

Periodic inspection of dams is extremely important. Owners are encouraged to make a thorough visual inspection of their dams at least twice a year, once in the summer and once in the winter, and to have their dams inspected by a registered professional engineer at least once every 5 years. A closer inspection of the embankment surface can usually be made during the winter months when the vegetal cover is dormant and during the summer immediately after mowing. Throughout this manual, items to look for during inspection have been emphasized.

Included in this section are suggested forms to record inspection observations, and operation, maintenance, rainfall and pool level records. The inspection forms have been set up with common problems identified for each area inspected. Additional copies of these forms may be obtained from:

Ohio Department of Natural Resources
Division of Water, Dam Inspection Section
Fountain Square, Building E-3
Columbus, Ohio 43224
Telephone Number: (614) 265-6731

Four forms are provided on which to record inspection observations: one for embankments, dikes, or levees; one for spillways and drains or outlet works; one for miscellaneous items such as the watershed, lake shoreline, downstream area, monitoring devices, etc.; and a separate form for concrete dams. The form on page 59 is only used if the dam is concrete or has a concrete section. General instructions are provided on the back of each sheet. The fifth form is for recording operation, maintenance, rainfall, and pool level events.

These forms are used by the Dam Inspection Section of the Division of Water, Ohio Department of Natural Resources, and their use by dam owners is encouraged.

DAM INSPECTION CHECKLIST

Date _____
Time _____

NAME OF DAM _____
 FILE NUMBER _____ COUNTY _____ CLASS _____
 WEATHER & SITE CONDITIONS _____
 INSPECTORS _____
 OTHERS _____

CHECK AREA AS INSPECTED	EMBANKMENT • DIKE • LEVEE		ACTION		
	CHECK/CIRCLE CONDITION NOTED	OBSERVATIONS	REPAIR	MONITOR	INVESTIGATE
U/S SLOPE	vegetation/riprap				
	beaching/slides/cracks				
	undermining/erosion				
CREST	ruts/erosion				
	cracks/settlement				
	poor alignment				
D/S SLOPE	vegetation/erosion				
	rodent burrows				
	sloughs/slides/cracks				
	seepage/wetness				
GROINS	vegetation/riprap				
	erosion				
	seepage/wetness				
ABUTMENTS	vegetation/erosion				
	sloughs/slides/cracks				
	seepage/wetness				
TOE	cracks/slumps				
	embankment drains				
	seepage/wetness				

GENERAL COMMENTS, SKETCHES & FIELD MEASUREMENTS

GENERAL INSTRUCTIONS

1. HEADING

File Number refers to the Dam Inspection Section, Ohio Department of Natural Resources inventory system for dams, dikes and levees and may be obtained from the Dam Inspection Section office.

Class refers to classification under Administrative Rule 1501:21-13-01. The classification (I, II, III, or IV) may be obtained from the Dam Inspection Section office.

Inspectors and Others should include names and affiliations.

Weather and Site Conditions should include weather conditions and the condition of the ground surface (wet, snow-covered, muddy, dry, etc.) at the time of the inspection.

2. CHECKLIST

Check the appropriate box along the left-hand side as that AREA is inspected. Check the appropriate box if that CONDITION/ITEM is noted and/or inspected. The specific item should be circled. Further description should be provided under OBSERVATIONS. Check the appropriate box for the required ACTION. Obvious problems will require repair. Monitoring will be recommended if there is potential for a problem to occur in the future. Investigation is necessary if the reason the problem is occurring is not obvious. More than one box can be checked.

3. OBSERVATIONS

A brief description of any noted irregularities, needed maintenance or problems for each CONDITION/ITEM checked or circled should be made. Use blank row for any ITEMS not listed. Abbreviations and short descriptions are recommended. Examples: VEGETATION - Dense brush and trees. SEEPAGE/WETNESS - 10 foot diameter area, at toe near left abut., cattails, no flowing water. EROSION - 3 feet deep gullies at both d/s groins. If more room is needed for a description, the bottom of the page may be used.

4. GENERAL COMMENTS, SKETCHES, AND FIELD MEASUREMENTS

Explanatory sketches, measurements of cracks, slides and settlement, and additional explanation of observations should be placed in this section.

