



**DEPARTMENT OF TRANSPORTATION AND
DEVELOPMENT**

INTRADEPARTMENTAL CORRESPONDENCE

REFERRED TO

_____ REFERRED FOR ACTION :
 _____ ANSWER FOR MY SIGNATURE
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 _____ PLEASE ADVISE ME

MEMORANDUM

TO: Christopher P. Knotts, P. E.
CHIEF ENGINEER

FROM: Patrick J. Landry, P.E.
Deputy Assistant Secretary, OPW

DATE: January 10, 2022

SUBJECT: REVISION of EDSM Volume IV, Chapter 1, Section 1, Directive Number 11

I am requesting approval for a revision to EDSM IV.1.1.11: INSPECTION AND MAINTENANCE OF RESERVOIR EMBANKMENTS AND CONTROL STRUCTURES.

This EDSM has been revised to clean up incorrect and outdated language, to update the inspection frequency, inspection team composition, and maintenance responsibilities for Department maintained reservoir embankments and control structures.

Requested changes have been reviewed by the affected Districts and concurred in by the District Administrator or their representative and the email chains are included in the attachments.

If you have any questions or concerns; please feel free to contact me accordingly.

Attachments:

- EDSM current version
EDSM with track-changes proposed
EDSM with proposed changes incorporated
Email chains of review

Patricia J. Sunday 1/10/22
RECOMMENDED FOR APPROVAL DATE
Chris 1-20-22
RECOMMENDED FOR APPROVAL DATE

RECOMMENDED FOR APPROVAL DATE
 1/20/2022
 APPROVED DATE

ENGINEERING DIRECTIVES AND STANDARDS

Volume	Chapter	Section	Directive Number	Effective Date
IV	1	1	11	1/20/2022

SUBJECT: INSPECTION AND MAINTENANCE OF RESERVOIR EMBANKMENTS AND CONTROL STRUCTURES

- PURPOSE:** The purpose of this directive is to establish a uniform standard for the inspection and maintenance of Department of Transportation and Development maintained reservoir embankments and control structures in order to minimize risk to life and property.
- BACKGROUND:** Act 270 of 1984 authorized and directed the Department to assume responsibility for the operation and maintenance of reservoir embankments, dams, and control structures throughout Louisiana as identified in Section 5 of this Standard.
- SCOPE:** This directive establishes requirements for frequency and type of inspection, inspection procedure, maintenance expectations, reports, and administrative details necessary to the maintenance of dams assigned to the Department.
- POLICY AND PROCEDURE:** It shall be the policy of the Department of Transportation and Development to inspect and maintain all reservoir embankments and control structures as follows:

A. RESPONSIBILITY:

Coordination of all technical inspections will be the responsibility of the DOTD State Dam Safety Official.

The District Administrator will be responsible for the implementation of the maintenance inspection, observation inspection, and the operation and maintenance procedures for the listed dams within their respective District.

B. INSPECTION:

(1) Technical Inspection

The technical inspection is a complete and thorough inspection of the physical condition of the structure performed by specialists familiar with the design and construction of dams. The State Dam Safety Official will utilize the information gathered by these inspections to make an assessment of the safety of the project structure.

The frequency of technical inspections shall be assigned per the dam's hazard classification; annually for high hazard and significant hazard and every two years for low hazard. Additional technical inspections should always be conducted following an earthquake, major flood, vandalism, sabotage, significant reservoir drawdown or other atypical event as determined by the State Dam Safety Official.

The inspection team shall consist of the following personnel from contracted firms (if applicable) and DOTD Headquarters and District Offices:

Contracted Firm Personnel:

Professional Engineer
Structural engineer (if applicable)
Dam Inspector (Engineering Technician)

DOTD Personnel:

State Dam Safety Official or designated staff
District Water Resources Engineer (or staff designated by the ADA of Engineering)
Area Engineer (or designated supervisory staff directly responsible for dam maintenance operations)

The current format furnished by the State Dam Safety Official shall be used and completed by the Contracted Firm when a contract exists, or the State Dam Safety Official's designated staff when there is no contract with a private firm to perform the inspections. This format shall utilize the current version of the Dam Inspection Geodatabase for inspection data collection and report generation.

The original of the report will be submitted to the State Dam Safety Official, who will retain a file on each reservoir, with a copy to the District Administrator. An electronic version of the report will also be filed in Dam Inspection Geodatabase for use by District Personnel.

(2) Maintenance Inspection

The Maintenance inspection is a complete and thorough inspection to monitor the behavior and condition of the structure and all operating equipment. A principal objective is to determine maintenance needs and to promote an efficient and effective maintenance program.

