

Water Management of Francis E. Walter Reservoir for Recreational Opportunities

by Daryl Pierce



The Lehigh River is a jewel for water recreation in northeastern Pennsylvania. The Pennsylvania Fish & Boat Commission (PFBC) is highly invested in the Lehigh River for advancing recreational opportunities. One principal focus is management of Francis E. Walter Reservoir (F. E. Walter Reservoir) releases for supporting tailwater trout angling, in-lake angling and whitewater opportunities.

F. E. Walter Reservoir, Luzerne and Carbon counties, is situated just below the confluence of Bear Creek with the Lehigh River. The reservoir is owned and operated by the United States Army Corps of Engineers (USACE). The primary authorized purpose is flood control, with a secondary authorization for recreation. Prior to 2005, the reservoir was maintained as an 80-acre pool, with releases matching inflow. Limited whitewater recreation was provided on an ad hoc basis, wholly rain dependent, occurring only up to five times-a-year.

Tailwater recreational opportunities are characterized in an annual F. E. Walter Reservoir Recreational Operations Plan. These plans are negotiated among the USACE, PFBC

and Pennsylvania Department of Conservation and Natural Resources (PA DCNR) based on operational restrictions and received public input. The plans take a different direction than historical operations. They rely on temporary encroachments into flood control storage (i.e., up to 65 feet above the previously maintained 80-acre pool) throughout the summer. Thus, water is “banked” and releases are not limited to fortuitous rainfall events as in the past; however, some objectives remain reliant on additional storage accumulation from rainfall. The plans have progressively become more complex with experience. Currently, stored and released water is equitably managed to address the needs of all in-lake and downriver stakeholders. Annual plans are available from USACE website at www.nap.usace.army.mil/Missions/CivilWorks/FrancisEWalterDam.aspx.

The plan caters to both angling and whitewater communities. A spring fishing season is defined as weekend days from March through mid-May. This season specifically targets trout anglers and outfitter guided trips seeking optimal river conditions during peak trout action. “Fishing



photo-Jake Markczin

Lehigh River

Release” weekends of up to 400 cubic feet per second (cfs) are provided to allow for wade angling in the immediate reach below F. E. Walter Reservoir. Drift boat angling is supported further downriver as tributary input increases. During the warm summer months, daily augmentation of inflows, termed “Fisheries Enhancement” releases, provide some thermal relief to trout populations. Elevated summertime river flows generally prevent waters from exceeding trout thermal stress tolerances (i.e., 68 degrees F).

Supporting these fisheries, the F. E. Walter Reservoir and tailwater (Section 06, outflow downriver to confluence of Sandy Run) are managed by PFBC as Approved Trout Waters (ATW). Both waters are annually stocked with PFBC hatchery trout. The PFBC Commissioners designated both areas as ATW, Open to Year-round Fishing, during their 2014 summer quarterly meeting. The new designation allows catch-and-release fishing for trout from March through the opening of trout season in mid-April. Harvest of trout and other fishes is permitted as provided by Commonwealth Inland Water regulations during the remainder of the year.

Private paddling and rafting outfitters are a well-established presence on the F. E. Walter Reservoir tailwater, the Lehigh River. A whitewater season is defined as weekend days from the Saturday of Mother’s Day weekend through Labor Day. Whitewater releases occur every other weekend from May through mid-July, then every weekend thereafter. Total outflows vary from 650 cfs to 850 cfs, dependent on the month. Two higher whitewater releases of up to 1,700 cfs may occur in August depending on summer rainfall. If necessary, a final drawdown of up to 4,000 cfs, the “mega-release,” occurs over Columbus Day weekend for evacuation of any remaining water from the temporary recreational storage. Flow rates of these magnitudes can offer exciting Class I, II and III rapids within the Lehigh Gorge State Park. Reservoir releases are structured to provide greatest flows in the reaches in vicinity of White Haven in the morning hours. Peak flows progressively move downriver to Rockport by mid-afternoon and to Jim Thorpe by evening hours.

In-lake recreation also benefits from the annual plans. A 480-acre temporary recreational pool is generally maintained throughout the summer. Limiting pool fluctuations by 5 feet during May and June protects bass and panfish nesting sites.

The temporary pool also provides extensive motorboat (< 10 horsepower limitation) and flatwater kayaking access into either arm of the reservoir.

Innovative thinking is needed for further recreational opportunity improvements to F. E. Walter Reservoir. With these goals in mind, a study titled “The Lehigh River Recreational Enhancement Study” was completed in 2013 by the USACE in partnership with PA DCNR and PFBC. Study objectives were to examine potential benefits to tailwater temperatures and flows for supporting increased recreational opportunities under theoretical improved facilities at F. E. Walter Reservoir. Model outputs from the study suggested that with extensive facilities modifications and a reauthorization of purpose, a significantly improved tailwater fishery could be developed. Model simulations demonstrated that tailwaters could potentially be improved to support a blue-ribbon wild trout population and frequent and consistent whitewater releases. F. E. Walter Reservoir releases would be influential on downriver reaches to Glen Onoko (27 miles from F. E. Walter Reservoir) and possibly to the Packerton Yards (33 miles from F. E. Walter Reservoir).

Both fishing and whitewater activities offer great family fun. All citizens are encouraged to enjoy both experiences. Waters such as the Lehigh River can be unforgiving, so please be prepared. The PFBC requires mandatory wearing of U.S. Coast Guard approved life jackets from November 1 through April 30, however, it is best to always wear them when in a water setting. The PA DCNR maintains minimum standards for kayaks, canoes and rafts in the Lehigh Gorge State Park. First aid kits, throw bags and helmets (kayak/rafting) are also a good idea. A full listing of access points can be obtained from PFBC’s website at www.fishandboat.com/watertrails/trailindex.htm.

The future for the Lehigh River looks bright. Managed releases under annual plans provide a tailwater trout fishery, in-lake fisheries and whitewater events. Based on encouraging study results, PFBC is exploring potential avenues for advancing modifications to the existing F. E. Walter Reservoir facilities. We are highly appreciative of numerous sportsmen’s groups, paddling clubs, businesses and citizens who have been, and continue to be, involved with management of the Lehigh River. ☐