Definitions

U/S - Upstream

D/S - Downstream

Gallery - Inspection/Access hall inside of concrete dam

Groin - Intersection of embankment face with the valley abutment

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Ohio Department of Natural Resources

Division of Water

Dam Inspection Section

Fountain Square, Building E-3

Columbus, Ohio 43224

Telephone Number: (614) 265-6731

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Date _____
Time _____

NAME OF DAM _____
 FILE NUMBER _____ COUNTY _____ CLASS _____
 WEATHER & SITE CONDITIONS _____
 INSPECTORS _____
 OTHERS _____

	CHECK AREA AS INSPECTED	CONCRETE DAM TYPE _____		ACTION		
		CHECK/CIRCLE CONDITION NOTED	OBSERVATIONS	REPAIR	MONITOR	INVESTIGATE
<input type="checkbox"/>	U/S FACE	deteriorated joints cracking/spalling				
<input type="checkbox"/>	CREST	deteriorated joints cracking/spalling poor alignment				
<input type="checkbox"/>	D/S FACE	deteriorated joints cracking/spalling seepage				
<input type="checkbox"/>	ABUT-MENTS	vegetation/erosion sloughs/slides/cracks seepage/wetness				
<input type="checkbox"/>	TOE	erosion/undermining seepage/wetness foundation drains				
<input type="checkbox"/>	GAL-LERY	deteriorated joints cracking/spalling seepage				

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Date _____
Time _____

NAME OF DAM _____
FILE NUMBER _____ INSPECTORS _____

CHECK AREA AS INSPECTED	SPILLWAYS • DRAINS • OUTLETS		ACTION		
	CHECK/CIRCLE CONDITION NOTED	OBSERVATIONS	REPAIR	MONITOR	INVESTIGATE
Principal Spillway		Type:			
INLET-RISER	trashrack/debris				
	gates/flashboards				
	cracks/deterioration				
FLOW-WAY	improper alignment				
	cracks/deterioration				
	joint deterioration				
STILLING BASIN/OUTLET	type				
	cracks/deterioration				
	seepage/piping				
	undercutting				
	erosion				
	debris				
Emergency Spillway		Type:			
ALL AREAS	vegetation/cover				
	erosion				
	obstructions				
Lake Drains/Other Outlets		Type:			
DRAINS, OUTLETS	gates/valves				
	joints/flow surface				
	inlet tower				
	outlet area				
	operability				
TOE DRAIN	flow amounts				
	flow clear/muddy				

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CHECK AREA AS INSPECTED	MISCELLANEOUS AREAS		ACTION		
	CHECK/CIRCLE CONDITION NOTED	OBSERVATIONS	REPAIR	MONITOR	INVESTIGATE
<input type="checkbox"/> MONITORING	piezometers				
	weirs				
	monuments				
<input type="checkbox"/> GAGES	rainfall				
	pool level				
	stream				
<input type="checkbox"/> POOL AND SHORELINE	erosion/ground cover				
	development				
	reservoir crossings				
	sedimentation				
	water quality				
<input type="checkbox"/> WATER-SHED	slopes				
	land use				
	other impoundments				
<input type="checkbox"/> D/S AREA	stream channel				
	channel crossings				
	flood plain				
	development				
<input type="checkbox"/> EMERG. PLAN	notification list				
	evacuation plan				
	materials/equipment				
	access road to dam				

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Rainfall and Pool Level Records - Spaces have been provided for one month's records if daily readings and/or pool levels are made. As a minimum, rainfall and pool level records should be kept of significant (very large) rainfall events. *Weather conditions should include rainfall duration and intensity estimates; temperatures; ice and snow cover; etc.* General observations of the spillway performance and condition of the dam could be made.

Maintenance Performed, Equipment Operated - Operation of equipment and maintenance can be recorded under these headings. For example, if the lake drain is operated periodically, the date can be recorded here. Patching of spillway concrete or joint repairs would be significant maintenance items.

Flow Amounts - Records can be kept of any flows which are being periodically observed. Other could apply to seepage flow estimates of a certain area. Weather conditions during the observation are important to note.