

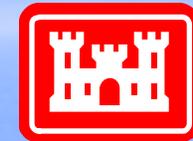
Welcome

Recreational Enhancements
on the Lehigh River

Public Information Workshop

21 January 2009

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
- 2009 Release Plan

Francis E. Walter Dam

Completion Date: 1961
Single Purpose, Flood
Control Dam

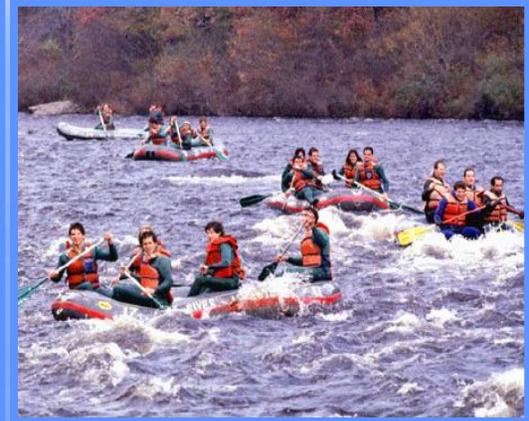
Recreation was defined
as Authorized Project
Purpose in 1988

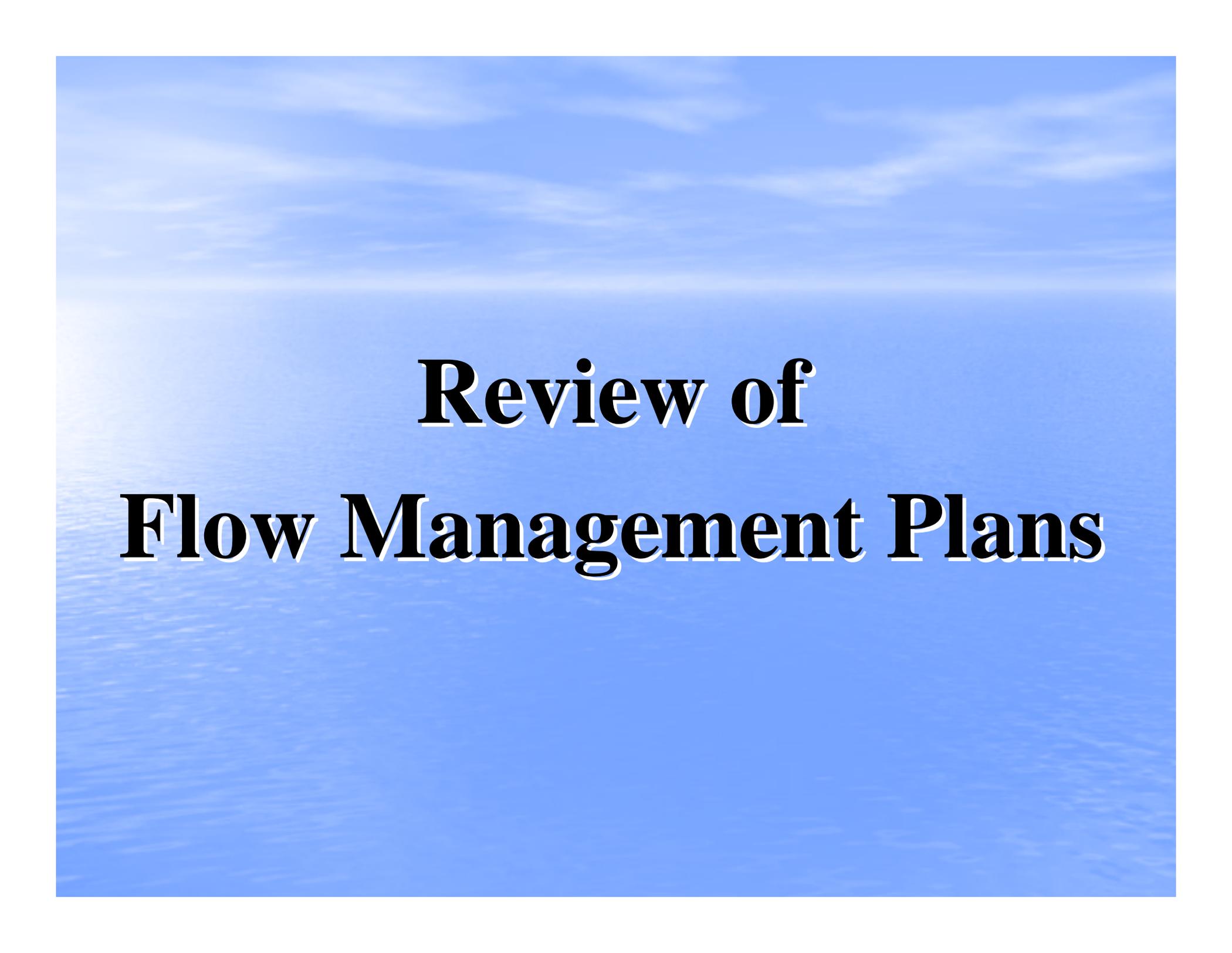
Access road across top of
dam was completed in
Spring 2005



