



Office of Engineering  
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John Bel Edwards, Governor  
Shawn D. Wilson, Ph.D., Secretary

January 24, 2022

Joe Beale  
P.O. Box 220  
BUSH, LA 70431

Re: Crane Lake Dam  
**Dam Inspection Report**  
NID ID No.: LA00398  
St. Tammany Parish

Dear Mr. Beale,

The Dam Safety Program of the Public Works and Water Resources Section of the Louisiana Department of Transportation and Development (LA DOTD) is responsible for regulating the Louisiana Dam Safety Program (R.S. 38:21-28). As part of the ongoing implementation of the program, LA DOTD has obtained the services of ECM Consultants, Inc. to conduct safety inspections of dams falling within the state regulatory jurisdiction. The inspections are performed in order to minimize potential hazards to downstream life and property in the event of a dam failure.

An inspection of the **Crane Lake dam was performed on 12/15/2021. Please see enclosed Inspection Report for deficiencies.** Also included are reference materials relevant to the inspection results and general educational materials as well as a Dam Inspection Performance survey. If you have any questions regarding inspection of dams or enclosed report, please contact me by email at [timothy.harper@la.gov](mailto:timothy.harper@la.gov), or by phone at (225) 379-3012. You may also contact the State Dam Safety Official, Mr. Bradley A. Sticker, P.E., by email at [brad.sticker@la.gov](mailto:brad.sticker@la.gov), or phone at (225) 379-3006.

Sincerely,

Tim Harper, P.E.  
DOTD Dam Safety Program

c: Bradley A. Sticker, P.E., State Dam Safety Official (elec w/o enclosure)  
Jennifer D. Branton, P.E., District 62 (DOTD) (elec w/o enclosure)  
Phillip Dibeneditto, E.I., District 62 (DOTD) (elec w/ enclosure/ftp)  
Benjamin J. Dow, Inspector, ECM Consultants, Inc. (elec w/ enclosure/ftp)



# LADOTD DAM INSPECTION AND EVALUATION REPORT

Inspection Date: 12/15/2021

## Reviewed and Approved by:

Name (Signature): *John A. Rasi*  
Name (Typed or Printed): John A. Rasi, P.E.  
Firm Name: ECM Consultants, Inc.  
Address: 8048 One Calais Ave., Suite F  
City, State, Zip Code: Baton Rouge, LA 70809  
Phone: (225) 615-7885

Name of Dam: Crane Lake  
Downstream Hazard: Low  
NID ID #: LA00398  
Parish: St. Tammany  
DOTD District: 62  
District Contact: Jennifer Branton, P.E.



*John Alan Rasi*  
*1/20/2022*

## ■ OWNER INFORMATION

Name of Owner: Whippoorwill Grove, Inc.  
Person to Contact: Joe Beale, Whippoorwill Grove Inc  
P.O. Box 220  
Bush, LA, 70431  
Tel.: (504) 812-3149

## ■ DAM INFORMATION

### Location of Dam

Directions to the dam are as follows:

1. From the intersection of US Highway 190 and LA Highway 21, in Covington, proceed 11 miles northeasterly on LA 21.
2. Turn left onto Fairgrounds Boulevard and proceed 1.4 miles northwesterly.
3. Turn right onto LA 1083 (Ben Williams Road) and proceed 0.2 miles northerly.
4. Turn right onto Turkey Ridge Road and proceed 1.3 miles easterly.
5. Turn right onto the dam access driveway and proceed about 240 feet southerly to the auxiliary spillway on the northern end of the dam.



Plan view of Crane Lake Dam (vicinity)



Plan view of Crane Lake Dam (dam site)

## Description of Dam

Crane Lake Dam consists of an earthen embankment stretching 1,270 feet from the attached 30-foot wide southern auxiliary spillway to the attached 35-foot wide northern auxiliary spillway, totaling a dam length of 1,335 feet. There is a treated timber bulkhead on the upstream slope. The primary spillway consists of a 14-inch diameter steel riser pipe with a half-pipe chute on the end spilling into Cormorant Lake on the eastern side of the embankment. There is a 35-foot wide concrete lined auxiliary spillway apron on the northern end of the dam. There is also a 30-foot wide earthen auxiliary spillway on the southern end of the dam.

