

Operation, Maintenance, and Inspection  
Manual and Emergency Action Plan for  
Lake Lakengren Dam  
Preble County, Ohio  
ODNR File Number; 9545-001

For

Lakengren Property Owners Association  
22 W. Lakengren Drive  
Eaton, Ohio 45320

PREPARED BY:



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Report No. 113063-0203-063  
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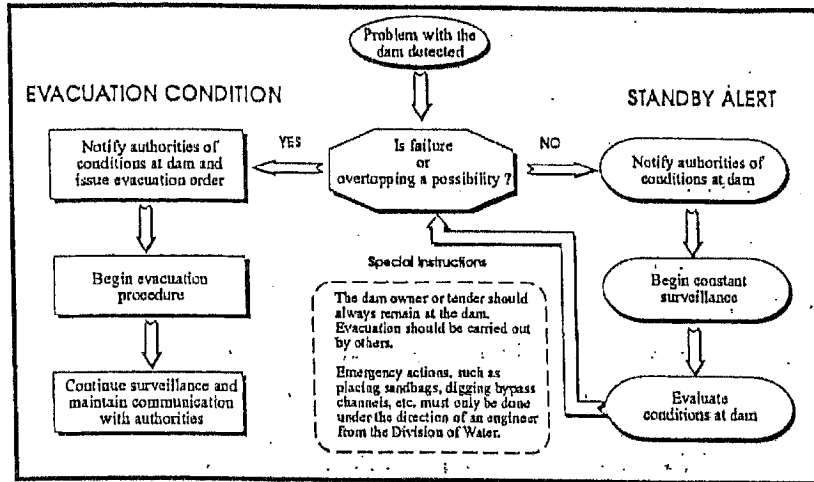
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### APPENDICES

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1) NOTIFICATION CHART

Emergency Notification Procedure for  
 LAKE LAKENGREN DAM  
 File Number: 9545-001



EAP COORDINATOR SHALL MAKE THE FOLLOWING NOTIFICATIONS

|  |     |   |
|--|-----|---|
| Kevin Thorpe, LPOA General Manager<br>937/336-2347 | AND | Gary Ketron, LPOA Dams Committee Chairman<br>937/456-4548 |
|--|-----|---|

| EVACUATION CONDITION   |  |   | STANDBY ALERT  |   |  |
|--|--|---|--|---|--|
| 1. Notify agencies according to checklist and wording below.   |  |   | 1. Notify agencies according to checklist and wording below.   |   |  |
| Time Notified  | Agency   |   | Time Notified  | Agency  |  |
|  | Preble Co.<br>EMA<br>937/456-1243  | (Alternate)<br>Preble Co. Sheriff's<br>Office - Dial 911<br>or 937/456-6262 |  | ODNR, Division of Water<br>614/265-6731 Business Hours<br>614/799-9538 Non-Business Hours |  |
|  | ODNR, Division of Water<br>614/265-6731 Business Hours<br>614/799-9538 Non-Business Hours            |   |  | Preble County<br>EMA<br>937/456-1243  | (Alternate)<br>Preble County Sheriff's<br>Office<br>Dial 911<br>937/456-6262 |
|  | Downstream Residents<br>Residents located immediately<br>downstream of dam<br>See List in Appendix A |   |  |   |  |
| <u>Evacuation Notification</u><br>"This is _____ notifying you that an evacuation order for LAKE LAKENGREN DAM has been given by LPOA/ODNR at _____ (time). Please evacuate people downstream of the dam according to the County Emergency Operation Plan. |  |   | <u>Standby Alert Notification</u><br>"This is _____ advising you that we are starting constant surveillance of the LAKE LAKENGREN DAM according to the Emergency Action Plan for this dam. We are notifying you, and the Dam Safety Officials of the Ohio Dept. of Natural Resources and will inform you if a decision to evacuate, or cancellation of the standby alert has been made." |   |  |
| Begin evacuation procedures as outlined in the Emergency Action Plan.  |  |   | 2. Continue surveillance and perform other procedures as outlined in the Emergency Action Plan.  |   |  |
| 3. Continue surveillance of the dam, maintain communication with authorities and initiate other emergency actions as directed by the Dam Safety Engineer.  |  |   | 3. Evaluate conditions at the dam and proceed in accordance with directions of the Dam Safety Engineer.  |   |  |

