HERBERT HOOVER DIKE REHABILITATION PROJECT

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U.S. Army Corps of Engineers
BUILDING STRONG®
143 miles of embankment around Lake Okeechobee

- 32 federal culverts
- 5 spillway inlets
- 5 spillway outlets
- 9 navigation locks
- 9 pump stations

No overflow capability

Built by hydraulic dredge and fill methods

- Not acceptable to today’s construction standards
Internal erosion (seepage and piping)
- Through embankment
- Through foundation

Culvert structures
- Soil erosion into conduit
- Erosion/Piping around conduit

Overwash/Overtopping
- Erosion of downstream slope

Dam Safety Action Classification (DSAC) Level 1- Assigned 2006
Major Rehabilitation Report (MRR) 2000
- Reach 1 initial phase
- Cutoff wall constructed

Federal Water Control Structure Culverts 2011
- 32 Federal Culverts within the entire HHD system
- Replacement or Removal

Dam Safety Modification Study (DSMS) 2016
- System-wide approach
- Risk reduction measures below tolerable guidelines
- Prioritize Implementation
Approval from 2000 HHD Major Rehabilitation Report

**Completed** – 21.4 miles of cutoff wall installed between 2007 and 2013

**Planned** – Cutoff wall tie-ins to 3 existing structures and 1 bridge with contract award in FY16

Complete the continuous seepage barrier through Reach 1 providing the risk reduction benefits to the adjacent communities
Reach 1 Cutoff Wall Extension

Approval from 2015 HHD Major Rehabilitation Report Supplement

Planned – 6.6 miles of cutoff wall installed with contract award in FY17 and completion in 2020

Impact – Final embankment remediation project to complete repairs reducing risks to inundation Zone A

Complete the continuous seepage barrier through Inundation Zone A providing the risk reduction benefits to the adjacent communities and allow a recommendation for accreditation to FEMA for this area of HHD.
Approval from 2011 HHD Culvert Letter Report

**Completed** – 1 removal and 2 replacements

**Ongoing** – 10 contracts with 18 replacements completed by 2020

**Planned** – 5 contracts with 8 replacements; 3 contracts with 3 abandonments to be scheduled and completed by 2022

Complete repairs at the highest points of failure through the HHD system
Culvert Replacement Phases

- Culvert 5A (S-281) - Foundation
- Culvert 12 (S-275) - Excavation
- Culvert 11 (S-269) - Completion
- Culvert 13 (S-272) - Reconstruction
Risk Assessment – Analysis performed on 32 dam segments within the 7 common inundation zones to identify and prioritize remediation

Modification Report – TSP in December 2015 with final report by the end of summer 2016

Impact – Final measures to reduce the risks for the entire system around the lake

- Recommendation for FEMA accreditation by inundation zone to begin in 2016
- Construction project implementation in 2019
- Opportunity to begin regulation schedule study
Approval by USACE Dam Safety Officer Required

Common Inundation Zone B
- 24.5 miles of cutoff wall

Common Inundation Zone C
- 4.1 miles of cutoff wall
- HP bridge abutment armoring

Common Inundation Zone D
- S-71 embankment flood wall
- S-72 embankment flood wall

Draft DSMR Tentatively Selected Plan
Cutoff Wall Locations
Embarkment Armoring Locations
Embarkment Flood Wall Locations
Implementation Timeline

Water Control Structures (Culverts)
- Southern part of HHD completed by 2020
- Northern part of HHD completed by 2022

Reach 1 Cutoff Wall Gap Closure
- Construction from 2016 to 2018

Reach 1 Cutoff Wall Extension
- Construction from 2017 to 2020

Dam Safety Modification Report (DSMR)
- Draft EIS public review period ended on 23 Feb 2016
- DSMR approval by the summer of 2016
- Construction start in 2019 with expected duration of 5 to 7 years (prioritization and funding dependent)
Lake Regulation Schedule

- Dam Safety Modification Study Risk Assessment utilized the current Lake Okeechobee Regulation Schedule (LORS)
- Proposed revisions to the current LORS will require an updated risk evaluation and a future lake regulation study for informed decision making
- A study for a new regulation schedule could be undertaken concurrently while risk reduction features identified in the DSMR are constructed
- A revised regulation schedule is not expected before 2020 and the timeline for implementation of any new regulation schedule will depend on the magnitude of change from the current LORS