

FALL 2023

The U.S. Army Corps of Engineers completed risk reduction work in early 2023 on Herbert Hoover Dike, the 143-mile structure surrounding Lake Okeechobee. Since 2001, the Corps has made a significant investment, over $1.6 billion, in projects designed to reduce the risk of catastrophic failure of the aging structure.

DIKE HISTORY

In the late 1920s, flooding from hurricanes killed thousands of people living in communities around the lake. As a result, Congress authorized the Corps to construct a series of levees. In the 1930s, the Corps built 68 miles of levee on the south shore of the lake, and an additional 16 miles of levee near the city of Okeechobee on the north.

Following another hurricane in 1947 that left much of south Florida under water for weeks, Congress authorized a project that raised and widened the existing levees. Congress also authorized the Corps to build an additional 59 miles of levee, bringing the dike to the 143-mile footprint that it has today. In 1960, the series of levees was renamed the Herbert Hoover Dike.

The dike was built with gravel, rock, limestone, sand and shell. These natural materials allow water to seep through the embankment. As the water level in the lake increases, the seepage can lead to internal erosion. Without intervention, the movement of material within the dike could cause the dike to fail, putting thousands of people in harm's way.

REHABILITATION

In the 1990s and early 2000s, the Corps observed issues at the dike during high water events in Lake Okeechobee. These issues included movement of dike material, such as sloughing, the development of sinkholes, and other erosion. The Corps dealt with issues immediately to keep the dike from failing. A series of studies was undertaken on various sections of the dike. As the results of those studies became available, the Corps began rehabilitation of the dike. A Dam Safety Modification Study was completed in 2016 that identified all remaining fixes needed to reduce risks around Herbert Hoover Dike.

WATER CONTROL STRUCTURES

The Corps completed the replacement or removal of 32 water control structures through Herbert Hoover Dike around Lake Okeechobee between 2010 and 2022:

- Completed the replacement of 28 water control structures. These structures (also known as "culverts") posed a failure risk due to loss of embankment material into and along them.
- Removal or abandonment of four water control structures at various locations. These culverts were no longer needed.

EMBANKMENT CUTOFF WALL

- Completed construction of 56.2 miles of seepage barrier (known as a partial-penetrating cutoff wall) between Port Mayaca to west of Moore Haven on the south side of the lake and in the Lakeport area on the west side of the lake. The constructed cutoff wall is located in areas known as Common Inundation Zone A, Common Inundation Zone B and Common Inundation Zone C.

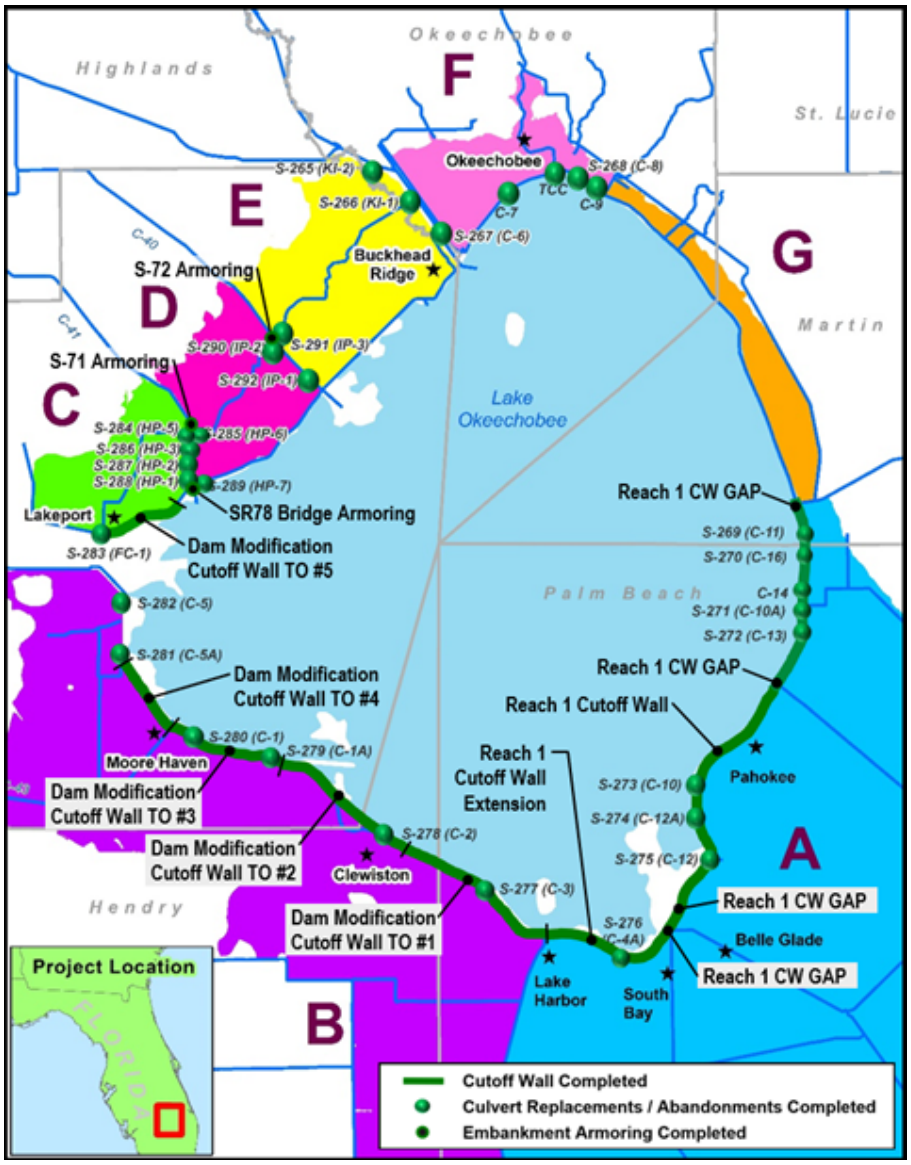
- The cutoff wall provides a barrier to address internal erosive pathways, also known as seepage and piping.

EMBANKMENT ARMORING

- Completed the armoring at the State Road 78 bridge abutments on the Harney Pond Canal. Placement of armoring at this location reduces the risk of dike failure due to storm surge brought about by a tropical system with a high lake level.

- Completed the armoring of the HHD Structure S-71 and Structure S-72 embankments on the Harney Pond and Indian Prairie Canals. The risk of embankment failure from over-washing or over-topping events has been reduced by placing armoring on the embankments adjacent to each structure.

HHD Common Inundation Zones



COST/SCHEDULE

The total cost of the rehabilitation effort is more than $1.6 billion. The HHD project was fully funded to completion with the State of Florida's $100 million contribution and inclusion in the Supplemental Long-Term Disaster Recovery Investment Plan. The Corps completed construction on all risk reduction measures in early 2023. The Dam Safety Action Classification (DSAC) Rating for HHD was changed from Level 1 to Level 4 with the completion of the risk reduction measures.

FOR MORE INFORMATION

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