

Below are an example of inspection procedures and a dam inspection checklist that can be used to conduct routine dam inspections for most dams in Wisconsin.

The Sample Dam Inspection Checklist is very detailed to try and cover all types of dams and appurtenant works. It can be edited to include only those parts relevant to the dam in question. Any style of checklist is appropriate if it covers all the components of the dam, allows for documentation of observations and requires action to be taken on any deficiencies.

*A checklist for inspections required under ss. 31.19 (2)(ag) can also be found at:
<http://dnr.wi.gov/topic/Dams/documents/DamInspectionChecklist102011.pdf>.*

Sample Inspection Procedures

- Work in methodical pattern (all upstream faces end to end, then crest end to end, then all downstream faces end to end, e. g). Use same pattern each time.
- Fill in checklist as you go.
- Survey periodically to determine settlement or movement.
- Photograph apparent deficiencies from several different locations and at a distance as well as close up.
- Measure cracks and holes periodically.
- Measure seepage volumes periodically.
- Operate gates regularly.
- Inspect concrete for new cracks, holes, spalling, etc.
- Inspect earthen sections for holes, slumps, slides, cracks, vegetation.
- Inspect gates, gate chains, cables, stop logs, electrical operation, ice damage.
- Inspect toe and other drains for clogs, flow, etc.
- Inspect signs/fencing.
- Inspect safety equipment.
- Other

APPENDIX C

Inspections

Sample Dam Inspection Checklist

NAME OF DAM INSPECTION CHECKLIST
DNR FIELD FILE NUMBER

OWNER: _____

OWNER'S REPRESENTATIVE: _____

DATE: _____

WEATHER/SITE CONDITIONS: _____

INSPECTOR(S): _____

OTHERS: _____

CHECK ITEM AS
INSEPECTED

NOTE CONDITIONS
AND OBSERVATIONS

NOTE ACTIONS
REQUIRED

___ Benchmark

- Check for disturbance/vandalism
- Condition: _____

___ Headwater Gage

- Condition: _____
- Reading: _____

___ Timber Weir

- Condition: _____
- Action: _____

___ Security Fence and Locked Gate and Gate Valve Locks

- Check for damage/vandalism
- Condition: _____
- Action: _____

___ Walkway and Railing

- Check for broken welds or other damage.
- Condition: _____
- Action: _____

___ Signage

- Condition and Visibility: _____
- Action: _____

___ Gate Valve ___ inch

- Exercise Gate (fully open/close – return to desired position), check for smooth operation and seal.
- Condition: _____
- Action: _____

___ Sluice Gate ___ inch

- Exercise Gate (fully open/close), check for smooth operation and seal.
- Condition: _____
- Action: _____

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___ Trash Rack

- Check for debris and remove if necessary
- Check for broken connections at anchor chains. Repair as required.
- Condition: _____
- Action: _____

___ Log Booms

- Check for debris accumulation and remove if necessary
- Check for broken welds, severe rust or other deterioration. Repair as required.
- Condition: _____
- Action: _____

___ Concrete Drop Inlet and Headwall

- Check concrete surfaces for cracks and spalls. Note location and crack widths on sketch.
- Concrete deterioration may be patched through maintenance procedures.
- Extreme deterioration should be examined by an engineer.
- Severe cracking or rapid changes require immediate notification to State Dam Safety Engineer.
- Condition: _____
- Action: _____

___ Concrete pipe ___ inch diameter

- Check for blockage and remove if necessary.
- Check for improper alignment.
- Check for cracks, spalling or other deterioration.
- Check pipe for joint deterioration.
- Condition: _____
- Action: _____

___ Upstream Riprap

- Elevation/location/extent of riprap _____
- Condition: _____
- Action: _____

___ Downstream Riprap

- High flow can cause underwater erosion (scour). Check for stream erosion and for scour hole at outlet of pipe. Use probe to check depth of scour hole.
- Condition: _____
- Action: _____

___ Earth Embankment

- Check vegetative cover. The embankment should have a suitable cover of grass with no woody vegetation such as brush, shrubs and trees. Mow regularly to maintain a 6-inch grass stand.
- Check for animal burrows. Remove animals and backfill holes with soil.
- Check for surface erosion on grassed slopes and at riprap flumes which intercept roadway drainage.
- Replace riprap as required and topsoil and re-seed eroded areas as required.
- Check for slumps (slides or sloughs). Slow or sudden movement of earth embankment is an indication of instability and requires immediate response. Contact State Dam Safety Engineer for advice.
- Check for settlement of embankment. Settlement may be uniform or at isolated depressions. Settlement indicates loss of material or compression of material either within the dam

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embankment or the foundation. Settlement should be documented and evaluated by an engineer.

- Check for seepage on the downstream slope. If present, monitor for presence of soil particles. If soil is moving, a piping condition (internal erosion) may exist and requires immediate contact with the State Dam Safety Engineer.
- Condition: _____
- Action: _____

___ Boat Ramp

- Check for ruts, potholes and other damage to gravel surface.
- When boat ramp is maintained/graded the crest should not be lowered. The crest should be preferably maintained at elevation _____ and at a minimum of _____ to prevent overtopping. Elevations should be checked during the engineering inspections.
- Condition: _____
- Action: _____

___ Emergency Spillway

- Check for evidence of flow through emergency spillway, note location of highwater marks at crest, inlet of culverts and outlets of culverts.
- Check for displaced riprap and erosion.
- Check for woody vegetation such as brush, shrubs and trees within riprap or at edges of riprap. Remove as required.
- Check for animal burrows. Remove animals and backfill holes with soil.
- Check condition of ___ inch corrugated metal culvert pipes.
- Check for ruts, potholes and other damage to gravel surface of road over culverts.
- Condition: _____
- Action: _____