



Hydropower Dam Safety Inspection Checklist Template

Reservoir Monitoring

Assessment of water levels, flow rates, and overall reservoir conditions.

Reservoir Water Level (meters)

Inflow Rate (cubic meters/second)

Outflow Rate (cubic meters/second)

Date of Measurement

Time of Measurement

Water Clarity (Visual Assessment)

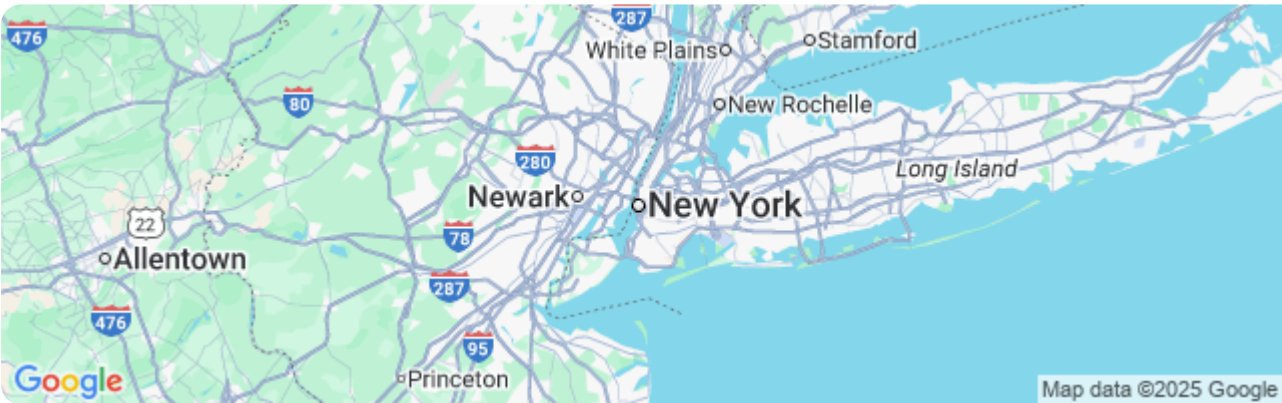
- ☐ Clear
- ☐ Slightly Turbid
- ☐ Turbid
- ☐ Very Turbid

Weather Conditions at Time of Measurement

Write something...

GPS Location of Measurement Point

 [Set My Current Location](#)



Dam Structure Inspection

Visual examination of concrete, embankment, and other structural components for cracks, settlement, or deterioration.

Crack Width (mm)

Enter a number...

Crack Location (e.g., upstream face)

Write something...

Description of Any Visible Deterioration

Write something...

Joint Condition

☐ Good

☐ Fair

☐ Poor

Settlement (mm)

Enter a number...

Photographic Evidence of Deterioration

 Upload File

Concrete Discoloration Observed?

☐ Yes

☐ No

Date of Last Repair

Enter date...

Spillway Functionality

Verification of spillway capacity and operational readiness for flood control.

Spillway Discharge Capacity (cfs)

Enter a number...

Reservoir Water Level (feet)

Enter a number...

Time of Spillway Gate Opening/Closing

Spillway Gate Operation (Automatic/Manual)

- ☐ Automatic
- ☐ Manual

Gate Alignment (Left/Right)

- ☐ Left
- ☐ Right

Observations (Gate Movement, Noise, etc.)

Write something...

Date of Last Spillway Cleaning

Enter date...

Photographs of Spillway Operation

 Upload File

Outlet Works Evaluation

Inspection of intake structures, penstocks, and discharge channels for leaks, blockages, or damage.

Penstock Pressure (PSI)

Enter a number...

Discharge Flow Rate (cfs)

Enter a number...

Valve Operational Status

- ☐ Open
- ☐ Closed
- ☐ Partially Open
- ☐ Locked Closed
- ☐ Manual Override Active

Intake Screen Condition

- ☐ Clean
- ☐ Slight Debris
- ☐ Moderate Debris
- ☐ Heavy Debris

Observations - Unusual Noises/Leaks

Write something...