**2. STATEMENT OF PURPOSE**

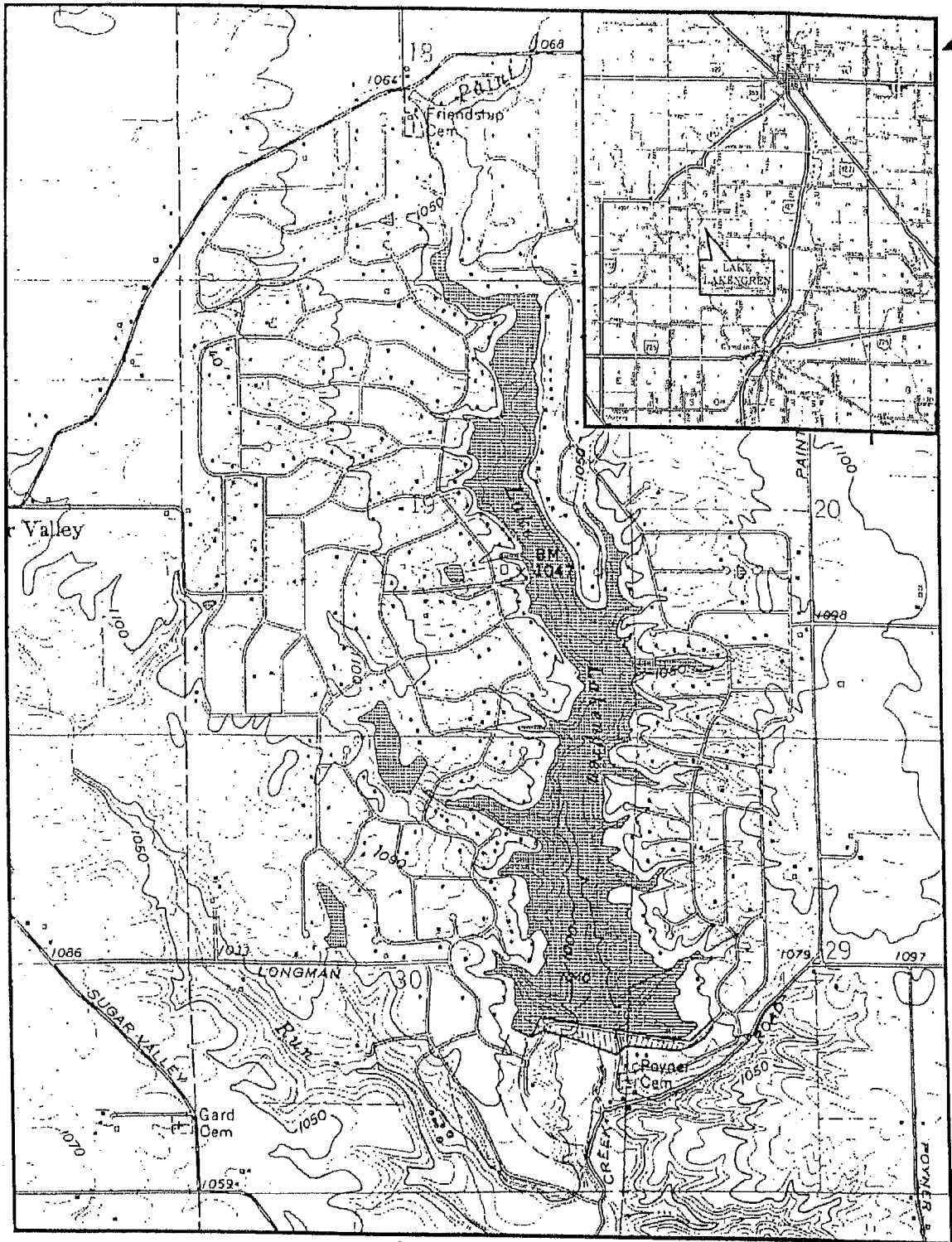
The purpose of this emergency action plan (EAP) is to safeguard lives and reduce damage to the property of the citizens of Preble County who live downstream from the dam and along Paint and Seven Mile Creeks, in the event of the failure of Lake Lakengren Dam. This EAP was developed to meet the requirements of the Ohio Administrative Code (OAC) 1501:21-15-07 "Emergency Action Plan" for the Lake Lakengren Dam.

