

## **Hamilton Ponds Coordination Meeting Notes and Agenda for 11-2-11**

**Attending:** BLM - Gary Diridoni; DWR - Teresa Connor and Nancy Snodgrass; HVT- Andrea Davis; NMFS - Seth Naman; TCRCD - Alex Cousins; USBR - DJ Bandrowski, Brandt Gutermuth, Robin Schrock, Kent Steffens; USFWS - Joe Polos; Yurok Tribe - Aaron Martin

### **10:00-10:15 Introductions/Meeting Goals and Objectives**

**DJ Bandrowski**

### **10:15-10:30 History of Hamilton Ponds and Management**

**Nancy Snodgrass**

- 1974 Trinity River Task Force Developed
- 1976 Task Force recommends Debris dam and Wellock pond to capture sediment in GVC
- 1985 Hamilton Ponds land purchased (by Task Force – and given to DWR to manage?). DWR has owned Hamilton ponds area since this time.
- Upper pond constructed in 1988 by DWR and Trinity County
- Lower pond constructed in 1989 by DWR and Trinity County
- Buckhorn Dam constructed in 1991
- Care taker moves off DWR property in 2007
- RCD has done 20 years of road decommissioning and revegetation in GVC drainage. Over time the need for the ponds to capture sediment should diminish. Approximately \$70 million have been spent to minimize sediment input to the Trinity (bought watershed, built dam, etc.).
- GVC Drainage has a forest/fire management plan written by Kenneth Baldwin available on TCRCD website. Fire in GVC could ruin all work and benefits from Reveg of the area and increase sediment load to the Trinity.
- 2 different documents available on the TRRP website on Hamilton pond management (1 = *DWR Hamilton Ranch Management Plan* and 2 = *Recommendations for Hamilton Ponds Sediment Control Plan* by D. Gaeuman)

### **10:30-10:45 Grass Valley Creek (GVC) Delta Evolution**

**Andreas Krause**

- GVC area is a very dynamic portion of the river
- Andreas has a draft memo on the GVC delta changes through time. This will be distributed to attendees.
- Over 350 feet (linear) of new land created after Trinity Dam built at the GVC delta
- Wellock levee was constructed in 1986. The Wellock pond was dredged around then (Wellock pond 1 was in the active channel of GVC just upstream of the Trinity River confluence and pond 2 was in the mainstem Trinity). Public lands were purchased rather than trying to maintain (dredging) ponds on private lands.

### **10:45-11:30 Implementation History at Hamilton Ponds and Environmental Compliance Issues**

**Brandt Gutermuth**

- 2002-2006 the upper pond was dredged frequently (see Gaeuman pond dredging recommendations for best info on dredging dates) and in 2007 the lower pond was dredged.
- Ongoing dredging operations since the ponds were built in the late 1980s.
- Spoil piles are not to exceed the elevation of Lewiston Road.

- Brandt has a draft project standard Operating Procedure (SOP) for dredging the Hamilton ponds. This procedure is meant for only the upper ponds, as the lower pond is probably better left as habitat than dredging.
- Brandt will work with Aaron and Damon to develop a new draft SOP for dredging which will minimize impacts to all fish species. Project will include testing of any fish removal techniques (e.g., pond drawdown), frequency of dredging, and known fish numbers in the ponds. The SOP may require reducing the water volume in pond 1 during dredging and may be flexible based on field conditions. By including all various scenarios that might occur, NMFS can analyze impacts of the work and determine the environmental impacts of the work. They will meet at the ponds for a field trip to determine range of options before completing the DRAFT SOP for review by all.

#### **11:30-11:45 Sediment Delivery Analysis/Recommendations Dave Gaeuman**

- Dave's paper looked at dredge records and the relationship between flow and sediment transport. Pond filling rate has everything to do with GVC flows.
- Ponds not filling as quickly as they did in earlier years.
- If we stopped dredging altogether, the Trinity River bed downstream from GVC would be more like the Douglas City Reach of the Trinity River where 10% of the bed is sand covered. Adding some more sand probably wouldn't impact DGC area of the Trinity River very much. Present condition downstream of GVC is approximately 4% sand coverage.
- Sediment transport is based more peak flows, not on total flow volume. That's why 2011 wasn't big for sediment transport because there wasn't much in the way of peak GVC flows.
- Dark Gulch also has a sediment basin (Sandy's pool) that is filling and needs to be maintained
- Bed material in the upper pond is generally coarser than material in the lower pond – especially in the dredge area. Lamprey use both the upper and lower ponds.

