

# Welcome

Recreational Enhancements  
on the Lehigh River

Public Information Workshop

16 February 2011

# 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



# Agenda

- F.E. Walter Project Overview
- Review Performance of Previous Release Plans
- 2011 Release Plan

# Francis E. Walter Dam

Completion Date: 1961  
Single Purpose, Flood  
Control Dam

Recreation was defined  
as Authorized Project  
Purpose in 1988

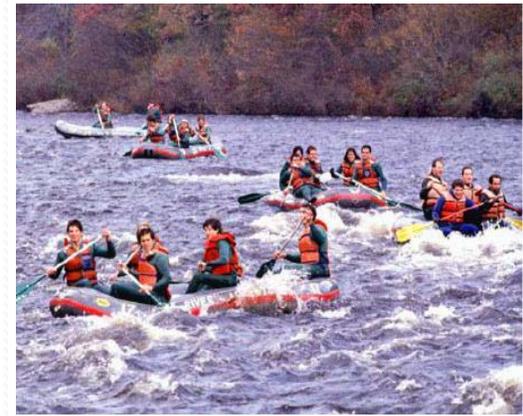
Access road across top of  
dam was completed in  
Spring 2005

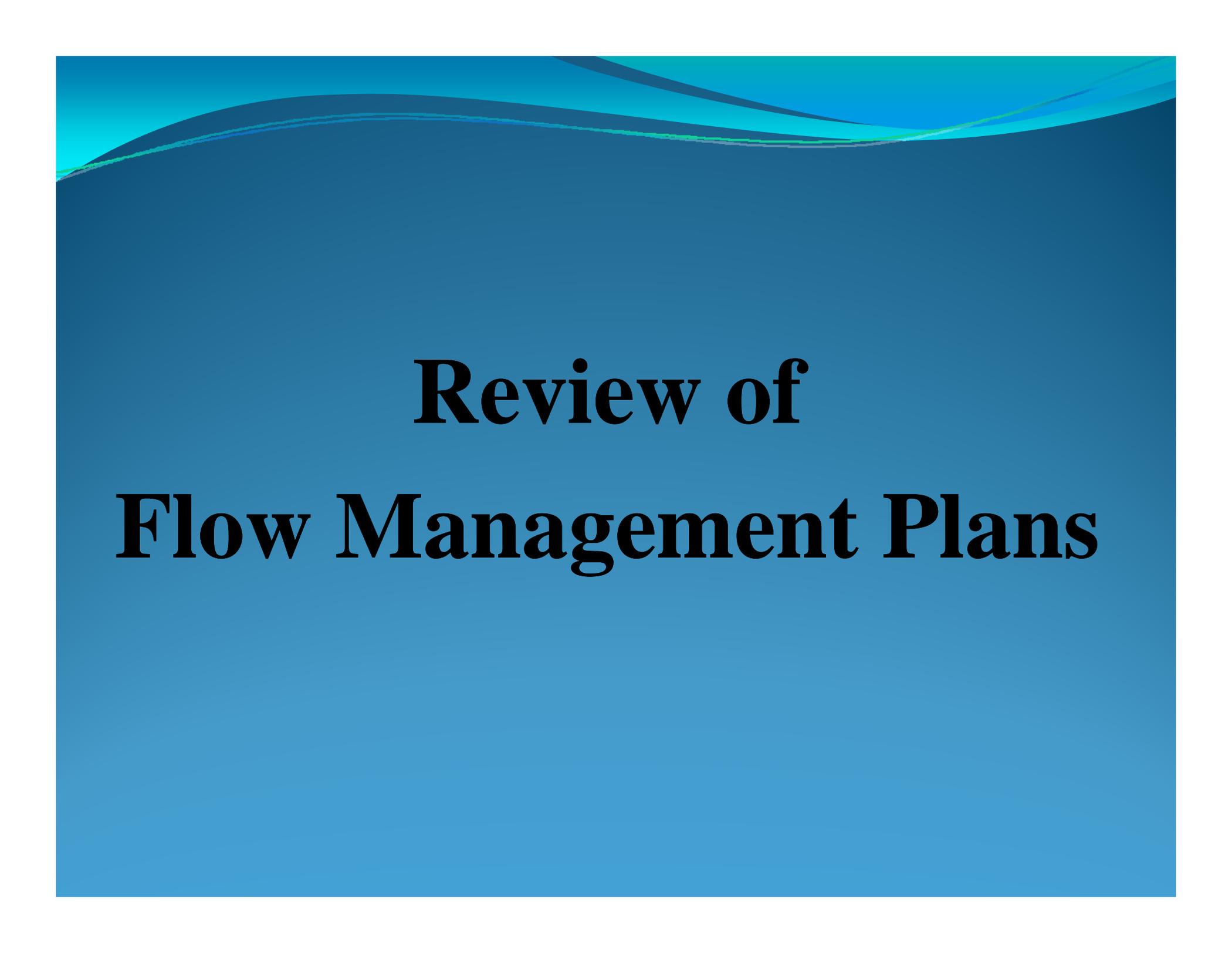
Grouting Program for seepage  
control Completed 2010



