Vermont

Townshend Lake

Townshend Lake in Townshend is located on the West River, about 19.5 miles upstream of the confluence of the West and Connecticut rivers. From Brattleboro, the dam is 18 miles north on Route 30.

The project, along with Ball Mountain Lake situated 9.5 miles upstream, provides flood protection to Townshend, Dummerston, Newfane, Brookline, and Brattleboro, all situated on the West River. Along with other Corps dams in the Connecticut River Basin, Townshend Lake also reduces downstream flood stages on the Connecticut River. During this storm, the flood storage area behind the dam was filled to capacity and excess water had to be discharged through the spillway.

Construction of the project began in November 1958 and was completed in June 1961 at a cost of $7.4 million. The project consists of an earthfill dam with stone slope protection 1,700 feet long and 133 feet high; a gated 360-foot-long horseshoe-shaped concrete conduit with a diameter of 20 feet six inches; and a spillway cut in rock with a 439-foot-long concrete L-shaped ogee weir. The weir's crest elevation is 30 feet lower than the top of the dam. About 4.3 miles of highway and four miles of electric and telephone lines were relocated to accommodate the project.

Townshend Lake has a permanent pool of 95 acres with a maximum depth of 21 feet. The flood storage area of the project totals 735 acres and extends 4.5 miles upstream through Jamaica. The project and all associated lands cover 1,219 acres. Townshend Lake can store up to 11 billion gallons of water for flood control purposes. This is equivalent to 5.8 inches of water covering its drainage area of 106 square miles.

Located in the heart of the scenic West River Valley and near an historic covered bridge, Townshend Lake provides a variety of recreational opportunities. The picnic area offers 100 tables and 65 fireplace grills; three picnic shelters; swimming on 800 feet of beach; boating (power boats allowed up to 10 horsepower); a 1.7-mile-long marked hiking trail; cross-country skiing and snowmobiling on unmarked trails, including old Route 30; an open field for ball playing; horseshoe pits; a change house; drinking water; and sanitary facilities. There is excellent fishing in both the reservoir and along 2.8 miles of upstream river. While the state stocks rainbow trout, brown trout, and salmon, the river and lake support self-sustaining brook trout, smallmouth and largemouth bass, bullhead, rock bass, sunfish, and yellow perch. There is in-season hunting/trapping for native deer, wild turkey, red fox, ruffed grouse, woodcock, coyotes, raccoon, squirrel, rabbit, beaver, muskrat, mink, and fisher.

The recreational resources at Townshend Lake complement the neighboring Townshend State Forest, a 35-campsite facility operated by the Vermont Department of Forests, Parks, and Recreation.

The 1986 Water Resources Development Act passed by Congress authorized the Corps to design, construct, and operate facilities that will enable upstream migrant adult Atlantic salmon to bypass the dams at Townshend and Ball

Mountain Lakes. The law also authorized the Corps to provide the necessary facilities for the downstream passage of juvenile salmon. A $925,000 fish passage project on the West River was completed by the Corps in January 1993 encompassing both Ball Mountain and Townshend lake dams. The facility at Townshend Lake consists of the construction of a fish trap to collect upstream migrant salmon which would then be transported via tank truck above the dam to release points at both Ball Mountain and Townshend lakes. Modifications were made at both Ball Mountain and Townshend lakes to allow for downstream migration of juvenile salmon as well.

The normal pool elevation of 65 feet at Ball Mountain Lake is reduced to 25 feet each year to attract the juvenile salmon (April thru mid-June), and one of the three manual flood gate controls has been replaced with an automated gate operator which will automatically regulate outflows to assure that the 25-foot pool elevation will be maintained during normal flows.

At Townshend Dam, a splash weir was constructed within the intake weir structure upstream of the center flood control gate to form a splash pool to protect juvenile salmon from injury due to the 20-foot drop to the inlet weir floor. A one foot V-notch was cut into the inlet weir to allow the juvenile salmon to enter the outlet during low flow periods. It is estimated that 75,000 to 80,000 juvenile salmon will pass downstream annually on their migration to the ocean.