



Mitchell Lake Dam Project

Black Hills National Forest – Mystic Ranger District

Background

- Built in 1937 by the Civilian Conservation Corps (CCC) to create a recreational fishery.
- No Flood Control Benefits
 - Dam cannot safely pass half PMF (56,098 cfs) or 100-year flood event (5,288 cfs)
 - Dam can safely pass 50-year flood event (3382 cfs)
- Hazard Classification – High Hazard Dam
- The existing structure is an earthen embankment with concrete conduit outlet works and a concrete spillway
 - Spillway deteriorating, outlet works inoperable, heavily sedimented in, trees growing on the downstream
- Impoundment max capacity 111 acre-ft
 - Current impoundment – 18 acre-ft
- Spring Creek Watershed – 104 sq. mi.



Image: spillway entrance – deteriorating concrete, vegetation growing, debris blocking the entrance.

Alternatives

- **Rehabilitation - \$34,600,000**
 - The dam would be rehabilitated to safely route the Half-PMF inflow design flood.
 - The primary spillway would be repaired or reconstructed to ensure the reservoir has a properly functioning low-level outlet.
 - Built-up sediment would be removed, restoring the original design storage for the reservoir
- **Decommission - \$2,400,000**
 - Construct a stabilized breach through an embankment capable of passing a 100-year inflow with less than 10 feet of reservoir depth.
 - Restore natural channels through the existing reservoir pool area and provide trails, allowing better access to the public for fishing and recreation. As well as improve habitat conditions for aquatic life.
 - Reseed and revegetate all disturbed areas and the existing reservoir pool area
- **No Action - \$0 - \$14,900,000+**
 - No action would be taken to address the deficiencies of the dam.



Image: spillway entrance – deteriorating concrete, vegetation growing, debris blocking the entrance.

Mitchell Dam Meeting & Media Efforts

- Feb 16th, Hill City Economic Development Council
- March 5th, Pennington County Board of Commissioners
- March 11th, Hill City Council
- March 13th, Hill City Public at the Community Center
- Posted on the Black Hills Forest News, and Public Meeting outreach
- Picked up by the following media: Black Hills Fox News, RC Journal, SDPB



Image: spillway – deteriorating concrete, rebar exposed, vegetation growing, debris in the spillway.

Mitchell Dam Public Comments as of March 19th

- In Favor of Rehabilitation (12)
- In Favor of Decommission (16)
- Other Comments
 - Trust Credibility - keep informed (5)
 - Question Analysis Type - (1)



Image: spillway entrance right wall – deteriorating concrete, end of the wall is breaking off vegetation growing, debris blocking the entrance.

Conclusions

- Mitchell Dam is in poor condition
 - Remedial action or removal is needed
- Opportunity to utilize Great American Outdoors Act (GAOA) Funding
- Opportunity for the National Forest Advisory Board (NFAB) to engage and make a recommendation to the Forest Supervisor

