

## GUIDELINES FOR AN OPERATION, MAINTENANCE AND INSPECTION MANUAL

**I. INTRODUCTION** - State or list pertinent facts about the dam and reservoir; height, freeboard, lake area, drainage area, elevations, spillway sizes, etc.... Indicate purpose of reservoir and any special pertinent information. The Ohio Division of Water Inventory form includes much of this information.

**II. INSPECTION** - This section should indicate who, how frequent, and what is involved in an inspection. A form or forms should be included which can be used for each type of inspection or items to be monitored. Each dam should have specific problem areas which will require monitoring. These areas will be specified or outlined in past inspection reports either performed by ODNR or the owner's engineer.

<u>FREQUENCY</u>	<u>PERSONNEL</u>	<u>ITEMS TO INSPECT/MONITOR</u>	<u>FORM NO.</u>
As needed	Damtender	Rainfall	
Weekly	Damtender	Seepage / wet areas Toe drain flow Pool Level Trash rack debris Slides/cracks Rodent activity Vandalism	
Once Every 3 months	Damtender	Piezometer	
Yearly	Engineer/ Damtender	Slope protection/riprap Erosion Condition of vegetal cover Spillway condition Embankment condition Lake drain conditions Settlement monuments	
Periodic 3 to 5 years	ODNR/Engineer	Engineer's Safety Inspection	

**III. MAINTENANCE** - Indicate items which will require periodic maintenance. Each dam should have specific items addressed (see examples). Conditions specified on past inspection reports should be included.

<b><u>ITEM</u></b>	<b><u>FREQUENCY</u></b>
Mow embankment and emergency spillway	2 times/year
Lubricate and repair as needed lake drain valve mechanism	yearly
Re-establish proper vegetal cover	as needed
Repair erosion	as needed
Repair rodent damage	as needed
Clean trashrack	as needed
Repair concrete	as needed
Other mechanical equipment	yearly
Replace/replenish riprap	yearly

IV. **OPERATION** - Give a brief but complete description of all operation procedures. Specific procedure for operation of mechanical equipment such as valves could be included here. Emergency operation should be covered in the Emergency Action Plan.

<b><u>ITEM/CONDITION</u></b>	<b><u>ACTION REQUIRED</u></b>
Lake Drain Valve	Open at least 2 times/year
Pool level drawdown for winter season	Open drain and lower pool at a safe rate
Record keeping	Maintain records of all maintenance and operation actions

V. **SAFE RATE DRAWDOWN PLAN** - This section should include the method to be used for drawing the lake down under emergency conditions. This could include the maximum release rate which will not cause downstream flooding, the proposed location for an emergency channel through an abutment, other ways to provide for rapid drawdown if needed. Hastily, ill-conceived action during emergency situations could increase the failure rate or actually cause failure.

There are also non-emergency circumstances under which the lake level must be lowered. An example of this would be drawing the lake down to repair boat docks. A safe rate for non-emergency drawdown should also be determined and included in this section of the manual.

## **VI. EMERGENCY ACTION PLAN (EAP)**

The Interagency Committee On Dam Safety (ICODS) EAP Guidelines for Dam Owners, is recommended for consistency and uniformity. The format also serves as a checklist for completeness. When completed, the EAP should have two distinct sections: the basic EAP and the appendices.

Title Page/Cover Sheet/Table of Contents

- I. Notification Flowchart
- II. Statement of Purpose
- III. Project Description
- IV. Emergency Detection, Evaluation, and Classification
- V. General Responsibilities
  - A. Dam Owner
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  - C. Evacuation
  - D. Termination and follow-up
  - E. EAP coordination
- VI. Preparedness
- VII. Inundation Maps
- VIII. Appendices
  - Appendix A: Investigation and Analyses of Dam Break Floods
  - Appendix B: Plans for Training, Exercising, Updating, and Posting the EAP
  - Appendix C: Site-Specific Concerns
  - Appendix D: Approval of the EAP

For more information on the ICODS Emergency Action Plan Guidelines, please contact the Division of Water, Dam Safety Engineering Program at 614/265-6731 or visit our website at [www.dnr.state.oh.us/odnr/water](http://www.dnr.state.oh.us/odnr/water).

## **VII. APPENDIX (POSSIBLE ITEMS)**

- 1. Inspection forms
- 2. Past inspection reports
- 3. Reduced size as-built drawings
- 4. Stage-storage-area curve
- 5. Spillway rating curve
- 6. Drain rating curve
- 7. Pictures
- 8. ODNR inventory form