Tips and Tricks for Inspecting Dams and Canals

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Introduction

- Generally applicable for dams and canals
- Discuss important things to look for on an inspection
- Also emphasize
  - Why do inspections?
  - Why are they important?
  - How can they best be used?

Get Ready

- Schedule
  - When to do it?
    - Vary the times of year
      - Seepage
      - Exposed features
    - Avoid rainy weather
    - Avoid snow cover

Get Ready

- Schedule
  - Coordinate with Others
    - Dam Safety
    - Interested Parties
    - Engineer
    - Dam tender

Get Ready

- Equipment and Forms
  - Camera
  - Inspection forms/clipboard/pens/pencils
  - Previous inspection report to compare
  - Tape measure
  - Buckets
  - Ziploc bags
  - Flashlight
  - Stopwatch
  - Hammer or chain
  - More?

Important Things to Look For

- Seepage


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.5'
.4'
.3'

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- Blockages


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Why Do an Inspection?

- Because you have to
  - Regulations (High Hazard, Special Use Permit, other requirements)
- Because you want to
  - Check condition of structure
  - Understand what's going on
  - Keep up with maintenance

Why Do an Inspection?

- Because it's a good idea
  - Standard of care
  - Liability
  - Good management
  - Remember your asset is also a liability!

The Importance of Documentation

- Provides evidence of due diligence
  - Shows you care
  - Shows you are a good steward
- Provides long-term record
  - Invaluable
  - Shows changes over time
  - Proves how bad our memories can be

Annual Dam Owner's Observation Report
Earthen Dams

Purpose: 1)Identify Maintenance Needs
2.) Record Observations on dam condition

Dam Name: _____
Dam Observer:_____ **Observation Date:** _____
Reservoir Elevation: _____ **Weather Conditions:**_____

Area to be Examined	Observations	Recommended Action	Date to be completed
Embankment Crest			
surface cracks			
animal burrows			
low areas			
vegetation			
ruts			
other			
Downstream Slope			
wet areas/seepage			
slides/depressions etc.			
animal burrows			
erosion			
vegetation			
other			
Upstream Slope			
vegetation			
erosion,slides, sinkholes etc.			
slope protection			
other			

Always Take the Next Step

- Keep records organized and filed properly
- Use inspections to take necessary action
  - Call 911?
  - Call an engineer
  - Fix the problem

Always Take the Next Step

- Use inspections as tools for management
  - Incorporate monitoring as part of regular O&M visits (use a camera liberally!)
  - Incorporate results/recommendations into O&M plan
  - Set up instrumentation
  - Determine frequency of future inspections

Keep in Mind…

- Inspections are powerful tools
- Use them as intended
- Definite payoff

Thank you!