



US Army Corps
of Engineers
Jacksonville District

Herbert Hoover Dike Rehabilitation Project

October 2006

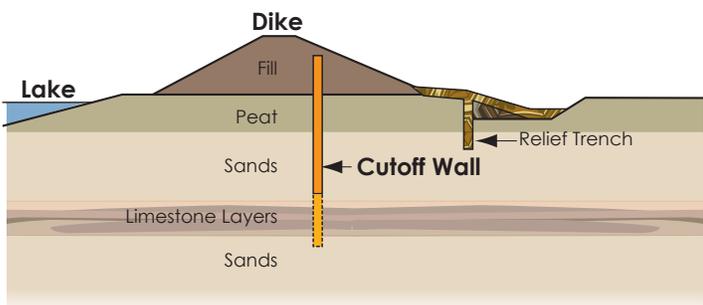
Facts & Information

The U.S. Army Corps of Engineers, Jacksonville District released on October 5, 2006 a report developed by an Independent Technical Review panel about the Herbert Hoover Dike (HHD) Major Rehabilitation Project. The HHD, a 140-mile long earthen levee, surrounds Lake Okeechobee, the “Heart of the Everglades” in south Florida. In managing the lake and the dike, the Corps has provided protection for lakeside communities for more than 70 years.

Background

In the late 1990s, the Jacksonville District published reports based on extensive studies that indicated eight areas of vulnerability in the HHD. In 2000, we received Congressional approval to proceed with the design of a project to rehabilitate, or reinforce, the HHD. This project, as originally designed, met the objectives identified in our earlier studies. Construction began in December 2005.

Original Design for Reach 1A



NOT TO SCALE

After receiving recent input from a variety of expert sources and in light of lessons learned following Hurricane Katrina, the Jacksonville District convened an Independent Technical Review (ITR) panel to further evaluate the design of the rehabilitation project.

The ITR panel included Corps experts from across the

nation and representatives of the South Florida Water Management District (SFWMD). This group evaluated the HHD rehabilitation project design for the first section of the project, Reach 1A, to determine if it was in keeping with applicable criteria, regulations and professional standards and practices. Several ITR members had also served on the Interagency Performance Task Force to develop an evaluation report of the New Orleans and Southeast Louisiana Hurricane Protection System.

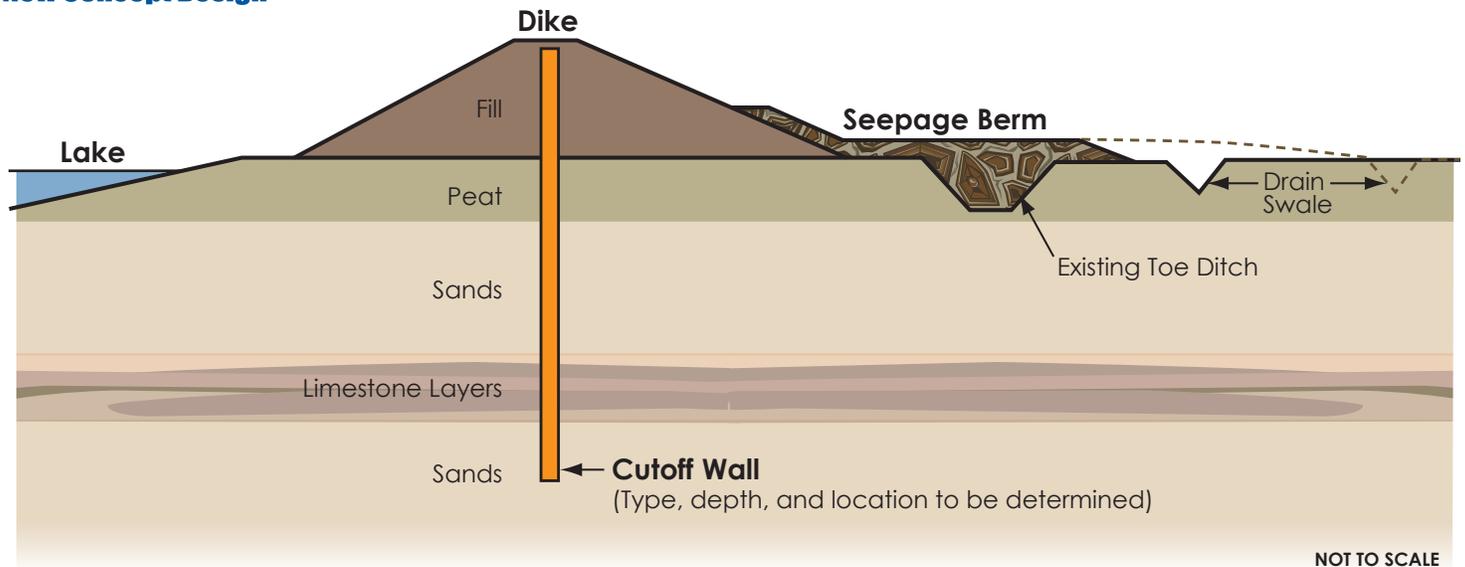
After the ITR review, we conducted a second level of evaluation. On Sept. 6-8, we hosted a meeting of about 40 experts, to review the ITR findings and to discuss future actions for strengthening the HHD. Participants included the ITR panel and additional scientists and engineers from the SFWMD, URS (a global engineering design firm) and BCI (authors of the state-sponsored report released in May).

The New Rehabilitation Design

The new design concept, proposed by the Corps and endorsed by this group, includes a seepage berm for decreasing piping and a cutoff wall for increasing stability. The design approach will also incorporate additional protection features where needed. It is important that this design allows for upgrading, if and when the Corps determines that to be necessary.



New Concept Design



The design approach closely mirrors an alternative that was developed by the Corps in 2000, but not chosen by the state and federal partners because it required additional and costly acquisition of real estate and may have impacted regional groundwater. That decision was based on the team's knowledge and best professional judgment at that time. The post-Katrina environment allowed us to overcome significant constraints and focus solely on public safety and risk reduction goals.

A seepage berm appears to be the best long-term solution to addressing piping, or internal erosion, incidents. The actual size of the berm may vary around the dike, depending on need and available space. In some areas, cutoff walls will be constructed to provide an additional line of defense. We will ensure that cutoff walls are installed to the depth that will ensure the greatest project success. This is dependent on the local geologic conditions, and is normally extended to a depth that prevents groundwater flow. However, for our intended purpose at HHD, the cutoff wall only needs to be deep enough to intercept all potential internal erosion pathways in the dike's foundation.

The height of the cutoff wall will be sufficient to provide protection against the standard project flood for Lake Okeechobee, which corresponds to a lake elevation of 26 feet. We will ensure that the top of the cutoff wall is well above that elevation, to account for uncertainties and provide further risk reduction.

Where We Are Now

Currently, we have a 6,200-linear foot cutoff wall constructed at Reach 1A. The wall should provide a greater level of protection against existing piping than without the wall. However, because of the presence of sand lenses throughout the length of the cutoff wall, it does not meet the specified construction requirements and we have placed a temporary hold on that portion of the project until we have incorporated new design elements.

The Corps is currently working to expedite the redesign and resume construction on Reach 1A. Concurrently, the project team will prioritize and initiate design and construction in accessible areas that we already own and that are most in need of repair. With our partners, we will initiate planning, real estate acquisition and design in the remainder of the HHD.

For More Information



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