

Francis E. Walter Reservoir Recreation Operations Plan for 2010

Introduction

The plan for 2010 will be different from that of 2009. While the 2009 plan was able to satisfy all of the plan features due to it being a very wet year, modifications are being made to better match planned releases to the time of the season when they are perceived as most beneficial based on public comment and modeling results from the Phase I Lehigh River Flow Study. This year water is again being allocated to insure early season (July through August 21st) white water recreational and fisheries releases (July through September 10th) while relying on seasonal precipitation and additional water accumulations to allow scheduling of releases for later in the season (September and October). Other modifications to release rates as well as changes to October operations are also planned.

Planned white water release dates are listed below:

May: 15, 29, 30

June: 12, 13, 26, 27

July: 10, 11, 24, 25, 31

August: 1, 7, 8, 14, 15, 21, 22*, 28*, 29*

September: 4*, 5*, 17**

* With the pool at 1365 on 1 July, storage is sufficient to support white water recreation and fisheries augmentations releases through 21 August and 10 September respectively. After those dates additional storage must be accumulated during the recreation season to make additional releases possible.

**The September 17th date will only occur if sufficient stored water is available. This is the last added increment for the 2010 recreation plan. Fisheries releases through October 17th will be assured before the September 17th release will be announced. The September 17th (Friday) release is planned for 4000 cfs. Ramping down from that release rate will be accomplished over the following weekend (September 18 and 19)

Total: 24 white water release dates planned, late season white water events and fisheries enhancement releases are dependent upon additional water storage becoming available during the year.

Details of planned operations are presented below.

Initial Filling:

For the 2010 season, the maximum storage level will be the same as last year, elevation 1370. On or before 1 April 2010 storage will be initiated at F. E. Walter Dam. The exact date that storage is initiated will be determined by the Corps of Engineers based on basin hydrologic conditions at the time. Storage could start earlier if precipitation raises the pool above elevation 1300. During this period outflows will be limited to 250 cfs on weekdays and during weekends the outflow will normally be set equal to inflow up to a maximum release rate of 1000 cfs. The weekend limit could be lowered to 750 cfs and the weekday limit lowered to 225 cfs if hydrologic conditions were such that reaching the target level of 1370 by 15 May 2010 was determined to be in jeopardy. The storage of excess inflows will continue until the pool reaches the elevation of 1370. Once pool level reaches 1370, outflow will match inflow until the start of the recreation season (15 May). The pool elevation of 1370 is expected to be reached no later than midnight Friday 14 May 2010, in time for the first planned white water release to begin on Saturday 15 May 2010 at 1 AM. If for any reason the target pool elevation is not reached in time for the first white water release, the agencies will reconvene to determine the appropriate course of action.

Special operations will prevail for the first two weekends of trout season (17-18 April and 24-25 April). Releases will be restricted to a maximum of 400 cfs for these two weekends. This restriction is consistent with DCNR restrictions placed on commercial boaters in the upper reaches of the Lehigh River from White Haven to Rockport. This may result in a pool level above elevation 1370 for brief periods.

Pool elevations above elevation 1370 at any time are generally considered undesirable encroachments into flood control storage and will normally be evacuated as quickly as possible in accordance with the Corps' F.E. Walter Reservoir Water Control Manual. If weather forecasts are favorable, the encroachment into flood control storage may be retained for brief periods to support planned recreational opportunities. The Corps of Engineers will be solely responsible for making this determination. As in previous years, flood control objectives take priority and if necessary any of the storage above elevation 1300 could be released if deemed necessary by the U.S Army Corps of Engineers.

15 May- 30 June

White water weekend events are planned to start on May 15th (Saturday only). As in previous years, the planned releases will be made for 12 hour periods from 1AM until 1 PM on Saturdays and Sundays.

The pool elevation will be maintained between elevations 1365 and 1370 from 15 May through 30 June. The 5 foot pool limit is intended to help conserve cooler water for later in the season, and to help in-lake fish spawning. As noted before, a pool level above

elevation 1370 is an undesirable encroachment into flood control storage which will normally be evacuated as quickly as possible. After pool elevation of 1370 is reached, weekday releases for fisheries enhancement for the period from 15 May thru 31 May will be 200 cfs and will be in the 200-250 cfs range in June. Weekend white water recreation releases during this period will be made as long as sufficient storage exists above elevation 1365 with a release target of 800 cfs in May and 750 cfs in June. Tables 1 and 2 provide priorities for determining the length and magnitude of white water recreation releases to be made in May and June if storage is not sufficient to make full releases for the planned 12 hour periods. Releases for fisheries enhancement on weekends when white water releases are not planned will be set to match inflow up to a maximum of 400 cfs during this period. If storage is not available above elevation 1365, releases will be set equal to inflow to maintain the 1365 elevation until 1 July. On Wednesday June 9th, the existing situation will be evaluated to determine if sufficient storage remains above elevation 1365 to maintain the fisheries releases and the remaining June white water releases (12/13 and 26/27 June). If it is determined that sufficient storage does not remain, adjustments in operations for the remainder of June will be made to best utilize available storage. Any cancellations or modifications of release plans will be announced (posted on Corps webpage).