Water Based Recreation

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



The background of the slide is a photograph of a bright blue sky with wispy white clouds above a calm blue body of water. The text is centered and rendered in a bold, black, serif font with a white outline.

Review of Flow Management Plans

F.E. WALTER RECREATION PLAN REVIEW

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

① Supplemental events held in October.

② Final Monday white water event cancelled

The background of the slide is a photograph of a bright blue sky with wispy white clouds above a calm blue body of water. The text is centered in the middle of the image.

2009 Flow Management Plan

The Francis E. Walter Flow Management Plan 2009 Planned Whitewater Release Dates

May 9

May 23, 24

June 13, 14

June 27, 28

July 11, 12

July 25, 26

August 8, 9

August 22, 23

September 5, 6

September 19*, 20*

October 3*, 4*, 5 **

October 17*, 18 *

* Release dependant on additional water becoming available

** If sufficient storage is available, 5 October is last added increment.

2009 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 starting with the second weekend in May and ending 18 October.
- All storage is subject to evacuation for flood control or other emergencies. Evacuation of storage due to impending hurricanes or tropical storms may result in cancellation or modification of releases.

2009 Flow Management Plan

- As in the 2008 plan, 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 the second weekend in May.
- Releases are dependent on hydrologic conditions

2009 Flow Management Plan

April

- Start storing no later than April 1
 - Match inflow up to 1000 cfs on weekends while storing. Weekends of 11, 12 and 18, 19 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 mid May is in jeopardy, weekend releases may be reduced to 750 cfs, and weekday releases to 225 cfs. If not at 1370 by mid May agencies will reconvene to determine appropriate course of action.

2009 Flow Management Plan

May – June

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 according to tables.
- Agencies meet by 9 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

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

2009 Flow Management Plan

July-August

- Utilizing storage between elevation 1365 and 1300
- Provides sufficient storage for white water releases thru September 6 and fisheries releases thru September 16
 - Fisheries enhancement releases will be 100 cfs in July and 50 cfs in August up to a maximum release of 300 cfs.
 - Whitewater releases will be 700 plus inflow (up to 800) in July and 750 plus inflow (up to 850) in August.

2009 Flow Management Plan

September

- Storage volume between elevation 1365 and 1300 is sufficient to support only the planned whitewater releases through September 6th.and fisheries enhancement releases thru September 16th.
- Additional planned whitewater and fishery enhancement releases can only occur if precipitation occurs during the recreation season to allow accumulation of additional water