**3. PROJECT DESCRIPTION**

The Lake Lakengren Dam is an earth embankment in Gasper Township, Preble County, Ohio, as shown in Figure 1. The dam and associated lake are on Paint Creek approximately 5.25 miles north of its confluence with Seven Mile Creek, south of Camden, Ohio.

| DAM PHYSICAL CHARACTERISTICS              |                               |
|---|-------------------------------|
| Item                                      | Value                         |
| Drainage Area                             | 8.13 mi <sup>2</sup>          |
| Total Storage Capacity at Crest Elevation | 5,460 acre-ft                 |
| Storage Capacity at Normal Pool Elevation | 3,103 acre-ft                 |
| Surface Area at Normal Pool               | 176 acre                      |
| Freeboard at Maximum Water Elevation      | 2.4 ft                        |
| Principal Spillway                        | 300-ft wide weir              |
| Principal Spillway Elevation              | 1,040.5 ft                    |
| Emergency Spillway                        | 300-ft wide vegetated channel |
| Emergency Spillway Elevation              | 1,038 ft                      |
| Crest Elevation                           | 1,050 ft                      |
| Maximum Height of Dam                     | 74 ft                         |
| Length of Crest                           | 2,300 ft                      |
| Width of Crest                            | 20 ft                         |
| Downstream Outslope                       | 2.5(h): 1(V)                  |
| Upstream Outslope                         | 2.5(h): 1(V)                  |
| Lake Drain                                | 25-inch steel pipe            |





U.S.G.S. QUAD: EATON SOUTH, OHIO

### VICINITY MAP

LAKE LAKENGREN DAM  
 LAKENGREN PROPERTY  
 OWNER'S ASSOCIATION  
 EATON, OHIO

PROJECT NO.

113063

SCALE

N.T.S.

FIGURE NO.

1



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There are no significant upstream or downstream water-retention structures on Paint Creek.

The Lake Lakengren Dam is classified as a Class I dam in accordance with Section 1501:21-13-01 of the Ohio Administrative Code. The dam is a Class I structure based on its height, storage volume, and hazard classification. There is a potential for loss of human life and damage to high-value downstream property and to local and state routes and bridges in the event of a dam failure. The following table summarizes the downstream communities, roads, and bridges that will be affected potentially by a dam failure.

| SUMMARY OF DOWNSTREAM HAZARDS |   |
|-------------------------------|---|
| Hazard ID No.                 | Description   |
| 1                             | Property next to Paint Creek downstream of the dam.     |
| 2                             | City of Camden  |
| 3                             | City of Somerville                                      |
| 4                             | Paint Creek Road (near Paint Creek)                     |
| 5                             | Longman Road (near Paint Creek)                         |
| 6                             | Camden Sugar Valley Road (C.H. 21) (near Paint Creek)   |
| 7                             | Paint Creek Four Mile Road (C.H. 45) (near Paint Creek) |
| 8                             | Gasper-Somers Road (near Paint Creek)                   |
| 9                             | State Highway 725 (near Paint Creek)                    |
| 10                            | U.S. Highway 127 (near Paint Creek)                     |
| 11                            | County Highway 24 (near Paint Creek)                    |
| 12                            | County Highway 227 (near Paint and Seven Mile Creeks)   |

More detailed information concerning the downstream area potentially affected by a dam failure is presented on the facility inundation map found in **Appendix A**. A list of residences and contact information immediately downstream of the dam within the inundation area is also in **Appendix A**.

