

***Trinity River
Recommended Instream
Release Schedule for
Water Year 2004***

Prepared by the Trinity River
Restoration Program AEAM
Team

A stylized, dark teal silhouette of a mountain range is positioned in the bottom right corner of the slide, extending from the right edge towards the center.

Release Schedule Planning

- ◆ Monitoring and assessment reports
- ◆ Preliminary water year classification
- ◆ Preparation of flow alternatives
- ◆ TAMWG/TMC technical meeting
- ◆ Preparation of draft Recommendation
- ◆ Review of Recommendation by TAMWG and TMC

Status of the System

- ◆ Riparian encroachment is happening at downstream “pilot” sites
- ◆ Little coarse sediment transport occurred in 2003
- ◆ Temperature standards for both adult and juvenile salmonids were largely met
- ◆ Trinity River flows kept conditions suitable for migration longer through the spring run than compared to 2002
- ◆ Fall run migration appeared to be unimpeded
- ◆ Fall flows did not appear to impact spring run spawning timing, or patterns.

TRFES Restoration Objectives for a Wet Water Year

- ◆ Mobilization of matrix particles (D84) on alternate bar surfaces
- ◆ Channelbed scour greater than 1 d84's depth and redeposition of gravels
- ◆ Transport sand out of the reach at a volume greater than input from tributaries to reduce instream sand storage
- ◆ Transport coarse bed material at a rate near equal to input from tributaries to route coarse sediment
- ◆ Create Alluvial deposits
- ◆ Eliminate tributary aggradation
- ◆ Periodic channel migration
- ◆ Floodplain creation, innundation and occasional scour
- ◆ Woody riparian mortality on lower alternate bar surfaces
- ◆ Woody riparian regeneration on upper alternate bar surfaces and floodplains
- ◆ Maintain fluctuating water table for off-channel wetlands and side channels

WY2004 Priorities

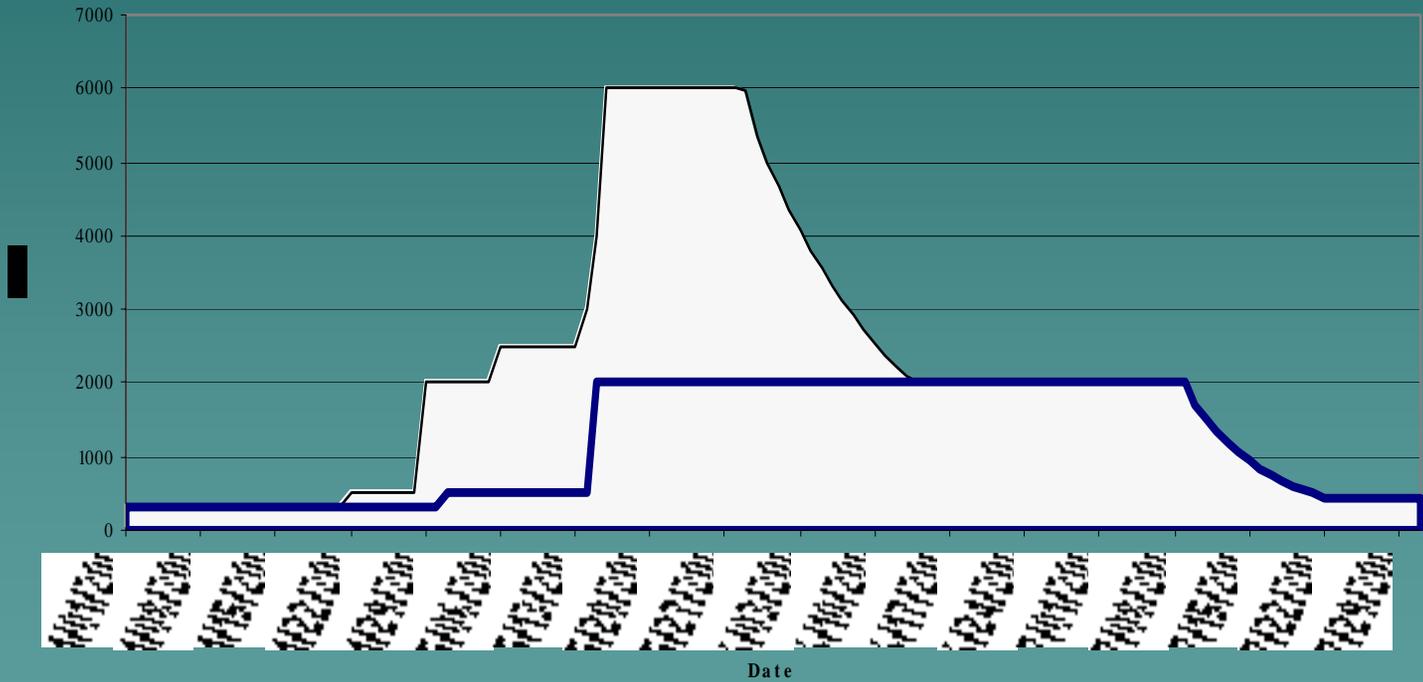
- ◆ **Completion of bridge replacement construction.**
- ◆ **Survival of progeny of four year old fall run chinook spawners of the 1999 brood year (the brood year hardest hit by 2002 die-off). 2000 cfs from May 14 until July 9.**
- ◆ **Scour and removal of riparian seedlings at existing channel restoration sites (estimated release 4-5 day at 6,000 cfs).**
- ◆ **Transport of tributary delta coarse sediments from Rush and Indian Creeks equal to annual input (estimated release 4 days of 6,000 cfs).**
- ◆ **Calibrate GSTARS sediment transport model above Rush Creek section (recommended release 1 day of 4500 and 1 day of 6,000 cfs).**
- ◆ **Reduce mainstem fine sediment storage (recommended release extended duration of >4500 cfs).**

Planning Guidelines

1. Work creatively with the Restoration Implementation Group (RIG) and permitting agencies to reconcile conflicting bridge construction and resource management schedules.
2. Prioritize restoration objectives relating specifically to chinook salmon. Add restoration objectives specific to other species subsequently.
3. Provide the most significant change, to the largest area, of rearing habitat possible with the available water.
4. Implement TRFES hydrographs consistently. The TRFES represents the best available knowledge regarding flows required to meet restoration objectives. Consistent application of management actions increases the ability of monitoring to detect change caused by the management action.

