

1. Provide the name of all non-Federal interests planning to act as the sponsor, including any non-Federal interest that has contributed or is expected to contribute toward the non-Federal share of the proposed feasibility study or modification.

To be determined.

2. State if this proposal is for a feasibility study or a modification to an authorized USACE project or feasibility study and, if a modification, specify the authorized project or study.

This proposal is for a Feasibility Study to evaluate modifications to existing facilities of the Francis E. Walter Dam located on the Lehigh River, Pennsylvania.

3. State the project purpose of the proposed study or modification.

Completed in 1961, the Francis E. Walter Dam was authorized as a flood control facility on the Lehigh River in Luzerne and Carbon counties, Pennsylvania. Initial authorizations were for run-of-river operations, maintaining a minimal base pool of 80 ac (1,300 ft. NGVD). A recreational authorization, subservient to flood control, was added in 1988 for supporting various activities on United States Army Corps of Engineers (USACE) property that specifically identified whitewater as a targeted recreational activity. Existing tower facilities provide for bottom releases through the main flood gates (1,250 ft.) or two small bypass gates (1,297 ft.) only. Thereby all in-lake hypolimnion (cold water) is evacuated by early summer. This severely limits the size and abundance of the existing modest wild trout fishery, a modest hatchery-dependent “put-and-take” hatchery tailwater fishery, and development of robust in-lake two-story fish populations (i.e., bass, panfishes, walleye, and trout).

Currently, Francis E. Walter facilities are managed for enhancing tailwater and in-lake recreational opportunities under temporary annual Francis E. Walter Reservoir Recreation Operations Plans (Plans). These Plans are annually formulated in partnership with USACE, the Pennsylvania Fish and Boat Commission (PFBC), the Pennsylvania Department of Conservation and Natural Resources (DCNR), and public stakeholders. The intent of the Plans is to create temporary summertime recreational storage by encroachment into flood control storage (~15%). Benefits include a larger lake (480 ac (1,370 ft.)), restrictions on springtime in-lake fluctuations, augmenting reservoir releases for whitewater interests (commercial and private paddlers), providing suitable springtime flows for tailwater angling, and limited improvement of habitat for adult wild and hatchery trout. This temporary recreational storage is subservient to flood control operations and can be lost at any time. Of special interest is that a modest increase in summer base releases under this cooperative plan has created a limited but exciting wild trout fishery as far downstream of Francis E. Walter as Walnutport. This fishery is highly dependent on thermal refuges at springs, outflows from Class A wild trout tributaries, and Beltzville Reservoir.

Releases under the annual negotiated Plans provide well-established whitewater recreational opportunities for private paddlers and commercial outfitters. Four commercial outfitters hosted, on average, 69,271 people per year from 2005 through 2012.

The completed Lehigh River Recreational Enhancement Study (Tillman et al. 2009, Tillman and Lewis-Coker 2012), under USACE Section 22, was commissioned in partnership with DCNR and PFBC. This study investigated hypothetical modifications to existing facilities and operations for enhancing recreational opportunities. Three outcomes were identified.

- 1) Status quo: Continue providing recreational opportunities under existing facilities governed by the annual Plans. Very limited opportunities were identified beyond modest improvement for wild trout habitat by increased base flows. This option is least desirable.
- 2) Tower modifications: Requires installation of a multi-port tower and re-authorization of a permanent pool 824 ac (1,392 ft.). Limited improved habitat and ecosystem opportunities were identified. Higher cold-water releases showed some improved adult trout habitat in approximately 26 miles of the tailwater, but all tailwater thermal benefits could be lost in wet years. Little or no opportunity was created for the establishment of permanent in-lake two-story fisheries. Whitewater activities were nominally improved by supporting some additional releases.
- 3) Full reconstruction: Requires installation of a multi-port tower and raising the dam breast (30 ft.) for permanent pool of 1,333 ac (1,428 ft.). This option provides a robust 33-mile or more wild trout tailwater fishery, substantial increase of whitewater releases, and minimal lake draw down allowing potential establishment of two-story in-lake fisheries. It should be emphasized that the most conservative limits and assumptions were set for modeling these options. For example, a no-stress maximum temperature of 20 C was the goal for wild trout. Many excellent wild trout fisheries are sustained at intermittent temperatures above 20 C, so the limits reported in the Phase II report should be viewed as very conservative and obtainable. Other assumptions, such as the assumed lake stratification profile, are highly variable from reservoir to reservoir; and here again, the most conservative assumptions were used in estimating the extent of the non-stressful habitat condition to be obtained and the lake level required to sustain such improved conditions. In other words, the Phase Two Report should be viewed as a

very conservative estimate of the ecological and fisheries benefits that might accrue as a result of construction of a multi-level release tower and increased operation pool levels.

