Louisiana Department of Transportation and Development

Louisiana Dam Safety Program

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Louisiana Dam Safety Program

- Recognizes the inherent danger posed by impoundments of significant volumes of water.
- Requires that owners of structures which impound water (or other liquids) assume the responsibility for that danger by ensuring that such structures are designed, constructed, and maintained so as to minimize the risk to life and property.
- Regardless of the circumstances of failure, the owner is ultimately responsible for loss of life and property damages that may occur from the failure of his dam.
Included are all dams which are:

- Twenty-five (25) feet or more in height and having an impounding capacity at maximum storage greater than fifteen (15) acre-feet,

- Or

- Six (6) feet or more in height and having an impounding capacity, at maximum storage of fifty (50) acre-feet or more.
Structures that are required to have an approved permit under the State Dam Safety Program.
Structures that must be submitted to the Director, Public Works and Flood Control Directorate for review under the State Dam Safety Program.
The Impact Classification is determined by an evaluation of the probable maximum impacts of a dam breach.

- Low hazard dams are those for which, because of size and/or location, little or no significant damage to life or property is likely to result from a failure of the dam.

- Significant hazard dams are those which could cause appreciable damage to property or could pose possible threat to human life in the event of failure.

- High hazard dams are those for which failure would cause excessive property damage or make loss of human life likely.
Reasons For Dam Failure

Most common reasons for dam failure are:

- **Piping**: internal erosion through the dam.
- **Erosion**: caused by overtopping of the dam and/or poor maintenance.
- **Structural damage**: caused by earthquakes, slope instability, faulty construction, or poor maintenance.
Consequence Of Dam Failure

- In the past 30 years, there have been over 135 fatalities and more than $2.6 billion in property damage in the U.S., resulting from dam failures.

- None in Louisiana.

- Association of State Dam Safety Officials (ASDSO)
Dam Inventory In Louisiana

- From 1981 to 2001 a total of 260 dams were registered and entered into Louisiana’s Dam Inventory Data File.
- In 2003, DOTD signed agreements with two Engineering consultants to gather information on unregistered dams.
- 274 dams were located, inspected and added to the Data File.
- There are presently 534 dams in inventory, including 28 high hazard and 65 significant hazard.
Dam Inventory In Louisiana

- Electronic submittal of data to the National Inventory of Dams (NID) via the Corps of Engineers Headquarters Annually.
- Electronic submittal of the dam safety annual Report to the National Dam Safety Review Board (NDSRB).
- Maintain FEMA Dam Safety Program Certification.
DAM INVENTORY

- High Hazard: 28
- Significant Hazard: 65
- Low Hazard: 441

Total Number of Louisiana Dams: 534
Saline Lake Dam
Dam Safety Inspection

- High and significant hazard dams are inspected annually and low hazard dams once every five years.
- Technical inspection reports are prepared and mailed to the dam owners for review and remediation/repair as needed.
- Follow-up inspection is conducted, for any dam with structural deficiencies, discovered during periodic inspection.
- Inspection and evaluation of proposed dam sites to determine classification of the dam.
- Inspection of new dams upon completion.
- 150 dams inspected Annually
Emergency Action Plans (EAPs) for DOTD-Maintained Dams

- DOTD has signed agreements with two engineering consultants to prepare breach analyses and Emergency Action Plans (EAPs).
- 14 breach analyses have been completed, including four prepared in-house.
- Five breach analyses will be completed in F.Y. 07-08.
- 20 Emergency Action Plans (EAPs) have been completed.
- Emergency Action Plans table-top exercises have been held in District 03, 04, 05, 07, 08 and 58.
Louisiana Dam Safety Program’s Internet/Intranet Web Pages

- Check It Out @: http://www.dotd.louisiana.gov/intermodal/dams

- Provide information to dam owners and the general public.

- Allow Dam Safety staff to upload inspection reports, photos, maintenance reports, piezometer readings, etc.

- A web based calendar for scheduling dam inspection and communicating inspection schedules to various district offices has been completed and is in use.

- 95% of the Dam Safety Program is run electronically.
Louisiana Dam Safety Program’s GIS Web Page

Check It Out on the Intranet @:  
http://dotdgis2.dotd.louisiana.gov/website/dams/viewer.htm

Generate Interactive Maps showing dam location along with basemap features, satellite imagery and high resolution orthophotography.

Not available to the general public at this time due to security issues.
QUESTIONS?. 