DAM REHABILITATION
FOR
DUNN LAKE DAM

By:
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THE PROBLEM
SPILLWAY PROBLEM
APPLICATION FOR IMPACT CLASSIFICATION

Pertinent Data: (Continued)

*Height of Dam: 14 feet

*Maximum Capacity: 132 acre ft.

*Note: The height of the dam is established with respect to the maximum storage potential measured from the natural bed of the stream or watercourse at the downstream toe of the barrier, or if it is not across a stream or watercourse, the height from the lowest elevation of the outside limit of the barrier, to the maximum water storage elevation. For determining project size, the maximum storage elevation is considered equal to the top of the dam elevation.

Drainage Area (sq. miles): 1.0

Average Annual Rainfall (inches): 60.65

Elevation of Top of Normal Pool (ft. MSL): 287.5

Area of Impoundment at Normal Pool (acres): 15.3

Maximum Area of Impoundment (acres): 26.9

Average Depth of Impoundment (ft.): 2.6

Maximum Depth of Impoundment (ft.): 15.0

Top of Dam Elevation (ft. MSL): 292.0

Principal Spillway Crest Length (ft.): [If Multi-Stage, Provide additional Crest Length(s) & elevation(s)] 100 @ 288.0

Emergency Spillway(s): [Crest Length(s) & Elevation(s)] 45 @ 290.2

Spillway Design Flood: 50 Year

Surcharge Elevation for Design Storm (ft. MSL): 2.6

Surcharge Elevation for 100 Year Storm (ft. MSL): 3.0
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Other Pertinent Information:

A “Low” impact classification is established by the applicant because:

- The dam and reservoir are located in a rural area.
- There are no buildings located in the dam breach inundation area within the 4.3 mile reach of Dunn Creek from Beaver Creek to the Dam Site.
- A sunny day breach would produce an increase in water surface elevation of 1.6 ft. over the 50 year storm below the dam which reduces to no increase with 2500 ft. below the dam.
- The overtopping of the White Road bridge is 1.7 ft. for the 50 year storm and 0.01 feet for the “sunny day” breach at the upstream side. On the downstream side, the breach flow is below the top of roadway.
- There is no development around the rim of the reservoir.
- The maximum increase in top width of the Dunn Creek floodplain from normal operating condition to breach condition is 41 feet.

A “breach condition” inundation map is presented on Exhibit 2.