#### 4: EMERGENCY DETECTION, EVALUATION, AND CLASSIFICATION

The detection of potential problems and existing problems with the Lake Lakengren Dam will primarily be the responsibility of the dam owner and operator (LPOA). The inspection and maintenance program is designed to detect and correct situations that could lead to or cause

problems with the dam. It is anticipated that the routine inspections and timely maintenance will effectively limit the potential for the development of significant problem. Information collected in the weekly and annual inspections that indicates potential problems with the dam that may lead to a failure will first be evaluated by the LPOA **EAP Coordinator**. After an assessment of the problem, the **EAP Coordinator** will take appropriate action based on the emergency classification of the problem. Please note that problems that are handled under general maintenance of the dam are not considered "emergency" conditions that should be handled under the EAP.

The potential does exist for conditions that exceed the limits of the design assumptions incorporated into the dam construction to occur. Such conditions include rainfall and storm flow in excess of the design storm event (please note that the dam spillway will pass 100% of the PMF without overtopping), inconsistent soil conditions within the dam structure that could heighten seepage, piping failure, or slope instability. This EAP establishes the three levels of emergency classification for the dam described in the following table. Included in the table is a description of conditions related to the emergency classification level.

| EMERGENCY CLASSIFICATION LEVELS |  |  |
|---------------------------------|--|--|
| Level                           | Description/Situations   | Action   |
| <b>NON-FAILURE EMERGENCY</b>    | <p>A situation where a dam failure is not likely to occur.</p> <p><u>Examples</u></p> <p>New areas of seepage (wet spots) without significant flow.</p> <p>Increase in piezometer water level readings by more than 2 feet.</p> <p>Embankment soil sloughing, soil cracks, soil erosion, or other soil movements indicative of slope instability during <b>non-flood</b> events.</p>   | <p>Contact ODNR, Division of Water and an Engineer for repair/notification recommendations</p> |
| <b>STANDBY ALERT</b>            | <p>A situation where dam failure may occur, but preplanned actions may prevent the failure.</p> <p><u>Examples</u></p> <p>The lake level rising within 2.4 feet of the dam crest and continuing to rise.</p> <p>Seepage and piping of soil from the downstream slope</p> <p>Significant seepage flow on down stream slope that is not increasing with time.</p> <p>Embankment soil sloughing, soil cracks, soil erosion, or other soil movements indicative of slope instability during <b>flood</b> events.</p>   | <p>Implement Emergency Notification Procedure</p> <p>(See Notification Chart – Section I)</p>  |
| <b>EVACUATION CONDITION</b>     | <p>A situation where the dam failure is imminent or is occurring.</p> <p><u>Examples</u></p> <p>The dam is overtopping or nearly overtopping. The lake level rising within 6 inches of the dam crest and continuing to rise. Additional rain is predicted.</p> <p>A large slide develops in either the upstream or downstream slope of the embankment and threatens to release the impounded water.</p> <p>Seepage and piping of soil from the downstream slope with seepage flow increasing with time.</p> <p>Sudden and rapid failure of an appurtenant structure threatens complete failure of the dam and release of its impoundment</p> | <p>Implement Emergency Notification Procedure</p> <p>(See Notification Chart – Section I)</p>  |





Any time the lake level is within 2.4 feet of the dam crest and rising, the storm event causing the flooding condition may exceed the design storm/flow for the dam. This situation is cause for alarm because continued inflow to the lake may cause overtopping of the dam and would cause a **STANDBY ALERT** condition to be issued. When the lake level is within 6 inches of the dam crest and is still rising, the situation is considered an **EVACUATION CONDITION** because failure of the dam by overtopping is likely.

In addition to overtopping the dam, seepage through the embankment and slope instability are significant issues that can present emergency situations. Seepage may be observed as water flowing from the dam face or simply as wet areas evidenced by enhanced vegetation growth or coloration. Slope instability may be revealed by areas of soil sloughing or downslope movement, tension cracks in the soil, and scarps or abrupt slope changes. Many times, soil movement is associated with seepage or the presence of excess water within the dam structure.

