U.S. Army Corps of Engineers - Public Meeting Notes

February 6, 2007

Maxwell House Hotel

There are two dams upstream from Nashville suffering seepage problems, Wolf Creek Dam (270 river miles from Nashville) and Center Hill Dam (70 river miles from Nashville). Both dams were constructed over 40 years ago on limestone foundations that are prone to seepage. Seepage is the movement of water through and under a dam. All dams have seepage due to water finding least paths of resistance through dam materials. Seepage must be controlled in velocity and quantity to keep the dam safe.

Wolf Creek Dam

Wolf Creek Dam contains the largest reservoir of water in the area.

U.S. Army Corps of Engineers admits there is a serious problem with seepage and soil erosion of the dam's embankment.

The Corps considers this problem to be serious and a "high risk".

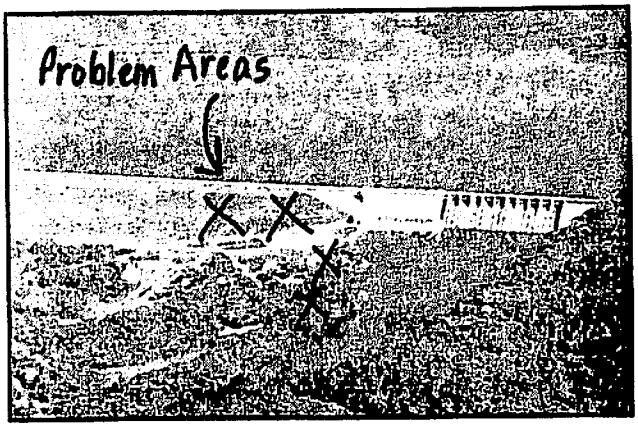
Seepage and soil erosion problems have been on going since 1968. Throughout the years, repairs have been made to control these problems. Problems revolve around the limestone foundation. Limestone contains caves, voids and fissures. Normal seepage through the dam into these limestone spaces cause larger spaces to become larger, thus more water is able to move through the foundation of the dam.

Over the past couple years, increases in wet areas downstream. Exploratory drilling wet material in the dam's embankment near the limestone foundation. Monitoring instruments indicated increases in water pressure in these areas.

The U.S. Army Corps of Engineers know what the problems are, and know what needs to be done to keep the dam safe.

Currently:

- Instruments indicate increases of seepage in the limestone bedrock.
- There are wet areas in areas of the embankment and downstream.
- There is settlement on the top of the embankment.
- There are soft areas in the embankment.

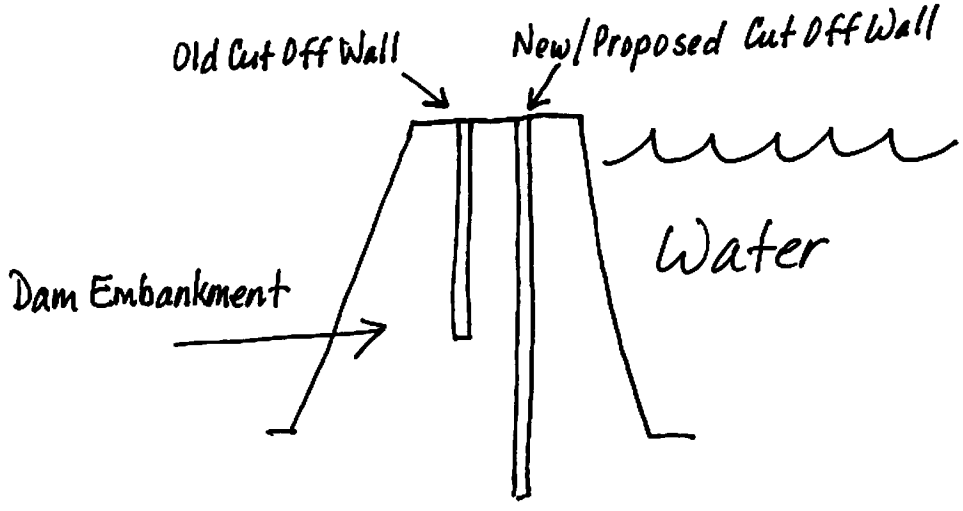


Wolf Creek Dam

The "Fix":

- First - Grout voids within the embankment. Grout is a mixture of sand, cement and water that is pumped under pressure through pipes deep into the dam to fill voids. Grouting is not a long-term solution to the seepage problem. Grouting will stabilize pressure within the embankment allowing for the second phase of repair.

- Second - Add a new 3 ft. thick cut off wall, upstream from the original 1ft cut off wall with the dam embankment. The new wall will go down 450 ft. further than the existing wall. The new wall will cost approximately 310 million dollars; all funding for the project has been approved, and scheduled for completion before 2014.



U.S. Army Corps of Engineers Action Plan

Emergency Action Plan

- Up to date information to State and local EMS Officials.
- Coordinate with local Emergency Management Officials
- Public Meetings.

Increased Monitoring

- 27/7 Monitoring of the dam.
- Monthly inspections.
- Daily / weekly monitoring of sensors.

Solve & Manage Seepage Problem

- Lower and maintain water level at 680 ft. Stress indicators show decreasing pressure within the embankment as water level drops. Water levels can be dropped ½ ft. per day.
- Grouting improves foundation and fills voids.
- Risk Assessment to be completed in three months.
- Independent panel for review and oversight of the project.

Emergency Notification

There would be ample warning of a pending breech of the dam. Sensors within the dam would indicate a breech before it would happen. There would be time for evacuations.

- Corps would advise NOAA (National Weather Service). Weather radio emergency broadcasts, information strip at bottom of television channels.
- Activation of State emergency systems.
- Local emergency broadcasts and information.

Notes of Interest
Corps flood maps are on public display at the Hermitage Library, 3700 James Kay Lane.

Utility outages, water, electric and natural gas would be localized to affected flood areas.

If Nashville's water treatment facility would succumb to flood waters, the city would still have fresh water for 18 days. Floodwaters would recede within the 18-day fresh water period, thus no substantial fresh water problems would linger.

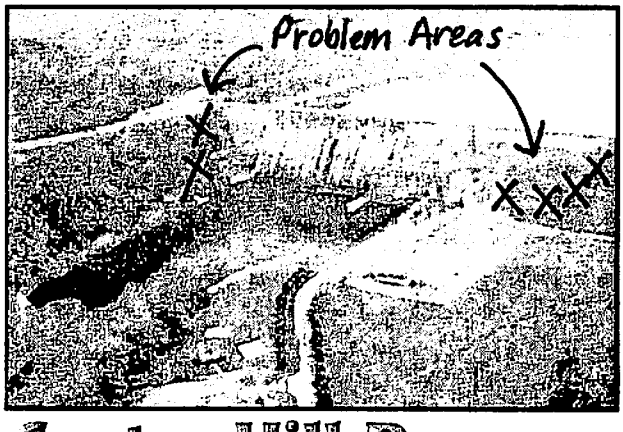
Wolf Creek Dam is becoming safer each day due current repairs being performed.

If the Wolf Creek Dam is breeched, the Old Hickory Dam would be opened up at full capacity to empty water down the Cumberland River.

Center Hill Dam
Same bad foundation problems and repair plans as Wolf Creek Dam. Cost of repairs approximately 240 million dollars with critical grouting to begin summer 2007.

Not as serious as Wolf Creek Dam. Center Hill Dam does not contain as much water as Wolf Creek Dam.
Failure of this dam would create flooding for Nashville area, but not near as bad as a Wolf Creek Dam failure.

No flood maps have been produced.



Center Hill Dam