The maintenance inspection shall be conducted semiannually. The Technical Inspection defined in (1) above shall be considered one of the Maintenance Inspections each year it is conducted. The maintenance inspection team shall consist of the following DOTD personnel:

District Water Resources Engineer (or staff designated by the ADA of Engineering)

Area Engineer (or designated supervisory staff directly responsible for dam maintenance operations)

The current maintenance inspection format furnished by the State Dam Safety Official shall be used. The completed report shall be provided electronically to the State Dam Safety Official with a copy to the District Administrator. The report shall be supplemented by pictures, sketches, diagrams, interviews, etc. Conditions observed that threaten the integrity of the structure shall be reported immediately by the most expeditious means possible to the District Administrator and the State Dam Safety Official.

(3) Observation Inspection

The Observation inspection is an informal inspection to monitor the behavior and safety of the dam. At this time, routine maintenance needs shall be documented and scheduled.

Observation Inspections shall be made on a monthly basis.

The District Water Resources Engineer or their representative along with the supervisory level representative of the applicable maintenance unit shall perform this inspection as an integral part of the maintenance program.

Conditions observed during this inspection that exceed the bounds of routine maintenance, or indicate unusual activity, shall be reported to District Headquarters. Conditions observed that threaten the integrity of the structure shall be reported immediately by the most expeditious means possible to the District Administrator and the State Dam Safety Official.

On reservoir embankments with piezometers, water level readings in the piezometers shall be taken during the monthly Observation Inspection. The piezometer readings collected shall be recorded and provided electronically to the State Dam Safety Official.

C. OPERATION & MAINTENANCE:

Operation and maintenance activities shall be completed as defined in the Operation and Maintenance (O&M) Manual for each structure. A copy of the O&M Manual for each dam will be provided to the appropriate maintenance unit by the ADA of Engineering. The district maintenance sections are to perform only nonstructural maintenance items such as mowing grass, vegetation control, painting, greasing, removal of trash and debris, repairs to fencing, minor erosion, signs, etc. Normal operations as outlined in the Operation and Maintenance Manual for each structure shall be performed by District Water Resources Personnel trained in said operations and in compliance with EDSM IV.1.1.12. Any other activity shall first be cleared through the Public Works and Water Resources Section and the State Dam Safety Official. Hard copies of the O&M Manuals shall be filed in the District with electronic copies stored in the Dam Inspection Geodatabase located at the DOTD Maps and Apps web page — Field Mobility/Dam Inspection Dashboard.

D. EMERGENCY OPERATIONS:

Each District shall have a hard copy of the Emergency Action Plan (EAP) for each reservoir on file. An electronic version of the EAP shall also be filed in the Dam Inspection Geodatabase. Each EAP is to be reviewed annually by the District Water Resources Engineer and any necessary updates provided to the State Dam Safety Official for inclusion. A tabletop exercise initiated by the State Dam Safety Official for each EAP shall occur at least every three years for high hazard dams and every five years for significant hazard dams.

Statements to the press and the general public in reference to the condition and safety of dams shall be made only by the Chief Engineer or approved designee, or as set forth by the EAP.

E. DOCUMENTATION:

In addition to the EAP, all O&M Manuals, most recent inspection reports, report formats, readings, and data may be found in the Dam Inspection Geodatabase located at the DOTD Maps and Apps web page — Field Mobility/Dam Inspection Dashboard, to be maintained by the State Dam Safety Official.

5. ASSIGNED RESERVOIR EMBANKMENTS AND CONTROL STRUCTURES BY NID NUMBER AND NAME

- a. LA00006 - Bundick Creek in Beauregard Parish
- b. LA00021 - Kepler Creek Dam in Bienville Parish
- c. LA00020 - Ivan Lake Dam in Bossier Parish
- d. LA00002 - Lake Bistineau in Bossier Parish
- e. LA00003 - Black Lake Dam in Caddo Parish
- f. LA00011 - Lake Claiborne Dam in Claiborne Parish
- g. LA00028 - Smithport Dam in DeSoto Parish
- h. LA00010 - Chicot Lake Dam in Evangeline Parish
- i. LA00029 - Turkey Creek Dam in Franklin Parish
- j. LA00018 - Iatt Lake Dam in Grant Parish
- k. LA00025 - Nantachie Lake Dam and LA00595 - Nantachie Lake Dam No. 2 in Grant Parish
- l. LA00385 - Caney Lake in Jackson Parish
- m. LA00386 - Black Lake Bayou Reservoir and LA00004 - Chivery Dam in Natchitoches Parish (Formerly Allen-Chivery)
- n. LA00026 - Saline Lake Dam in Natchitoches Parish
- o. LA00012 - Bayou Cocodrie in Rapides Parish
- p. LA00387 - John K. Kelly Grand Bayou in Red River Parish
- q. LA00015 - Bayou Darbonne Dam and Reservoir in Union Parish
- r. LA00001 - Lower Anacoco in Vernon Parish
- s. LA00022 - Vernon Lake Dam in Vernon Parish

6. OTHER ISSUANCES AFFECTED: All directives, memoranda, or instructions issued heretofore in conflict with this directive are hereby rescinded.

7. EFFECTIVE DATE: This policy will become effective upon signature of the Chief Engineer.

CHRISTOPHER P. KNOTTS, P.E.
CHIEF ENGINEER