2009 Flow Management Plan

September - October

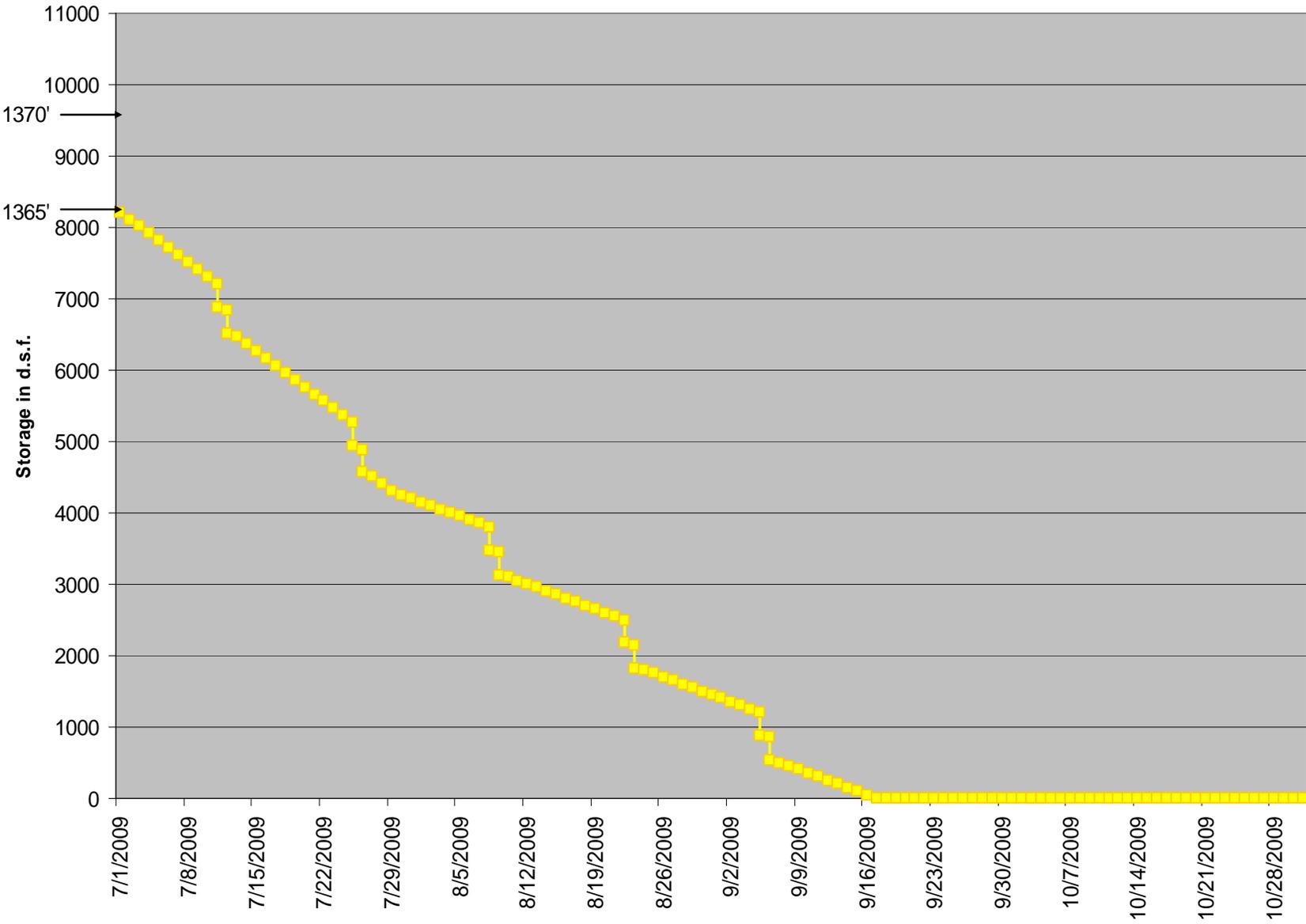
- Any additional storage that becomes available will be equitably allocated to provide for fisheries enhancement and incrementally add additional whitewater events in September and October.
 - Fisheries priorities are to first increase early August releases from 50 to 100 cfs, then add September days at 50 cfs then support 400 cfs releases on Veterans day weekend. (Oct 10, 11, 12) and 24, 25 Oct.
 - White water priority is to add next upcoming weekend (two full days) before adding additional dates. Partial weekends determined according to table based on available volume. Maximum release of 650 cfs plus inflow (750 cfs maximum)
- October 5th last added increment, release up to 4000cfs
- 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.

Release Rate Priorities – September-October

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	600	12	675
750	12	700	12	725
750	12	800	12	750

Maximum release rate will be 750 cfs in September - October

2009 Proposed F. E. Walter Rule Curve



Working Together: Partnership in Action

- Public meetings held in February 2005, February 2006, January 2007, and January 2008.
- 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 underway and scheduled to be completed before start of the 2009 recreation season.
- State agencies have partnered with the Lehigh Coldwater Fisheries Alliance and the Wildlands Conservancy to support Water Quality Monitoring and Modeling. Modeling efforts currently underway

Public Involvement

- Visit our web site for updated information and 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
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107
Susan.R.Anderson@usace.army.mil
- For most up to date information on Recreation plan go to:
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





2009 Proposed F. E. Walter Rule Curves

