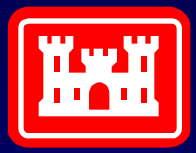
Welcome

Recreational Enhancements
on the Lehigh River
Public Information Workshop
24 February 2005
Split Rock Lodge

Cooperating Agencies



US Army Corps of Engineers
Philadelphia District

Delaware River Basin Commission

Pennsylvania Fish & Boat Commission

Pennsylvania Department of Conservation and Natural Resources

US Army Corps of Engineers

The Role of the Delaware River Basin Commission

- **DRBC is responsible for meeting Trenton flow target and coordinates with the Corps of Engineers.**
- **DRBC requests emergency storage in F.E. Walter during drought emergencies.**
- **DRBC supports a release program which improves recreation opportunities while preserving flood storage potential.**

The Role of the Pennsylvania Fish & Boat Commission

- To protect, conserve and enhance fish and other aquatic life in the reservoir and the Lehigh River

- To promote fishing and boating in the reservoir and the Lehigh River

The Role of the Bureau of State Parks

- To provide opportunities for enjoying healthful outdoor recreation and to serve as outdoor classrooms for environmental education
- To place priority on the conservation of the natural, scenic, aesthetic and historic values of our parks
- To carry out our stewardship responsibilities in a way that protects the natural outdoor experience for the enjoyment of current and future generations

Purpose of Workshop

- Discuss potential for enhancement to recreation under different flow management plans
- Explain process used by cooperating agencies to address various issues
- Recommend a flow management plan for 2005
- Highlight long-term objectives
- Emphasize need for public involvement

Topics

- F. E. Walter Project Purpose
- Recreation at F. E. Walter
- Current Operating Plan
- 2005 Release Plan
- Long-term Objectives
- Public Involvement

Francis E. Walter Dam

Completion Date: 1961

Single Purpose, Flood Control Dam

Recreation was defined as Authorized Project Purpose in 1988

Public Law 100-676, Section 6 – November 17, 1988

Authorized Recreation as a project purpose

Recreation Defined – As used in this section, in addition to recreation on lands associated with the project, the term "recreation" includes (but shall not be limited to) downstream whitewater recreation which is dependent on project operations, recreational fishing, and boating on water at the project.

Public Law 100-676, Section 6 – November 17, 1988

Flood Control takes priority over recreation

SEC. 6. OPERATION OF CERTAIN PROJECTS TO ENHANCE RECREATION.

(a) Enhancement of Recreation.--…The Secretary is authorized to manage project lands at each such project in such manner as will improve opportunities for recreation at the project. … Nothing in this subsection shall be construed to affect the authority or discretion of the Secretary with respect to carrying out other authorized project purposes or to comply with other requirements or obligations of the Secretary which are legally binding as of the date of the enactment of this Act.

Recreation

- Whitewater Boating
  - Kayaking
  - Rafting
  - Canoeing
- In-Lake Boating
- Fishing
  - In-lake
  - Downstream

Existing Whitewater Releases

- 2 two-day events in June
- 1 one-day event in September
- 2 one-day events in October
  (500 – 750 cfs)
- Other releases made as water is available and conditions allow

Fishing & Boating

- Lake is stocked with adult trout by the PA Fish and Boat Commission
- Lehigh River is stocked with adult and fingerling trout by the PA Fish and Boat Commission
- Existing regulation plan attempts to keep boat launch and access road usable

Factors Affecting Current Operations

- Flood Control Activities
  - Maintaining Normal Pool (Elev. 1300)
- Emergency Operations
- Scheduled Whitewater Releases
- Trout Stocking
- Water Quality
- Public Use of Upstream Road (Elev. 1310)
- Maintaining Access to Boat Launch Area

Pool above 1310 – road is impassable

Iron oxide deposited downstream

Modified Dam Access Road Construction Progress

Scheduled to be completed Spring 2005

Plan Options Considered

- Pool elevation
  - 1330, 1335, 1350, 1370, 1392, 1410
- Release schedule
  - Whitewater release every weekend
  - Whitewater release every other weekend
  - Releases between June and September
  - Releases between May and September
  - Releases between May and October
  - 750 cfs
  - 750 – 1000 cfs
- Pool fluctuation
  - 2 foot pool fluctuation in May and June
  - 5 foot pool fluctuation in May and June
- Minimum release
  - 200 cfs
  - 250 cfs

Environmental Changes in a Range of Alternative Pool Elevations

- 1300 Foot Pool Elevation
  - 80 Pool surface acres (current operation)