Dam height	25.0 feet
Structural height	25.0 feet
Hydraulic height	23.0 feet
Maximum discharge	209.0 cubic feet/second
Maximum storage	1,225.0 acre-feet
Normal storage	1,127.0 acre-feet
Surface area	98.0 acres
Drainage area	1.5 square miles

## History of Dam

The Crane Lake Dam was designed by Dave Goodyear and was constructed by Dave Goodyear in 1988. No other history of the dam was available at the time of the inspection.

## ■ INSPECTION TEAM

### Name

Benjamin Dow, ECM

Kumar Ambati, ECM

Grant Berne, DOTD

Joe Beale, Whippoorwill Grove

## ■ INSPECTION RESULTS

### Brief Description of Condition of Dam and Summary Items Requiring Attention

The Crane Lake Dam is in fair condition and fulfilling its intended purpose. The inspection was made on a clear and sunny day with good visibility. The following items require attention:

### Crown Deficiencies:

None

### Downstream Embankment Deficiencies:

- Evidence of seepage or saturated areas indicating possible seepage at or beyond the dam toe or along or near conduits, concrete structures, etc. No evidence of soil transport was observed.

- Animal burrows are present which may lead to seepage or slope stability problems, and they require immediate attention.

**Upstream Embankment Deficiencies:**

None

**Spillway Deficiencies:**

Spillway 1 (Primary):

None

Spillway 2 (Auxiliary):

None

Spillway 3 (Auxiliary):

None

**Outlet Works Deficiencies:**

None

**Irrigation Deficiencies:**

None

**Instrumentation Deficiencies:**

None

**Corrected Items from Last Inspection:**

None

**Present Pool Elevation (ft.)**

1-foot below concrete spillway crest

**Present Tailwater Elevation (ft.)**

None

**Operation and Maintenance Procedures**

Operation and maintenance procedures are the responsibility of the owner. There were no written operation or maintenance records available during the inspection.

■ **EARTH EMBANKMENTS**

**Dimensions/Shape/Describe Overall Condition**

This dam consists of a 1,270-foot long earthen embankment that runs along the eastern shore. The crown width is 14 feet. The upstream slope descends from the crown at a vertical rate, and the downstream slope descends from the crown at a 3H: 1V rate.

**Dam Embankment - Crown**

**Crown Width (Ft.):** 14



**Crown Length (Ft.):** 1,270  
**Crown Description:** Earthen crown with grass coverage.  
**Fence:** None  
**Abutment:** Both abutments appear satisfactory.  
**Comments:** No additional comments.

*No deficiencies identified*



Embankment Crown Photo 1



Embankment Crown Photo 2



Embankment Crown Photo 3



Embankment Crown Photo 4

### **Dam Embankment - Downstream Embankment**

**Embankment Description:** Earthen embankment with grass coverage.  
**Embankment Slope:** 3H: 1V  
**Berm Description:** None  
**Berm Slope:** None  
**Toe Area:** The area at the embankment toe is Cormorant Lake.  
**Comments:** Probable seepage on both ends.

## Deficiencies (2):

Type	Description	Corrective Action
Seepage (No Soil Transport)	Evidence of seepage or saturated areas indicating possible seepage at or beyond the dam toe or along or near conduits, concrete structures, etc. No evidence of soil transport was observed.	Evaluate permanent solution to control seepage monitor these areas regularly especially when reservoir level is elevated.
Animal Burrows	Animal burrows are present which may lead to seepage or slope stability problems, and they require immediate attention.	Excavate, inspect, backfill, compact in lifts and re-establish sod cover. Establish/improve animal abatement program.



Downstream Embankment Photo 1



Downstream Embankment Photo 2



Downstream Embankment Photo 3



Downstream Embankment Photo 4





Downstream Embankment Photo 5



Downstream Embankment Photo 6

### **Dam Embankment - Upstream Embankment**

<b>Embankment Description:</b>	Earthen embankment with grass coverage and a timber bulkhead.
<b>Embankment Slope:</b>	Vertical (timber bulkhead)
<b>Protection Type:</b>	The upstream shore protection consists of a treated timber bulkhead.
<b>Comments:</b>	No additional comments.