Last Valve Maintenance Date

Enter date...

Inspector Signature

Instrumentation & Monitoring Systems

Testing and calibration of dam instrumentation (piezometers, strain gauges, water level sensors) and data acquisition systems.

Piezometer Reading (Settlement Point 1)

Enter a number...

Piezometer Reading (Settlement Point 2)

Enter a number...

Strain Gauge Reading (Dam Face)

Enter a number...

Time of Last Data Download

Data Download Status

- ☐ Successful
- ☐ Partial
- ☐ Failed


Date of Last Calibration

Enter date...

Notes on System Performance

Write something...

Screenshot of Monitoring Dashboard

 Upload File

Embankment Stability (Earthfill Dams)

Evaluation of embankment slope stability, erosion protection, and seepage control.

Embankment Settlement (mm)

Enter a number...

Slope Angle Deviation (degrees)

Enter a number...

Evidence of Piping?

- ☐ Yes
- ☐ No
- ☐ Uncertain

Description of Slope Instability Signs (if any)

Write something...

Seepage Rate (liters/second)

Enter a number...

Erosion Protection Measures Present?

- ☐ Riprap
- ☐ Vegetation
- ☐ Geotextile
- ☐ None

Last Vegetation Inspection Date

Enter date...

Concrete Condition (Concrete Dams)

Assessment of concrete reinforcement, joint performance, and overall concrete integrity.

Concrete Cover Thickness (mm)

Enter a number...

Joint Condition (Excellent, Good, Fair, Poor)

Write something...

Description of Any Visible Cracks (Location, Width, Length)

Write something...

Evidence of Alkali-Silica Reaction (ASR)?

- ☐ Yes
- ☐ No
- ☐ Uncertain

Crack Width (mm) - Maximum Observed

Enter a number...

Upload Photo of Dam Face (Section A)

 Upload File

Date of Last Concrete Repair

Enter date...

Seepage Control

Monitoring and assessment of seepage rates and identification of potential seepage pathways.

Total Seepage Volume (Gallons)

Enter a number...

Seepage Rate from Toe (Gallons/Hour)

Enter a number...

Seepage Appearance (Color/Texture)

- ☐ Clear
- ☐ Cloudy
- ☐ Silty
- ☐ Oily

Description of Seepage Location(s)

Write something...

Evidence of Erosion Near Seepage Points?

- ☐ Yes
- ☐ No
- ☐ Uncertain

Date of Last Grouting/Sealing Activity

Enter date...

Notes/Observations Regarding Seepage Control Measures

Write something...

Emergency Action Plan (EAP) Review

Verification of EAP awareness, training, and readiness for emergency response.

Last EAP Training Date

Enter date...

EAP Familiarity Level (Staff)

- ☐ Fully Familiar
- ☐ Somewhat Familiar
- ☐ Not Familiar

Number of Staff Trained on EAP

Enter a number...


Summary of Recent EAP Drills/Exercises

Write something...

Communication System Status (During Emergency)

- ☐ Operational
- ☐ Partially Operational
- ☐ Non-Operational

EAP Document Version (Current)

 Upload File

Estimated Time for Notification of Authorities

Wildlife & Environmental Considerations

Assessment of potential impacts on fish passage, aquatic habitat, and overall environmental conditions.

Fish Passage Status

- ☐ Clear
- ☐ Partial Obstruction
- ☐ Complete Obstruction
- ☐ Under Construction/Maintenance

Aquatic Vegetation Density (Scale of 1-5)

Enter a number...

Observations Regarding Bird Nesting Activity

Write something...

Evidence of Erosion Along Shoreline?

- ☐ Yes
- ☐ No
- ☐ Uncertain

Last Wildlife Survey Date

Enter date...

Notes on Water Quality (e.g., clarity, odor)

Write something...