The PFBC vision for Francis E. Walter is two-fold. The short-term vision is to manage tailwater and in-lake fisheries by annual negotiated inter-agency Plans using temporary encroachments into flood control for recreational purposes. Enhancement of fishing or whitewater activities is limited to the temporary nature of the Plans subjected to termination pending significant flood control activities. The long-term goal envisions the Lehigh River as a robust blue-ribbon trout fishery maintaining optimal downriver water temperatures to the greatest extent possible while continuing to support the whitewater community, and building stable lake structure sufficient to establish a two-story lake fishery through extensive modifications to existing Francis E. Walter facilities. The PFBC is requesting further study (i.e., Feasibility Study) for implementation of the full reconstruction option identified in the Lehigh River Recreational Enhancement Study.

4. Provide an estimate, to the extent practicable, of the total cost of the proposed study or modification.

\$3 million estimate for the Feasibility Study (cost-shared 50/50 with a non-Federal sponsor).

5. Describe, to the extent practicable, the anticipated monetary and non-monetary benefits of the proposal including benefits to the protection of human life and property; improvement to transportation; the national economy; the environment; or the national security interests of the United States.

Implementation of improvements to Francis E. Walter Dam facilities, under the guidance of the configuration identified in the Lehigh River Recreational Enhancement Study, is anticipated to directly benefit water-based recreations, as well as enhance aquatic populations. Permanent recreational storage would allow the generation of at least a 33-mile wild trout tailwater fishery, a two-story in-lake fishery, and a substantial increase in the number of supported whitewater releases. A recent economic study of the economic value (cold water fishing, boating, associated expenditures, and second home real estate) in the nearby Upper Delaware River tailwaters indicated a present value projected over 20 years of \$414 million (\$5.5 million/river mile). The study covered 74 miles of tailwater fishery in the East Branch, West Branch, and upper Delaware River main stem and can be found at

<http://www.dcecodev.com/files/3313/9887/6418/fishingStudy.pdf>. The economic value of the Lehigh tailwater fishery – expected to extend 33 miles and be associated with less private land available for development – should be evaluated in the proposed Feasibility Study.

The Lehigh River is located in one of the most populous regions of Pennsylvania, and the Lehigh Gorge State Park and other public lands and public access points make this an easily accessible wilderness within easy driving distance of Philadelphia, the Lehigh Valley, and metropolitan areas of New Jersey and New York City. Furthermore, strategic development of tailwater trout fisheries throughout the Commonwealth meets the PFBC's goals to create and provide tailwater trout fishing opportunities within a reasonable distance of all Pennsylvania anglers.

Tailwater trout fisheries provide consistent year-round fishing opportunities. The current fishery is seasonal, with the peak being between April and June and a lesser peak in early fall. During the peak season, suitable fishing days are largely limited due to required flood control

water releases and complex management of water release schedules to account for multiple user groups and purposes. A controlled tailwater with regular coldwater releases will allow fishing to occur in all months of the year and provide conditions for wild and hatchery reared trout in tributaries and in the main river. Fishing-related businesses, hotels, restaurants, and other support services make financial commitments when a fishery is predictable, of consistent quality, and available during as much of the year as possible.

Most of the destination wild trout fisheries in the Lower 48 United States are located in so-called tailwater fisheries which provide enormous economic value to the local economy. Recent estimates for famous fisheries include the following: the Big Horn River in Montana (about 13 miles) generates on average about \$50M/year; the Henry's Fork in Idaho generates \$41M/year.; and the Bull Shoals tailwater complex is estimated variously at generating approximately \$232M/year. PFBC thinks that the greatest economic value of such a project would be the creation of a destination wild trout tailwater fishery with a value to the local economy estimated in the 10's of millions of dollars per year that cannot be outsourced. It is highly recommended that a thorough analysis of the economic value of an industry based on such a fishery be made a part of the Feasibility Study.

6. Describe if local support exists for the proposal.

A commercial boating stakeholder group, angler stakeholder group, and individuals representing paddler and angler interests currently provide input for recreational release plans. In support of the annual Francis E. Walter Reservoir Recreation Operations plans, USACE hosts public meetings for reviewing plan performances and gathering comments and recommendations. General sentiment at the meetings has expressed satisfaction with the annual plans; and many

have expressed the temporary operations have significantly improved their businesses and contributions to the local economies.

Local angling interest groups such as the Lehigh River Coldwater Alliance, the Lehigh River Stocking Association, and several fishing guide services have all embraced the current river and its fishery and have consistently made their wishes known to the PFBC regarding improvements to flows, temperatures, and the trout fishery in the Lehigh River.

7. State if the non-Federal interest has the financial ability to provide for the required cost share.

To be determined.

8. Submit a letter or statement of support from each associated non-Federal interest.

The Pennsylvania Fish and Boat Commission is actively seeking support from Members of Congress and other stakeholders and has initiated discussions for presentation of the vision for improving Francis E. Walter facilities and potential enhancements to environmental, recreational and local businesses interests.