PROJECT SUMMARY

## Cobun Creek Dam No. 2

Client: Morgantown Utility Board Monongalia Co., WV Year: 2022 Cost: \$30,000,000



Gwin, Dobson & Foreman planned, designed, and managed the construction of a new water supply dam for the Morgantown Utility Board, the largest publicly owned water supplier in WV. Located on Cobun Creek, a 400 MG reservoir will be formed by a 75-ft. high zoned-earth embankment. GD&F performed a source evaluation using a reservoir depletion model to derive a safe yield of 3.5 MGD for a 50-year drought condition. The reservoir will also provide a 15-day emergency supply for a maximum design demand of 24 MGD. The dam project incorporates the following major features:

- Embankment construction consisting of 500,000 cubic yards of various grades of earth fill processed from site excavations and borrow areas.
- Internal drainage system comprised of an inclined chimney drain, horizontal drainage blanket, seepage collection system and toe drain.
- Rock excavation and blasting at the dam foundation, abutments and spillway using pre-split drilling and blasting techniques and mechanical rock removal.
- Ground anchor structural retention system consisting of 400 rock anchors for reinforced concrete panel walls, spillway slabs, and ogee overflow weir.
- Structural concrete for hydraulic structures (intake tower, spillway, concrete cradle) and mass concrete structures (ogee weir and spillway terminal structure) with a total placement of 8,300 CY of reinforced concrete.
- Grout curtain including drilling and pressure grouting of 36,000 SF.
- Outlet conduit involving 550 LF of 48" and 66" diameter pre-stressed concrete cylinder pipe (PCCP) with concrete cradle, controlled backfill and drainage layers.
- Intake pipe consisting of 720 feet of 36-inch ductile iron pipe, valves, and fittings.



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- Intake tower comprised of a 79-ft. high by 15-ft. square intake structure with sluice gates, knife gate valves, intake ports, valve operators and ladders/platforms.
- Roadway construction including the relocation of Upper Cobun Creek Road (according to WVDOH standards), access drives and various stabilized roads.
- Preliminary route alignment and hydraulic design of 22,600 LF of 30-in. transmission main (with I-68 directional boring) from the reservoir to water treatment facility.



