

# Repairs to Scotts Run & Hopewell Dams, French Creek State Park

Client: PA Department of Conservation and Natural Resources, Engineering & Construction Div.

Berks Co., PA

Year: 2020    Cost: \$1,250,000



Gwin, Dobson & Foreman designed repairs and improvements for the recreation dams at French Creek State Park. Under the direction of the PA Department of Natural Resources, GD&F performed feasibility studies, preliminary engineering and final design documents for the Scotts Run Dam and Hopewell Dam. A description of the rehabilitation work is as follows.

Built in 1953, Scotts Run Dam is 35 feet high with a crest width of 625 feet and classified as a High Hazard dam. Field investigations revealed widespread downstream seepage and spillway deterioration.

- Installation of new toe drain system, including manholes, perforated piping and drain fill material to safely collect and convey seepage below the dam
- Replacement of the upper concrete intake gate chamber, installation of new handrail and access hatch and new valve operator and stem guides for the 24" intake valve
- Stone restoration and repointing joints of spillway walls and channel floor; wood access stairs at the emergency spillway and new reinforced concrete spillway wall with stone facing

A High Hazard dam, Hopewell Dam is comprised of a zoned-earth embankment with a height of 30 feet and length of 1,000 feet. Constructed in 1938, the dam has a masonry primary spillway and a concrete emergency spillway built in 1990. Stone masonry showed significant deterioration and displacement.

- Removal and replacement of the existing 30" sluice gate, stem guides and operator at the primary spillway intake structure
- Installation of wood stairs and fence adjacent to the emergency spillway and primary spillway
- Repair of spalled concrete at the emergency spillway and removal of loose mortar, injection grouting of voids and repointing of the masonry at the primary spillway