Detection of minor seepage or slope movement during a non-flood event is considered a **NON-FAILURE EMERGENCY** condition and the evaluation of these conditions should be made by an engineer or an authorized person with ODNR's Division of Water. Detection seepage or slope movement during a flood event is considered a **STANDBY ALERT** condition since it is likely that the flood event is causing the observed conditions and that the conditions will likely worsen with increased water in the lake.

The ONDR has identified four emergency events that should initiate an **EVACUATION** emergency condition. These conditions are:

1. The dam is overtopping or nearly overtopping: The dam owner or operator should closely monitor the level of the reservoir during periods of heavy rainfall and runoff. If the spillway and reservoir storage capacities are exceeded, overtopping will occur.
2. Piping (internal erosion of soil from the dam or its foundation) has developed: Piping is usually indicated by a rapid increase in seepage rate, a muddy discharge at or near the downstream toe, sinkholes on or near the embankment, and/or a whirlpool (eddy) in the reservoir. Boils at or near the downstream toe may be indications that piping is beginning.
3. A large slide develops in either the upstream or downstream slope of the embankment and threatens to release the impounded water.
4. Sudden and rapid failure of an appurtenant structure threatens complete failure of the dam and release of its impoundment.

Identification of any of these conditions at a dam during an inspection should lead to **EVACUATION** emergency status.

## 5. GENERAL RESPONSIBILITIES

### Dam Owner Responsibilities

The dam owner (LPOA) shall be responsible for the detection of conditions at the dam that constitute potential emergency situations. Upon detection of emergency conditions, the **EAP Coordinator** will be responsible for notification of the appropriate authorities in accordance with the Emergency Notification Procedure.

Regardless of the emergency situation, the owner is responsible for complying with the directives given by the authorities.

### Responsibility of Notification

As stated above, the **EAP Coordinator** has the responsibility to notify the appropriate authorities in the event of an emergency. The notifications will be made following the Emergency Notification Procedure Chart (Section I).

The **EAP Coordinator** for LPOA is listed on Emergency Notification Procedure Chart. If the **EAP Coordinator** is not available to make the appropriate notifications, their alternate, also listed on the on Emergency Notification Procedure Chart, will make the notifications and act as the **EAP Coordinator**.

### Responsibility for Evacuation

The dam owner shall not assume the responsibility of any evacuation or road closing notices or actions. The appropriate official, principally the Preble County Emergency Management Authority (EMA), shall take responsibility for the coordination and implementation of evacuation or road closing notices or actions.

### Responsibility for Duration, Security, Termination, and Follow-Up

The dam owner through the **EAP Coordinator** shall be responsible for monitoring the emergency situation at the dam and keeping the authorities informed of the ongoing conditions.

The dam owner shall also be responsible for providing sufficient means to restrict unauthorized individuals from entering onto the dam during emergency conditions. During the conditions of high water and potential overtopping, no one shall be allowed to enter onto the dam structure. During conditions of seepage or slope instability, access onto the dam will be limited.

based on recommendations from ODNR's Division of Water and/or an Engineer related to the observed conditions.

The appropriate officials (Preble County EMA and ODNR's Division of Water) shall be responsible for terminating **STANDBY ALERT** and **EVACUATION** emergency status. The agency that issues the termination notice shall notify the dam owner and all agencies involved. The dam owner shall be responsible for terminating the emergency at the dam site and restoring access to the dam as required.

#### EAP Coordinator Responsibility

The **EAP Coordinator** has the responsibility to coordinate revisions to the EAP, implement training and EAP exercises, and act as the LPOA contact with regulatory authorities during emergency situations.