- 1392 Foot Pool Elevation
  - 806 Land surface acres inundated
  - 9.7 miles of upstream stream and river inundation
  - Documented negative WQ impacts (in-lake and Lehigh)
  - Documented biological impacts (in-lake and Lehigh)

Environmental Changes in a Range of Alternative Pool Elevations

- 1370 Foot Pool Elevation

  - 312 Land surface acres inundated

  - 6.3 miles of upstream stream and river inundation

  - Anticipated negative WQ impacts (in-lake and Lehigh)

  - Anticipated biological impacts (in-lake and Lehigh)

Environmental Changes in a Range of Alternative Pool Elevations

- 1335 Foot Pool Elevation

  - 216 Land surface acres inundated

  - 3.8 miles of upstream stream and river inundation

  - Anticipated no negative WQ impacts (in-lake and Lehigh)

  - Anticipated no biological impacts (in-lake and Lehigh)

Minimize Risk and Maximize Benefit

- **2005 plan at pool elevation 1335'**
  - Reduce potential for species of concern impact
  - Reduce potential for aquatic and terrestrial habitat impact
  - Reduce potential for negative water chemistry changes

Minimize Risk and Maximize Benefit

- Improve recreational whitewater boating potential
- Improve downstream fishery potential with higher flows
- Potential to improve downstream water quality under low flow conditions
- Minimize pool fluctuation during in-lake spawning periods
- Reduce likelihood of emptying pool as a flood control response

2005 Flow Management Plan Constraints and Restraints

- Temporarily raise pool from 1300 to 1335 between May and October
- Limit pool fluctuation between 1330 and 1335 in May and June for Lake Spawning Enhancement
- Increase number of days where flow is 250 cfs or greater between May and September for downstream fisheries enhancement.
- Storage subject to evacuation for flood control (anticipation of large event such as hurricane or nor'easter)
- Whitewater release dependent on hydrologic conditions

2005 Flow Management Plan Benefits

- Downstream
  - Higher flows (more days at 250 cfs or greater)
  - More whitewater boating opportunities
- In-Lake
  - Increased in-lake spawning habitat
  - Increased lake forage

2005 Flow Management Plan Risks

- Downstream
  - Whitewater releases not guaranteed
  - 250 cfs releases short-lived
- In-Lake
  - Potential to dewater newly created spawning area if necessary for flood control or to maintain minimum release
  - Loss of use of existing boat launch and parking area (Launch from road)
  - Negative/degrading water quality

2005 Flow Management Plan Target Releases

- 750-1000 cfs
  - **May 7-8** **May 14-15** **May 21-22** **May 28-29**
  - **June 4-5**
- 750 cfs
  - **June 11-12** **June 18-19** **June 25-26**
  - **July 2-3** **July 23-24**
  - **August 6-7** **August 20-21**
- 750-1000 cfs
  - **September 3-4** **September 17-18**
  - **October 1-2**
- Increase number of days where releases are 250 cfs or greater between May and September (current minimum release is 50 cfs)

2005 Flow Management Plan Risks

Number weekend whitewater release days

	2005 Water Release Schedule	2004 Water Release Schedule	Average performance using historic data (43 yrs)
May	8		6.9
June	8	4	4.7
July	4		3.3
August	4		2.0
September	4	1	2.3
October	2	2	1.0

Comparison of Historic to 2005 Plan

Month	Number of Days In Month	Average Number of Days Flow is 250 cfs or Greater		
		Without Plan	With Plan	Change
July	31	13	22	+9
August	31	9	15	+6
September	30	10	12	+2
Mean	31	16	22	+6

Long-term Flow Management Plan
Adaptive Management Cycle

- Collect In-lake water quality data (May – October)
- Collect downstream water quality data (May – October)
- Evaluate performance of 2005 plan (Fall 2005)
- Propose Improvements for 2006 plan (Fall 2005)
- Public Comment for 2006 plan (Ongoing)
- Investigate Alternate Boat Launch (Ongoing)

Public Involvement

- Please join the cooperating agencies to discuss the 2005 flow management plan at their respective booths.
- Your input and involvement are crucial to the success of the this and future plans.
- We welcome all input including data and testing results and ask that you make all submissions through the mail or email.
- Visit our web site for updated information and the portal to submit your input:

  www.nap.usace.army.mil/Projects/FEWalter/index.htm
- Public comments may also be submitted to:

  U. S. Army Corps of Engineers
  Philadelphia District
  ATTN: Merv Brokke
  Wanamaker Building
  100 Penn Square East
  Philadelphia, PA 19107