# Washington state Department of Ecology logo.Dam Owner Annual Inspection FormEarthen Dams

## Project Data

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| --- |
| Dam Name:       |
| County:       | State Dam No. (if known)       |
| Owner Name:       |
| Owner Address:       | Telephone No.:      E-mail address:       |
| Inspected by:       |
| Inspection Date:       | Weather:       |

## Directions

* During inspection, check all boxes that apply. Fill in the overall condition of each structure and what actions will be taken to remedy any issues found. Mail or email a copy of the completed form to the Dam Safety Office.
* Mark approximate location of any problems on plan of dam footprint on page 6 and attach photos on page 7
* For concrete structures associated with your dam, check the “concrete in poor condition” box if you notice signs of settlement, misalignments, heaving, offset joints, cracks, or exposed reinforcements and make a note of what you have found in the line for overall condition.

## Reservoir Data

Reservoir Level at time of inspection       feet below dam crest

Reservoir Outflow at time of inspection       cfs or       gpm

Condition of Dam (embankment, abutments, foundation)

**Dam crest** Check all that apply:

[ ]  low areas

[ ]  horizontal misalignment

[ ]  surface cracking

[ ]  ruts

[ ]  animal burrows

[ ]  trees

[ ]  brush

Overall condition:

Actions needed:

**Upstream face** Check all that apply:

[ ]  slumps

[ ]  slides

[ ]  scarps

[ ]  sinkholes

[ ]  slope protection

[ ]  wave erosion

[ ]  animal burrows

[ ]  trees

[ ]  brush

Overall condition:

Actions needed:

Condition of Dam Cont. (embankment, abutments, foundation)

### Downstream face and toe Check all that apply:

[ ]  wet or soft areas

[ ]  slumps

[ ]  slides

[ ]  scarps

[ ]  sinkholes

[ ]  change in slope

[ ]  erosion

[ ]  unusual movement

[ ]  animal burrows

[ ]  water-loving vegetation

[ ]  trees

[ ]  brush

Is there seepage? [ ]  Yes [ ]  No If yes,

Location of seep:

Estimated flow:

Is the seep? [ ]  clear [ ]  turbid [ ]  N/A

Is there sediment? [ ]  Yes [ ]  No

Overall condition:

Actions needed:

### Pond liner Check all that apply:

[ ]  slope slumping

[ ]  tears, punctures, abrasion, other damage

[ ]  seam separation

[ ]  liner attachment issues to pipes, ramps, manholes

[ ]  ballooning of liner

[ ]  gas vents obstructed

[ ]  safety ladders/ropes integrity issues

[ ]  anchor trench/batten straps issues

[ ]  liner subgrade support movement or displacement

Overall condition:

Actions needed:

### Internal leak detection system

Check water level in sump. Is water present: [ ]  Yes [ ]  No

Damage to pipe boot at riser? [ ]  Yes [ ]  No

Odors coming from inside riser boot? [ ]  Yes [ ]  No

Overall condition:

Actions needed:

## Drop Inlet Spillway or Culvert (Pipe) Spillway

Spillway entrance or approach channel Check all that apply:

[ ]  debris

[ ]  vegetation

[ ]  slides

[ ]  other obstructions

[ ]  erosion protection

[ ]  other debris barrier

[ ]  trash rack in good condition

Overall condition:

Actions needed:

Intake or riser structureLook at riser crest, sidewalls, floor, trash rack, air vent. Check all that apply:

[ ]  misalignment

[ ]  movement

[ ]  settlement

[ ]  cracking

[ ]  concrete deterioration

[ ]  seepage at joints or cracks

[ ]  metal corrosion

[ ]  missing bolts

[ ]  air vent obstruction

[ ]  debris

[ ]  vandalism

Overall condition:

Actions needed:

## Drop Inlet Spillway or Culvert (Pipe) Spillway Cont.

Gates and gate controls Check all that apply: (leave blank if not applicable)

[ ]  operable and working

[ ]  corrosion

[ ]  deterioration

[ ]  vandalism

[ ]  other damage

[ ]  annual maintenance has been done

Overall condition:

Actions needed:

Outlet pipeline Look at concrete or metal condition, protective coating, pipe joints. Check all that apply:

[ ]  debris

[ ]  other blockage or obstruction

[ ]  joint separation

[ ]  movement

[ ]  cracks

[ ]  deterioration

[ ]  settlement

[ ]  corrosion

[ ]  cavitation

[ ]  seepage from drains/pipe exterior

Overall condition:

Actions needed:

Pipeline outfall or stilling basin Check all that apply:

[ ]  debris

[ ]  vegetation

[ ]  concrete condition poor

[ ]  movement

[ ]  cracks

[ ]  deterioration

[ ]  settlement

[ ]  erosion

[ ]  undermining

[ ]  gabions in poor condition

[ ]  riprap layer in poor condition

Overall condition:

Actions needed:

### Lead-out drain outfall(s)

Able to locate? [ ]  Yes [ ]  No Is there evidence of seepage? [ ]  Yes [ ]  No

Overall condition:

Actions needed:

## Open Channel Spillway or Weir Drop Structure

### Spillway entrance and overflow section, or weir overflow structure

Look at channel base, side slopes; concrete floor, sidewalls; weir boards. Check all that apply