### 6. PREPAREDNESS

The Operations, Maintenance, and Inspection Manual (OMI Manual) has been prepared as a first line of defense against the development of significant problems with the dam. The OMI Manual provides for regular inspections of the dam that are designed to reveal conditions that may develop into an emergency condition. With regular inspection and maintenance, it is anticipated that most of the potential problems that can lead to emergency situations will be prevented. The one notable exception is that of storm events in excess of the design storm used to size the spillway structures.

#### Surveillance

Regular inspection and surveillance of the dam will be in accordance with the schedules outlined in the OMI Manual. In addition, Lakengren residents will make daily surveillance observations of the dam and lake. As part of the EAP training, Lakengren residents will be told to report unusual conditions related to the lake level or dam to the LPOA office and/or to the **EAP coordinator**. During a **STANDBY ALERT** or **EVACUATION** condition the **EAP Coordinator** or LPOA representative designated by the **EAP Coordinator** will implement continuous monitoring of the dam.

#### Response During Periods of Darkness and Non-Business Hours

The **EAP Coordinator** lives in the Lakengren community and will be able to respond to an emergency during periods of darkness and non-business hours. Temporary lighting of the

downstream slope of the dam during periods of darkness will initially be performed using vehicle headlights. If the emergency condition extends past one night, the **EAP Coordinator** will organize the placement of temporary lighting at the dam by renting/leasing portable lighting plants.

#### Response During Periods of Adverse Weather

The dam has no power equipment that would fail to operate if electrical power is cut off by adverse weather. The **EAP Coordinator** will arrange contracting of emergency construction services and materials to repair the dam. A list of LPOA contractors that may be contacted in the event of an emergency will be maintained and updated with the EAP and is found in **Appendix C**.

#### Access to the Site

Access to the Lake Lakengren Dam site during a **STANDBY ALERT** or **EVACUATION** condition shall be limited to upstream roadways accessed from the Lakengren main entrance off of State Highway 732.

#### Alternate Systems of Communication

The notification plan for emergency situations is based on the use of telephones for communication between the **EAP Coordinator** and applicable agencies. Due to the widespread use of cellular telephones, it is anticipated that direct communication between the **EAP Coordinator** and agencies will be possible. However, in the event that telephone communication is not possible, the **EAP Coordinator** will send a representative to make the initial notification of an emergency condition directly to the Preble County EMA or the sheriff's office by driving into the City of Eaton. The anticipated time of travel for such a notification is about 15 minutes.

### 7. INUNDATION MAPS

Inundation maps that present the downstream floodwave predicted from a dam failure are presented in **Appendix A** along with supporting calculations and documentation. The maps were developed using USGS topographic information and the Simplified Dambreak Model (SMPDBK) Version 9/91 developed by the National Weather Service (NWS) Hydrologic Research Lab. Default breach parameters for an earthen dam were used in the model.

In developing the inundation maps, two dam breach scenarios were considered. The first is "sunny day" dam failure, and the second is a dam failure occurring during the Probable Maximum Flood (PMF) event. The inundation maps provide information relating to both scenarios. The following table describes the main input for each scenario.

| SUMMARY OF DAMBREAK SCENARIOS |   |   |
|-------------------------------|---|---|
| Scenario                      | Description and Input Data  | Output Data on Map  |
| <b>"Sunny Day" Failure</b>    | Scenario: dam fails at normal pool level without significant non-breach outflow<br><u>Main Input</u><br>Downstream cross-sections of Paint and Seven Mile Creeks (26 x-sections extending downstream 10.63 miles from the dam)<br>Lake elevation at breach = 1040 ft<br>Non-breach flow = 0 cfs | Distance downstream of dam to each cross-section<br>Floodwave travel time to each cross-section<br>Peak floodwave elevation at each cross-section |
| <b>PMF Failure</b>            | Scenario: dam fails during the PMF event<br><u>Main Input</u><br>Downstream cross-sections of Paint and Seven Mile Creeks (26 x-sections extending downstream 10.63 miles from the dam)<br>Lake elevation at breach = 1047.6 ft<br>Non-breach flow = 21,742 cfs                                 | Distance downstream of dam to each cross-section<br>Floodwave travel time to each cross-section<br>Peak floodwave elevation at each cross-section |

Detailed information concerning the computer model scenarios is presented in Appendix A along with the inundation maps. Downstream routing of the flood wave was ended based on the downstream distance required for the "sunny day" flood to be contained within the creek main channel. The average channel depth (flood depth) is estimated at 15 feet.