WY2004 Recommended Release Schedule

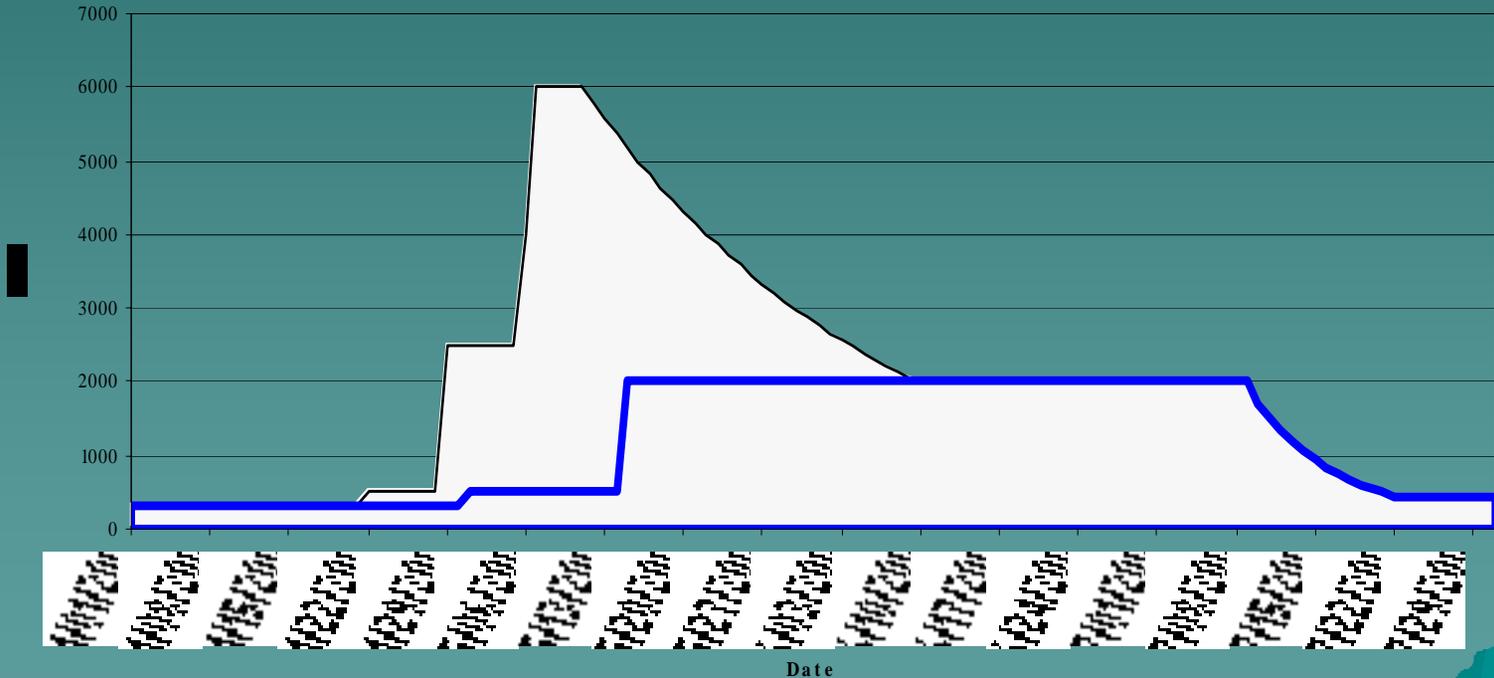
Recommended "Wet Year" Flow Schedule
-452.6 and 671.3 kAF-



□ 672 kAF ■ 453 kAF

WY2004 Recommended Release Schedule

Recommended "Normal Year" Flow Schedule
452.6 and 646.9 kAF



□ 646.9 kAF

■ 453 kAF

Expected Outcomes	452.6kAF (Current Allocation)	671.3kAF (Interim Wet Year without New Bridges)
Recommended release schedule description	Flow Study “normal and wetter years” 2000 cfs bench May 9- July 7	Flow Study “wet” year hydrograph with 6,000 cfs peak release
Restoration Program “Wet Year” Objectives		
1. Optimal water temperature for <u>chinook</u> smolt survival	Yes	Yes
1. Optimal water temperature for <u>coho</u> smolt survival	Partial	Yes
1. Optimal water temperature for <u>steelhead</u> smolt survival	No	Yes
1. Provide temperature suitable for Adult upstream migration and spawning	Yes	Yes
1. Significantly improve spawning gravel quality by mobilizing channelbed surface	No	Yes
1. Prevent riparian seedling germination on lower bar surfaces	Yes	Yes
1. Mobilization of tributary sediments delivered during winter 2003/04	No	Yes
1. Scour and removal of 2 yr old riparian seedlings on bar surfaces	No	Partial
1. Channel bed surface mobilization and cleaning of spawning gravels.	No	Yes
1. Transport of tributary fine sediments equal to input	No	Yes
1. Transport of tributary coarse sediments equal to input	No	Partial
1. Channel migration, creation of alternate point bar features	No	No
1. Reduce mainstem fine sediment (<5/8”) storage	No	Yes