[ ]  debris

[ ]  vegetation

[ ]  slides

[ ]  other obstructions

[ ]  concrete in poor condition

[ ]  movement

[ ]  cracks

[ ]  deterioration

[ ]  settlement

[ ]  cavitation

[ ]  erosion in earth or grass-lined channel

[ ]  gabions in poor condition

[ ]  riprap layer in poor condition

[ ]  weir boards in poor condition

[ ]  log boom in poor condition

[ ]  other debris barrier in poor condition

Overall condition:

Actions needed:

## Open Channel Spillway or Weir Drop Structure Cont.

Gates and gate controls Check all that apply: (leave blank if not applicable)

[ ]  operable and working

[ ]  corrosion

[ ]  deterioration

[ ]  vandalism

[ ]  other damage

[ ]  annual maintenance has been done

Overall condition:

Actions needed:

Outlet channel Check: channel base, side slopes; concrete floor, sidewalls. Check all that apply:

[ ]  debris

[ ]  vegetation

[ ]  slides

[ ]  other obstructions

[ ]  concrete in poor condition

[ ]  movement

[ ]  cracks

[ ]  deterioration

[ ]  settlement

[ ]  cavitation

[ ]  erosion in earth or grass-lined channel

[ ]  gabions in poor condition

[ ]  riprap layer in poor condition

[ ]  seepage from under-drains or along concrete exterior

Overall condition:

Actions needed:

Spillway outfall or stilling basin Check all that apply:

[ ]  debris

[ ]  vegetation

[ ]  concrete in poor condition

[ ]  movement

[ ]  cracks

[ ]  deterioration

[ ]  settlement

[ ]  erosion

[ ]  undermining

[ ]  gabions in poor condition

[ ]  riprap layer in poor condition

Overall condition:

Actions needed:

Under-drain outfalls Check all that apply:

Able to locate? [ ]  Yes [ ]  No Is there evidence of seepage? [ ]  Yes [ ]  No

Overall condition:

Actions needed:

**Low-Outlet Works** (visible elements)

**Intake structure** (if visible)Check all that apply:

[ ]  debris

[ ]  other obstructions

[ ]  trash rack in poor condition

[ ]  other debris barrier in poor condition

[ ]  concrete in poor condition

[ ]  metal in poor condition

Overall condition:

Actions needed:

Gates/valves and control mechanisms Check all that apply:

[ ]  operable and working

[ ]  corrosion

[ ]  deterioration

[ ]  vandalism

[ ]  other damage

[ ]  annual maintenance has been done

Overall condition:

Actions needed:

**Low-Outlet Works Cont.** (visible elements)

Outlet pipeline and pipe outfall Look at concrete or metal condition, protective coating, pipe joints. Check all that apply:

[ ]  debris

[ ]  other blockage or obstruction

[ ]  joint separation

[ ]  movement

[ ]  cracks

[ ]  deterioration

[ ]  settlement

[ ]  corrosion

[ ]  cavitation

[ ]  undermining at outfall

[ ]  seepage from drains/pipe exterior

[ ]  gabions in poor condition at outfall

[ ]  riprap in poor condition at outfall

Overall condition:

Actions needed:

Internal seepage/drainage controls (leave blank if not applicable)

### Lead-out drain outfalls:

Able to locate? [ ]  Yes [ ]  No

Clarity of flow:

Color or staining? [ ]  Yes [ ]  No

Presence of fines or sediment? [ ]  Yes [ ]  No

Estimated/measured flow(s):

Measuring devices:

Overall condition:

Actions needed:

### Piezometers:

Able to locate? [ ]  Yes [ ]  No

In secure location? [ ]  Yes [ ]  No

Readings:

Condition of casing:

Overall condition:

Actions needed:

## Emergency Action Plan (EAP) and Operation and Maintenance (O&M) Manual

Date of EAP or last update on file with Ecology? Date:

Date of O&M Manual or last update on file with Ecology? Date:

## Additional Comments

|  |
| --- |
|       |

## Plan View of Dam



(Insert plan view of dam and spillways)

## Photographs

 

(Insert photographs)

** **

**Mail or email a copy of this completed form to the attention of the Dam Compliance Technician at Ecology’s Dam Safety office:**

By email: damsafety@ECY.WA.GOV

By mail: Washington State Dept. of Ecology

 Dam Safety Office

 Attn: Dam Compliance Technician

 PO Box 47600

 Olympia, WA 98504-7600

**Problems found during your inspection?**

If a problem is observed, please call the Dam Safety Office at (360) 407-6872 during business hours for guidance and assistance.

If it is an emergency call:

1. Call **911**

2. Call State Division of Emergency Management

* 1. Call the Duty Officer (available 24 hours/day) at **1-800-258-5990**
	2. Clearly state that this is a “**dam safety emergency**”

**Would you like a customized inspection form?**

If you have found that this form has sections that do not apply to your dam or there are aspects to your dam that are not captured in this form, contact the Dam Compliance Technician at (360) 407-6613 or damsafety@ECY.WA.GOV and we will create an Annual Inspection Form specific to your dam.

**Helpful Documents and Information**

[Ecology’s Dam safety website](https://ecology.wa.gov/Water-Shorelines/Water-supply/Dams): <https://ecology.wa.gov/Water-Shorelines/Water-supply/Dams>

Documents found there:

* General information and dam ownership responsibilities
* Dam owner’s guidance manual
* Impacts of animals on earthen dams
* Impacts of plants on earthen dams
* Burrowing animal guidance