8. EAP APPENDICES

The following table summarizes the information contained in the Appendices to the EAP.

| SUMMARY OF EAP APPENDICES |  |  |
|---------------------------|--|--|
| Appendix                  | Title  | Description  |
| A                         | Investigation and Analyses of Dam Break Floods               | Contains inundation maps and supporting modeling documentation   |
| B                         | Plans for Training, Exercising, Updating and Posting the EAP | Contains a one page document that summarizes training, exercising, updating, and posting the EAP for the Lake Lakengren Dam  |
| C                         | Site-Specific Concerns                                       | Listing of construction contractors that may be contacted to provide emergency services. Additional information related to site-specific concerns will be added to this Appendix in EAP updates as applicable. |
| D                         | Approval of the EAP  | Contains a one-page approval page for the EAP.   |

The EAP appendices are attached.



## PURPOSE

1. Evaluate the dam-break inundation areas of Lake Lakengren Dam for both "sunny day" failure and flood failure conditions for Lake Lakengren Dam Emergency Action Plan (EAP).

## REFERENCES

1. *Simplified Dam-break Model (SMPDBK) computer program, version 9/91. National Weather Service Hydrologic Research Lab.*
2. *The NWS Simplified Dam-break Flood Forecasting Model. J. N. Wetmore and D. L. Fread. National Weather Service Hydrologic Research Lab.*
3. *Flood Insurance Study, Unincorporated Areas, County of Preble, Ohio, October 15, 1980. Federal Emergency Management Agency, Federal Insurance Administration.*
4. *Dam Inspection Report, Lake Lakengren Dam, Preble County, File number 9545-001, Ohio Department of Natural Resources Division of Water Dam Safety Section.*

## CALCULATIONS

Lake Lakengren is a private recreational lake. At normal pool level, elevation 1040 ft, the surface area is 176 acres and the storage volume is 3100 acre-ft (Ref. 4). The maximum storage capacity at the top of the dam, elevation 1050 ft, is 5460 acre-ft with a surface area of 301 acres (Ref. 4). Based on storage capacity, hazard and height, Lake Lakengren dam is classified as a Class I dam under Ohio Department of Natural Resources Division of Water Administration Rule 1501:21-13-01 (Ref. 4). For 100% probable maximum flood (PMF), the maximum pool elevation of Lake Lakengren is at 1047.6 ft with a peak outflow (discharge) of 21,742 cfs (Ref. 4). The surface area and the volume of the reservoir at this elevation are obtained from interpolation as 271 acres and 4891 acre-ft, respectively. The pool level is assumed at normal pool level (1040 ft) for "sunny day" failure condition and 100% PMF pool level (1047.6 ft) for flood failure condition.



| SMPDBK Input Data for Flood Failure      |   |
|--|---|
| Design Input                             | Input Value/Notes   |
| Water elevation when the dam breaches    | 1047.6 ft   |
| Final elevation of the breach bottom     | 980 ft  |
| Volume of the reservoir                  | 4891 acre-ft  |
| Surface area                             | 271 acres   |
| Final breach width                       | 202.80 ft (Ref. 2)  |
| Time of breach formation (failure)       | 6.76 minutes (Ref. 2)   |
| Non-breach outflow                       | 21,742 cfs  |
| Geometric data of channel cross-sections | Twenty-six cross sections were input along the Paint Creek and Seven Mile River from the toe of the dam to 10.63 miles downstream of the dam at major cross section geometry change locations. The cross-section geometry data were based on the measurements from the USGS 7.5 minute series topography in the downstream area of Lake Lakengren Dam and the field survey of the bottom width of Paint Creek. Based on the field survey, the average bottom width of Paint Creek is 30 feet. |
| Manning's "n"                            | 0.05 for the channel; 0.075 for left and right overbanks (Ref. 3).  |

