

## **Francis E. Walter Reservoir Recreation Operations Plan for 2011**

### **Introduction**

The plan for 2011 will be only slightly different from that of 2010. This year water is again being allocated to ensure early season (July through 21 August) white water recreational and fisheries releases (July through 11 September) while relying on seasonal precipitation and additional water accumulations to allow scheduling of releases for later in the season (late August through October).

Planned white water release dates are listed below:

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

\* With the pool at 1365 on 1 July, storage is sufficient to support white water recreation and fisheries augmentations releases through 21 August and 11 September respectively. After those dates additional water must be accumulated during the recreation season to make additional releases possible.

\*\*The 16 September release will only occur if sufficient stored water is available. This is the last added increment for the 2011 recreation plan. Fisheries releases through 14 October will be assured before the 16 September release will be considered. The 16 September (Friday) release is planned for 4000 cfs. Ramping down from that release rate will be accomplished over the following weekend (17 and 18 September)

Total: 24 white water release dates planned, (19 of which initial water storage can accomplish) 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 2011 season, the maximum storage level will be the same as last year, elevation 1370. On or before 1 April 2011 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. Setting weekend releases to match inflow during this time period is intended to match the natural conditions at the time and not favor either rafting or fishing. 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 14 May 2011 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 (14 May). The pool elevation of 1370 is expected to be reached no later than midnight Friday 13 May 2011, in time for the first planned white water release to begin on Saturday 14 May 2011 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 (16-17 April and 23-24 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 water stored above elevation 1300 could be released if deemed necessary by the U.S Army Corps of Engineers.

### **14 May- 30 June**

White water weekend events are planned to start on 14 May (Saturday only). As in previous years, all planned releases will be made for 12 hour periods from 1AM until 1 PM.

The pool elevation will be maintained between elevations 1365 and 1370 from 14 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 14 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 water 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 stored water 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 the pool is at elevation 1365, releases will be set equal to inflow to maintain the 1365 elevation until 1 July. On Wednesday 8 June, the situation will be evaluated to determine if sufficient water remains above elevation 1365 to maintain the fisheries releases and the remaining June white water releases ( 11/12 and 25/26 June). If it is determined that sufficient water does not remain, adjustments in operations for the remainder of June will be made to best utilize available water. Any cancellations or modifications of release plans will be announced (posted on Corps webpage).

### **Actions starting 1 July**

Starting in July, there will no longer be any specific flow targets or restrictions on pool level fluctuations. 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. Fisheries enhancement releases will be 100 cfs plus inflow up to 300 cfs through 24 July and 50 cfs thereafter until 11 September. Water 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 11 September.

### **Plan after Initial Storage is Utilized**

The 2011 plan is similar to the 2010 plan in that both fisheries enhancement and white water releases will utilize available water 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. Incremental volumes of accumulated water have been allocated equitably between the white water and fisheries enhancement purposes. Additional weekend releases and fisheries enhancement releases will be added based on how much additional water is accumulated and at what point in the season this water becomes available.

The priority order for additional added increments is listed below:

- When additional water is accumulated, add whitewater event on 27 August (650 cfs) and increase fisheries releases to 100 cfs for period 25-30 July. 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 28 August (650 cfs) and increase fisheries releases to 100 cfs for period 31 July-6 August.
- Next add whitewater event on 3 September (650 cfs) and increase fisheries releases of 100 cfs for period 7-13 August.
- Next add whitewater event on 4 September (650 and increase fisheries releases of 100 cfs for period 14-19 August.
- Next add fisheries releases of 50 cfs for period 12 September-14 October.
- Next increase fisheries releases to 100 cfs for period 20 August-16 September.
- Storage in excess of above flow needs may be released Friday, 16 September 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, 14 September 2011. No float fishing releases are planned. Significant ramping for this event will allow float fishing and white water opportunities during the ramping period.

Final release amounts and durations for white water events will be determined and posted on the Corps webpage the Wednesday prior to the event. If sufficient water is available, each scheduled white water event will be held at the full amount before subsequent planned white water events will be scheduled. Additional whitewater releases will not be scheduled unless water stored is sufficient to allow at least a 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.

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 as outlined above 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