July - August

Starting in July, there will no longer be any specific flow targets or limits on pool levels. In July, storage will be utilized for weekday and weekend fisheries enhancement releases of 100 cfs above inflow, up to a total of 300 cfs. On white water recreation weekends, for the 12 hour periods from 1AM until 1 PM on both Saturday and Sunday, releases will be set at inflow plus 600 cfs up to a maximum of 800 cfs in July and inflow plus 650 cfs up to 850 for white water events through 21 August. For the other 12 hour periods of the white water weekends, the release will revert to the fisheries enhancement augmentation release rate. Initially, fisheries enhancement releases will be 100 cfs plus inflow up to 300 cfs. Storage capacity at elevation 1365 at the end of June is sufficient to make the planned releases for white water weekends through 21 August and fisheries enhancements through 10 September.

September - October

The 2010 plan is similar to the 2009 plan in that both fisheries enhancement and white water releases will utilize available storage as long as it is present and rely on additional inflow during the recreation season to make late season releases possible. If at any time precipitation occurs to allow sufficient additional water to accumulate; planned white water recreation releases and additional fisheries enhancement releases will be scheduled. The volume of accumulated water will be allocated equitably between the white water and fisheries enhancement purposes, and as precipitation dependent release weekends are scheduled, fisheries enhancement releases will be increased from 50 cfs to 100 cfs, or additional release days of 50 cfs or 100 cfs will be added based on how much additional

storage is accumulated and at what point in the season the additional storage becomes available as outlined in the next paragraph. For the additional volume allocated for white water releases, priorities for water use for the remaining white water events are listed in Table 3. Final release amounts and durations will be determined and posted on the Corps webpage the Wednesday prior to the weekend. If sufficient water is available, each scheduled white water event will be held for both Saturday and Sunday at the full amount before subsequent planned white water events will be scheduled. Additional weekend releases will not be scheduled unless storage is sufficient to allow at least a one day (12 hour) release of 600 cfs. As additional releases become possible due to accumulation of water, the additional fisheries enhancement releases and white water release amounts will be announced.

Additional precipitation and additional releases from storage is proposed to occur in the following priority order through the July – October time period.

When additional storage is accumulated, add whitewater releases on August 22 (650 cfs) and August 28 (750 cfs) and additional fisheries releases of 50 cfs thru September 10 and 100 cfs thru August 6. Releases for fisheries enhancement will be the augmentation amount plus inflow up to a maximum of 300 cfs.

Next add the white water event for August 29th (750 cfs) and increase fisheries releases of 100 cfs thru August 17th.

Next add whitewater flows on September 4th (650 cfs) and increase fisheries releases of 100 cfs thru August 24th.

Next add whitewater flows on September 5th (650 cfs), add fisheries releases of 50 cfs thru September 13th and increase fisheries releases of 100 cfs thru August 30th.

Next add fisheries releases of 50 cfs thru October 17th.

Next increase fisheries releases to 100 cfs thru October 17th.

Storage in excess of above flow needs may be released Friday, September 17th for a higher flow whitewater release. The scheduling of this release will allow those interested in larger white water recreation releases to plan accordingly. The release rate will be based on the amount of water available. Release will be set at a maximum of 4000 cfs. Final scheduling and amount of this release will be determined and posted by Wednesday, 15 September 2010. No float fishing releases are planned. Significant ramping for this event will allow float fishing and white water opportunities during the ramping period.

Following this procedure may mean that white water events and additional fisheries enhancement releases become scheduled or modified with little advance notice. Also since the last large release is scheduled well before the end of the fisheries release period, excess water may become available. This water beyond what is necessary to make all the planned releases will be released at the discretion of the Corps of Engineers. Release plans will be posted on the Corps webpage.

Table 1

May Release Rate Priority

| Saturday | | Sunday | | Volume Required (DSF) |
|---------------|-------------------|---------------|-------------------|--------------------------|
| Rate (CFS) | Duration (HRS) | 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 800cfs in May

Table 2

June Release Rate Priority

| Saturday | | Sunday | | Volume Required (DSF) |
|---------------|-------------------|---------------|-------------------|--------------------------|
| Rate (CFS) | Duration (HRS) | 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

Table 3

July-September Release Rate Priority

| Saturday | | Sunday | | Volume Required (DSF) |
|---------------|-------------------|---------------|-------------------|--------------------------|
| Rate (CFS) | Duration (HRS) | 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 | 750 | 12 | 750 |

Planned releases in this period vary between 600-750 cfs plus inflow