The SMPDBK output files are attached. Following table summarizes the SMPDBK results:



## THE NWS SIMPLIFIED DAM-BREAK FLOOD FORECASTING MODEL,

by

Jonathan N. Wetmore and Danny L. Fread<sup>1</sup>

(Revised 12/18/91) by

Danny L. Fread, Janice M. Lewis<sup>2</sup>, and Stephen M. Wiele<sup>2</sup>

## SYNOPSIS

The National Weather Service (NWS) developed a simplified procedure in 1983 for predicting downstream flooding produced by a dam failure. This procedure, known as the Simplified Dam Break (SMPDBK) Flood Forecasting Model, produces information needed for delineating areas endangered by dam-break floodwaters while substantially reducing the amount of time, data, computer facilities, and technical expertise required in employing more highly sophisticated unsteady flow routing models such as the NWS DAMBRK model. The SMPDBK model can easily be processed on an inexpensive microcomputer; and with a minimal amount of data, the user may within minutes predict the dam-break floodwave peak flows, peak flood elevations, and peak travel times at selected downstream points. This capacity for providing results quickly and efficiently makes the SMPDBK model a useful forecasting tool in a dam failure emergency when warning response time is short, data are sparse, or large computer facilities are inaccessible. The SMPDBK model is also useful for pre-event dam failure analysis by emergency management personnel engaged in preparing disaster contingency plans when the use of other flood routing models is precluded by limited resources.

The SMPDBK model is designed for interactive use (i.e., the computer prompts the user for information on the dam, reservoir, and downstream channel and the user responds by entering the appropriate data values), and it allows the user to enter as much or as little data as are available; preprogrammed defaults can be substituted for some of the input parameters. Using the internally set default values, SMPDBK is capable of producing approximate flood forecasts after inputting only the reservoir water surface elevation when the dam starts to breach, reservoir surface area or storage volume associated with that water elevation, and elevation vs. width data for two cross sections of the downstream river valley (determined from on-site inspection or from topographic maps). If, however, the user has access to additional information (i.e., both the

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**APPENDIX B**

**PLANS FOR TRAINING, EXERCISING, UPDATING,  
AND POSTING THE EAP**



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**TABLE 1B**  
**PLANS FOR TRAINING, EXERCISING, UPDATING,**  
**AND POSTING THE EAP**

The EAP Coordinator has the responsibility to coordinate revisions to the EAP, implement training and EAP exercises. This table summarizes the LPOA plans for training, exercising, updating, and posting the EAP.

**EAP TRAINING AND EXERCISES**

The EAP Coordinator will conduct annual training with the Lakengren personnel that will be involved in the implementation the EAP. These personnel will include, at a minimum, the Lakengren security, maintenance personnel, LPOA Office staff, and the EAP Coordinator. Documentation of the training will be kept in **Appendix B** of the EAP.

The EAP Coordinator will also arrange periodic communication to the residents of Lakengren that identifies who to contact (EAP Coordinator or LPOA Office) in the event that they observe a problem with the dam.

The EAP Coordinator will also conduct an annual "tabletop" exercise of the EAP. This exercise will be designed by the EAP Coordinator to assess the state of training and readiness of the personnel involved in implementing the EAP. The drill will include, at a minimum, checking emergency contact telephone numbers and reviewing failure scenarios and responsibilities. Evaluation and comments from the exercise will be used to update the EAP procedures. Documentation of the exercises will also be kept in **Appendix B** of the EAP.

**EAP UPDATES**

The EAP coordinator will review and update (as necessary) the EAP annually. If significant changes are made to the EAP, all parties that sign the EAP approval sheet will be provided with copies of the changes.

**EAP POSTING**

An up-to-date copy of the **Emergency Notification Procedure** flowchart found in Section I of the EAP will be posted in the LPOA office. A copy of the EAP will also be maintained the LPOA office.



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