# Water Based Recreation

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





# **Review of Flow Management Plans**

# F.E. WALTER RECREATION PLAN REVIEW

<u>YR</u>	<u>STORAGE/LEVEL</u>	<u>PLANNED</u>	<u>EVENTS HELD</u>
2005	1335	22	10 <sup>①</sup>
2006	1365	22	22
2007	1365	22	19 <sup>①</sup>
2008	1370	24	23 <sup>②</sup>
2009	1370	24	24
2010	1370	24	22 <sup>③</sup>

- ① Supplemental events held in October.
- ② Final Monday white water event cancelled
- ③ Large release made later then scheduled

The background is a solid blue color. At the top, there are several wavy, overlapping lines in various shades of blue and cyan, creating a decorative header effect.

# **2011 Flow Management Plan**



# The Francis E. Walter Flow Management Plan

## 2011 Planned Whitewater Release Dates

(24 Release dates, same as 2010)

May 14	August 6, 7
May 28, 29	August 13, 14
June 11, 12	August 20, 21
June 25, 26	August 27*, 28*
July 9, 10	September 3*, 4*
July 23, 24	September 16**
July 30, 31	

\* Release dependant on additional water becoming available

\*\* If sufficient water is available, Friday, 16 September is last added increment.



# **The Francis E. Walter Flow Management Plan 2011 Planned Fisheries Release Dates**

- Fisheries Enhancement Releases
  - +100 cfs over inflow through 23 July 2011
  - + 50 cfs over inflow through 11 September 2011

Additional augmentation is precipitation dependent and added as storage is available



# 2011 Flow Management Plan

- Pool elevation 1370 Feet NGVD
  - 70 feet and 6.21 billion gallons above normal pool
- Whitewater releases from 1 a.m. to 1 p.m.
- Whitewater releases are generally planned for every other weekend in May and June. Then from late July thru early September they are planned every weekend.
- All stored water is subject to evacuation for flood control or other emergencies. Evacuation of water due to impending hurricanes or tropical storms may result in cancellation or modification of releases.



# 2011 Flow Management Plan

- As in previous years, white water release decisions will be made by Wednesday afternoon
  - Notifications posted to the Corps web site, White Water Release Hotline, email distribution list, and press releases will be issued when deviating significantly from the plan.
- Plan requires sufficient inflows to impound 70 feet of storage by 14 May.
- Releases are dependent on hydrologic conditions



# 2011 Flow Management Plan

## *Spring*

- Start storing no later than April 1
  - Match inflow up to 1000 cfs on weekends while storing. Weekends of 16, 17 and 23, 24 April releases limited to 400 cfs for trout season.
  - Minimum release while storing will be 250 cfs.
- \* If Hydrologic conditions indicate that reaching 1370 by 14 May is in jeopardy, weekend releases may be reduced to 750 cfs, and weekday releases to 225 cfs. If not at 1370 by 14 May agencies will reconvene to determine appropriate course of action.



# 2011 Flow Management Plan

## *May – June (unchanged from 2010)*

Match inflow on non-whitewater weekends (up to 400 cfs if pool is below 1370)

- Limit pool fluctuations to elevations 1370-1365
  - Protect fish spawning areas in-lake
  - Conserve cooler water for later in season
- Target minimum release is 200 cfs in May, 200-250 cfs in June
- Target whitewater releases will be 800 cfs in May, 750 cfs in June. If insufficient water available, releases adjusted accordingly.
- Agencies meet by 8 June to assess situation and adjust June releases as necessary

# Release Rate Priorities - May

Saturday		Sunday		Volume Required (DSF)
Rate (CFS)	Duration (DSF)	Rate (CFS)	Duration (HRS)	
600	12			300
650	12			325
700	12			350
700	12	500	6	475
750	12	550	6	512.5
800	12	600	6	550
800	12	700	6	575
800	12	600	12	700
800	12	700	12	750
800	12	800	12	800

