's treated more like a reservoir, the lake is also home to a slew of birds and fish. Its waters also keep the Everglades from drying out and the Caloosahatchee River from becoming too salty.

Duba said the report focused only on safety without taking into account all the demands that are placed on the lake.

Lee County Smart Growth Director Wayne Daltry emphasized the need to look beyond safety, too, adding that giant levees do not protect people on the South Florida coasts from flooding.

"What is the level of protection we're supposed to be giving to towns from hurricane flooding. Is it supposed to be equal?" Daltry said. "They can't be guaranteed perfect protection from storms."

Living with the dike

Last year, Hurricane Wilma gouged a 100-foot long, 40-foot thick hole in the Hoover Dike near Pahokee, but the mayor there isn't worried.

J.P Sasser, the mayor of Pahokee, said he's not concerned about the report because he trusts the Army Corps to make repairs on time.

"Those of us that have lived and grown up right at the foot of the levee so to speak, we just don't seem to have the concerns that everybody that does not live near the levee has. It's actually a security blanket," Sasser said. "We've been through a lot of hurricanes through the years and it hasn't broken yet."

On Monday, emergency management officials briefed Pahokee officials and leaders in other towns around the lake on the hurricane response as well as the concerns outlined in the report. Such discussions occur every year before hurricane season.

In another routine visit to discuss hurricane preparedness, Michael Chertoff, director of the Department of Homeland Security, met with Gov. Bush in Tallahassee.

At a brief press conference following the meeting, which was recorded in part by Bush's press office and e-mailed to media, Bush emphasized the need to repair the dike and to plan for disaster.

"There needs to be a commitment to fortify the dike and secondly, we need to adjust our evacuation plans for the region," Bush said in the recording. "And we intend to do that."