*No deficiencies identified*



Upstream Embankment Photo 1



Upstream Embankment Photo 2



Upstream Embankment Photo 3



Upstream Embankment Photo 4

## ■ SPILLWAY

<b>Spillway Classification:</b>	Primary
<b>Spillway Type:</b>	Uncontrolled
<b>Spillway Description:</b>	14-inch diameter steel riser pipe with a half-pipe discharge chute.
<b>Crest Description:</b>	The top of the riser pipe and discharge chute appears satisfactory.
<b>Stilling Basin:</b>	None
<b>End Sill:</b>	None
<b>Approach Channel:</b>	None
<b>Discharge Channel:</b>	None. The spillway discharges directly into Cormorant Lake.
<b>Gates and Operations:</b>	None
<b>Spillway Drains:</b>	None
<b>Comments:</b>	No additional comments.

*No deficiencies identified*



Primary Spillway Photo 1



Primary Spillway Photo 2





Primary Spillway Photo 3



Primary Spillway Photo 4

**Spillway Classification:** Auxiliary  
**Spillway Type:** Uncontrolled  
**Spillway Description:** 35-foot wide concrete broad crested weir.  
**Crest Description:** Concrete broad crested weir.  
**Stilling Basin:** None  
**End Sill:** None  
**Approach Channel:** None  
**Discharge Channel:** Earthen swale that flows into Cormorant Lake  
**Gates and Operations:** None  
**Spillway Drains:** None  
**Comments:** No additional comments.

*No deficiencies identified*



Auxiliary Spillway Photo 1



Auxiliary Spillway Photo 2



Auxiliary Spillway Photo 3



Auxiliary Spillway Photo 4

**Spillway Classification:** Auxiliary  
**Spillway Type:** Uncontrolled  
**Spillway Description:** 30-foot wide earthen broad crested weir  
**Crest Description:** Earthen broad crested weir  
**Stilling Basin:** None  
**End Sill:** None.  
**Approach Channel:** None  
**Discharge Channel:** Earthen swale that discharges into Cormorant Lake.  
**Gates and Operations:** None  
**Spillway Drains:** None  
**Comments:** No additional comments.

*No deficiencies identified*



Auxiliary Spillway Photo 1



Auxiliary Spillway Photo 2





Auxiliary Spillway Photo 3

## ■ OUTLET WORKS

### Type and Description:

There is a 14-inch diameter steel pipe and gate valve at the base of the riser pipe which can be used as a drawdown.

### Intake Structure:

The intake is the upstream end of the 14-inch diameter steel riser pipe.

### Outlet Channel:

The pipe discharges directly into the downstream Cormorant Lake.

### Gates and Related Devices:

The valve appears operational.

### Comments:

No additional comments.

*No deficiencies identified*



Outlet Works Photo 1



Outlet Works Photo 2

## ■ IRRIGATION STRUCTURE

### Type and Description:

None

### Irrigation:

None

<b>Intake Structure:</b>	None
<b>Outlet:</b>	None
<b>Channel:</b>	None
<b>Gates and Related Devices:</b>	None
<b>Comments:</b>	None

*No deficiencies identified*

## ■ INSTRUMENTATION

<b>Monumentation/Surveys:</b>	None
<b>Observation Wells:</b>	None
<b>Weirs:</b>	None
<b>Piezometers:</b>	None
<b>Staff Gage Description:</b>	None
<b>Staff Gage Reading (Ft.):</b>	1-foot below concrete spillway crest
<b>Tailwater Staff Gage Description:</b>	None
<b>Tailwater Staff Gage Reading (Ft.):</b>	None
<b>Comments:</b>	None

*No deficiencies identified*

## ■ RESERVOIR

### **Slope**

The reservoir slopes appear to be in satisfactory condition and fulfilling their intended purpose.

### **Bank**

The reservoir banks appear to be in satisfactory condition and fulfilling their intended purpose.

### **Sedimentation**

There were no visible areas of sedimentation occurring within the reservoir at the time of the inspection.



Reservoir Photo 1