Maximum release 800 cfs in May  
(unchanged from previous years)

# Release Rate Priorities - June

Saturday		Sunday		Volume Required (DSF)
Rate (CFS)	Duration (DSF)	Rate (CFS)	Duration (HRS)	
600	12			300
650	12			325
700	12			350
700	12	500	6	475
750	12	550	6	512.5
750	12	600	6	525
750	12	700	6	550
750	12	750	6	562.5
750	12	750	12	750

Maximum release 750 cfs in June  
(unchanged from previous years)



# 2011 Flow Management Plan

## *After July 1*

Utilizing storage between elevation 1365 and 1300, First priority will be:

- Provides sufficient storage for white water releases thru August 21 and fisheries releases thru September 11
  - Fisheries enhancement releases will be 100 cfs thru 24 July and 50 cfs to September 11 up to a maximum release of 300 cfs.
  - Whitewater releases will be 600 plus inflow (up to 700) in July and 650 plus inflow (up to 750) in August.  
(unchanged from previous years)



# 2011 Flow Management Plan

- Any additional storage that becomes available will be equitably allocated to provide for fisheries enhancement and incrementally add additional whitewater events.
  - Fisheries priorities are to incrementally extend both periods of 50 cfs release and periods of increased release from 50 to 100 cfs.
  - White water priority is to add next planned date.

# Added Increments

<b>Increment</b>	<b>1</b>	<b>8/27 7/25-7/30</b>	<b>650 cfs 100 cfs</b>	<b>Whitewater event Fisheries release</b>
	<b>2</b>	<b>8/28 7/31 -8/06</b>	<b>650 cfs 100 Cfs</b>	<b>Whitewater event Fisheries releases</b>
	<b>3</b>	<b>9/3 8/07-8/13</b>	<b>650 cfs 100 cfs</b>	<b>Whitewater event Fisheries releases</b>
	<b>4</b>	<b>9/4 8/14 – 8/19</b>	<b>650 cfs 100 cfs</b>	<b>Whitewater event Fisheries releases</b>
	<b>5</b>	<b>9/12 – 10/14</b>	<b>50 cfs</b>	<b>Fisheries releases</b>
	<b>6</b>	<b>8/20 -9/16</b>	<b>100 cfs</b>	<b>Fisheries releases</b>
	<b>7</b>	<b>9/16</b>	<b>4000cfs</b>	<b>Whitewater event</b>

- Updates will be posted on Corps of Engineers webpage as additional recreation and fishery releases can be accommodated. Changes may occur with little advance notice.



# **Working Together: Partnership in Action**

- Public meetings held annually to solicit comment and present recreation plans.
- Received hundreds of responses after each meeting
- Compiled list of over 400 stakeholders
- Many comments received on the Flow Management web site
- Improved communication: Including press releases, notifications, announcements, emails, and web page updates
- Cooperating Agencies evaluated plan performance, and incorporated comments into subsequent Recreation Plan development



## **Working Together: Partnership in Action**

- Corps of Engineers made a small turn around on Rt. 940 side of lower road to ease launch difficulties. Completed summer 2007.
- Replacement of Bypass valves.
- State agencies have partnered with the Lehigh Coldwater Fisheries Alliance and the Wildlands Conservancy to support Water Quality Monitoring and Modeling. Modeling efforts ongoing.

# Public Involvement

- Visit our web site for updated information and to submit your input:  
[www.nap.usace.army.mil/Projects/FEWalter/index.htm](http://www.nap.usace.army.mil/Projects/FEWalter/index.htm)
- Public comments may also be submitted to:  
U. S. Army Corps of Engineers  
Philadelphia District  
Wanamaker Building  
100 Penn Square East  
Philadelphia, PA 19107  
[Stephen.Rochette@usace.army.mil](mailto:Stephen.Rochette@usace.army.mil)
- For most up to date information on Recreation plan go to:  
[www.nap.usace.army.mil/watercontrol/resreg.htm](http://www.nap.usace.army.mil/watercontrol/resreg.htm)
- For most up to date information on Basin flow conditions go to:  
[www.nap-wc.usace.army.mil/nap](http://www.nap-wc.usace.army.mil/nap)
- Francis E. Walter Dam on Facebook:  
<http://www.facebook.com/fewalterdam>