Questions to answer – observations:

- 1) What's life expectancy of Buckhorn dam (~ 50 more years – not filling so fast with GVC reveg)
- 2) Determine sediment differences between ponds. Upper pond catches sediment is coarser in general.
- 3) Read Trso 2004 on GVC for background
- 4) Get as-builts from DWR for Hamilton ponds (done – distributed by Nancy Snodgrass)

#### **11:45-12:00 Passive & Active Sediment Removal Technology Rod Wittler**

Streamside systems sediment removal (active = w/ pumps and passive = gravity sediment removal with siphon) - <http://www.streamsidesystems.com/>. Streamside system might be applicable at Hamilton area instead of dredging. Hydraulics control the minimum size collected in these screens and screen opening determines the maximum size of sediment collected. Screens 20-300 ft. wide can remove up to about 2,000 c/day. Could turn on screen with GVC stage. 30-foot unit could be poured in place concrete. Are there approach and sweeping velocity data available for these screens? Data needed to estimate take of fish?

#### **12:30-1:00 Ecological Habitat Value/Biological Issues Aaron Martin/Damon Goodman**

- Aaron and others have seen 1+ Chinook salmon (>160 mm). Many Chinook and steelhead. So this may be an important place for maintaining life history diversity in Chinook salmon.
- Clouds of fish in the entrance to the upper pond

- Coho are dispersed all over the pond and near wood.
- Aaron has seen almost 10 fold more fish in the upper pond than lower. Is there a temp difference in the upper and lower pond? Upper pond has better velocity and fish seem to like that. If it is a food issue, food transported from the creek comes into the upper pond and diminishes as it is eaten during passage to the lower pond)
- Aaron has not seen adipose clipped Chinook indicating hatchery juveniles may not swim up the creek but juvenile coho salmon are known to swim up the creek.
- Fish are big and healthy, ideal for salmonid rearing, likely growing faster than the mainstem.
- Yuroks tagged fish in September near Buckhorn Dam. These fish were detected entering the ponds in Nov-Dec but not leaving by project end in April. If the fish lived, they likely over wintered in the ponds. Others tagged in the mainstem near Salt flat & Deadwood Ck. migrated to ponds.
- Lots of lamprey in the upper pond when Aaron and Damon shocked it (many thousands). Lamprey rear in oxygen rich fine sediments (Pacific and Klamath River lamprey- Species of CDFG concern). Young rear for 5-7 years in the sediment.

#### **1:00-2:00      Management Topics/Issues for the Future      Group Discussion**

- Sediment Control/Removal – In general we need to do as little as possible and be as smart as we can in sediment removal to minimize impacts from going into remove or dredge more frequently.
- Scott McBain sent an email that noted the need to consider the effects of not dredging on the downstream river. How much is enough sediment (DG) entering the Trinity River before it's a problem for habitat and spawning, etc.?
- Recreation/Public Usage/Education –BLM to work with TCRCD in stewardship agreement to minimize erosion and evaluate GVC erosion potential. Is upslope reveg working?
- Revegetation/Restoration – Need to work with DWR, TRRP, TCRCD, and BLM to come up with vegetation plan for the larger Lowden/Hamilton ponds area.

#### **Planning/Prioritization Questions & Next Steps      Group Discussion**

##### ➤ Is a New Biological Opinion Needed?

It is still likely that a separate BA/BO from Hamilton Ponds sediment removal is more expedient than a new broad TRRP BO. DWR (Nancy Snodgrass) would like to see stand-alone (Hamilton Ponds only) BA/BO. Brandt will update old SOP with Aaron and Damon so that impacts to fish are minimized. see 10:45 discussion.

##### ➤ What Assessments/data are needed?

- What would an experimental draw down of the upper pond be used for? Used for lamprey survey? Why couldn't this be done at the time of the dredging? NMFS does not need the pond to be lowered in elevation to answer the question of how many coho salmon are in the ponds. But if you are going to lower the water elevation NMFS needs to know all the details associated with that part of the project for effects.
- Would fry and ammocetes be able to cross the passive sediment collector? Are there studies that have addressed this? How to minimize impacts?
- Ask Andy Hill for lamprey or coho or steelhead data for GVC.
- Ask the question of the reason for action in Grass Valley Creek: is it mainstem embededness or is it to maintain the pond habitat? Get back to Gaeuman on whether or not the level of embededness that would result if the ponds were not dredged is acceptable. Need to minimize dredging – how

infrequently is it prudent to dredge the upper pond. Do we need to maintain both or only the upper pond for dredging?

- What Data Do we Have?
- What Data Do we Need
  - Frequency of planned dredging
  - Rotation of dredging areas
- Developing Assignments for Future Planning