

<https://www.dominionenergy.com/about-us/making-energy/renewables/water/bath-county-pumped-storage-station>

Bath County Pumped Storage Station



Bath County, VA
Powers 750,000 homes

Station Facts

- Net generating capacity is 3,003-megawatts (6 units)
- License Issued - January, 1977 and commercial operation began December, 1985
- Owned jointly by Dominion Energy (60%) and Allegheny Power System (40%)

Lower Reservoir Dam:

- 135 feet high and 2,400 feet long
- Contains 4 million cubic yards of earth and rock fill

Lower Reservoir:

- 555 surface acres
- Water level fluctuates 60 feet during operation

Upper Reservoir Dam:

- 460 feet high and 2,200 feet long
- Contains 18 million cubic yards of earth and rock fill

Upper Reservoir:

- 265 surface acres
- Water level fluctuates 105 feet during operation

Water Flow

- Pumping: 12.7 million gallons per minute
- Generating: 13.5 million gallons per minute

Brief Facts

- Cradled in Virginia's rugged Allegheny Mountains, the world's most powerful pumped storage generating station quietly balances the electricity needs of millions of homes and businesses across six states. (View a video (<https://youtu.be/ppPIUdBvhU>).)

- Cited as one of the nation's most outstanding 1985 engineering achievements.
- The earth and rock fill moved to construct the dams and other project facilities, if piled up, would create a mountain 1,000 feet high.
- Enough concrete was poured to build 200 miles of interstate highway.
- The station consists of two large reservoirs. When demand is low, water is pumped from the lower reservoir to the upper one.
- When demand is high, valves permit water to run through the tunnels to the lower reservoir at a rate as high as 13.5 million gallons per minute, turning six turbine generators.
- The water level in the 265-acre upper reservoir can fluctuate as much as 106 feet when the unit is operated.
- The station occupies a relatively small amount of land, minimizing adverse effect on the environment. Flows to Back Creek and Little Back Creek, are supplemented by storage from the station reservoirs. This significantly improves stream flow during periods of drought and enhances the environment for fish and other aquatic life.
- The Bath County Pumped Storage Station Recreation Area (/community/lakes-and-recreation) is open to the public. Opened in 1989, it has facilities for fishing, non-power boating, picnicking, swimming, hiking and camping. There are two ponds (27 and 45 acres).

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