

# GREATER YELLOWSTONE HYDROLOGISTS

April 28<sup>th</sup>-29<sup>th</sup>

## 2010 Winter/Spring Meeting

Hydrology Team Subcommittee for the Greater Yellowstone Coordinating Committee

Shoshone National Forest, Cody WY

**Facilitator:** Greg Bevenger

**Note taker:** Karri Cary

**Attendees:**

Susan O'Ney (Grand Teton National Park); Ronna Simon & Trevlyn Robertson (Bridger-Teton National Forest); Brad Higginson & Louis Wasneiwski (Caribou-Targhee National Forest); Mark Story (Gallatin National Forest); Mark Nienow (Custer National Forest); Virginia Kelly (GYCC); Greg Bevenger, Liz Oswald, & Karri Cary ( Shoshone National Forest)

### FIELD TRIP – APRIL 28TH

**Agenda item:** North Fork Shoshone River Fuel Reduction Projects **Presenter:** Karri Cary

**Discussion:**

The decision for this project was signed in 2005 with the main objective being fuels reduction in a WUI area associated with beetle mortality. Other objectives were to improve forest health and to enhance wildlife habitat. There were three tiers: fuels reduction within 300' of structures, mechanical sanitation salvage, and prescribed fire. This project is just reaching the end of the mechanical salvage logging phase, and the total sale volume was approximately 21,000 Ccf. There were eight crossings on the mainstem for this sale which have all been successfully rehabilitated where other non-timber sale impacts were not present. Resource specialist coordination and involvement in this project has been key.

**Agenda item:** Gunbarrel Fire Flood Risk Reduction Projects **Presenter:** Greg Bevenger

**Discussion:**

The Gunbarrel fire occurred in 2008 and was 68,148 acres. Through the BAER process, three drainages were identified as having enough high severity burn that there was increased risk for debris jam flood flows that threatened the lodges at the base of these drainages (also situated at the apex of alluvial fans). Mitigation for this was done through LWD clearing, coordination with the lodge owners, and coordination with the Weather Service.

### OFFICE PRESENTATIONS – APRIL 29TH

**Agenda item:** Using Historical Aerial Photos for Stream Restoration Planning **Presenter:** Brad Higginson

**Discussion:**

The C-T has been working with local conservation agencies and private landowners to improve fish passage. On this project the channel had been straightened, but effectively communicating this with the land owner was a challenge. Utilizing a time series of aerial photos, they were able to show the land owner what the channel had historically looked like. Using these photos as a communication tool, the landowner chose to not only restore the one channel being discussed but others on his property. The National Archives Records Administration was a source for pre 1955 photos. GIS tools used were the geo-referencing toolbar (to geo-reference a scanned photo) and the swipe layout tool within the effects toolbar (for comparison between photos). Windows Movie Maker was used to put this into a format that could be used to share the info with partners on this project.

<u>Action items</u>	<u>Person responsible</u>	<u>Draft Deadline</u>	<u>Final Deadline</u>
✓ <i>Email out web links for aerial photo site.</i>	Brad	n/a	Before next mtg.

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**Agenda item:** Gallatin Forest 2009 & 2010 Road Decommissioning Projects **Presenter:** Mark Story

**Discussion:**

Gallatin N.F. has been proceeding with decommissioning associated with their travel management planning. Priority water quality areas were identified using road density, road condition, and 303(d) listings as indicators. Types of decommissioning include: recontouring, rip/seed/slash, and closing roads via slash placement, buck and pole fencing, and rock barricades. Findings included that 1) recontouring does not present as much of a sediment source as originally thought, 2) weed treatment prior to the work decreases post-treatment weed response, and 3) signs educating the public were helpful in managing further unauthorized use, and persistent law enforcement via ATV ranger patrols are essential to reign in unauthorized use and further creation of user made ATV routes.

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**Agenda item:** Cascade Fire Debris Flows **Presenter:** Mark Nienow

**Discussion:**

There was a post fire rain event that occurred delivering two inches in less than two hours (between a 50 and 100 year storm). The narrow drainages on the front facing slopes had considerable down-cutting and bedload movement, and major debris flow materials intercepted a forest road. During the BAER assessment, these front facing slopes weren't noted as an issue due to the mosaic burn pattern. While there were flood warning signs in place, the question was posed as to whether or not we should be assessing the less frequent storm events? The group consensus was that your design storm is something that you can mitigate whereas the event that occurred in this situation could not have been mitigated.

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**Agenda item:** Bridger-Teton Forest Wild & Scenic Rivers Workload **Presenter:** Ronna Simon

**Discussion:** See attached handout.

Per the Snake Headwaters Legacy Act, 2009, there are 13 new river segments that have been designated under the Wild & Scenic Rivers Act in Wyoming. In conjunction with this, the designation ORV's are being reevaluated, and instream flow data is being collected and the need for ISF water rights is being explored for each segment. A CRMP for each segment has to be completed within three years of designation. One point that the forest is now having to consider is the need for Section 7 (of the Wild & Scenic Rivers Act, 16 U.S.C. 1271-1287) Review is needed if there is going to be any work within the designated area.

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**Agenda item:** GYCC Direction for Water Resources **Presenter:** Virginia Kelly

**Discussion:** See attached handout.

In 2009, Healthy Water Quality Flow was added as a subset of the Ecosystem Health priority. GYCC listed three priority areas with this category: Dam/withdrawal sites on the forests that other entities have identified, water rights inventory, and quantifying instream flows. Within the Sustainable Operations Priority, water consumption was a priority, and within the Climate Change emphasis, water effects/threats and management implications.

Base funding is being offered to subcommittees with a strategy. The strategy must have: mission statement, outcomes and measures, a project list with a budget, 3-5 year project schedule, and a year-end accomplishment report. Likely it should focus on the areas GYCC identified as priorities.

Questions posed: 1) Do we want to coordinate with the SOS?, 2) Does anyone want to join the Climate Change subcommittee?, 3) Do we have any messages for the public?

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**Agenda item:** Review & Discussion of GYCC Watershed Management Strategy **Presenter:** Greg Bevenger

**Discussion:**

Many of the action items were started but for numerous reasons, many with deadlines were not completed. Follow-up discussion involved incorporating the information Virginia presented in the previous presentation. There was a decision that minor updates to the strategy were necessary and that the strategy would be streamlined by moving the action items into the implementation plan. Updates would include a focus on the three focus areas GYCC identified. Each of the "new" documents being created would be included as Appendices to the Strategy. There was a suggestion that the next winter/spring meeting should spend considerable time on this topic.

Following up on Virginia's questions from the last presentation, there was discussion that links to SOS are most obvious on the water rights/uses aspects. There are already hydrologists on the Climate Change committee.

<u>Action items</u>	<u>Person/s responsible</u>	<u>Draft Deadline</u>	<u>Final Deadline</u>
✓ Email strategy to subcommittee members	Greg	n/a	Before next meeting
✓ Strategy Update	Mark S., Liz, Karri, Louis	Dec. 1, 2010	Jan. 15, 2011
✓ Implementation Schedule Update/Development	Mark S., Louis	Feb. 14, 2011	March 15, 2011
✓ Outcomes/measures/ranking criteria and process development	Mark S., Trevlyn, Brad	Feb. 1, 2010	March 15, 2011
✓ Teleconference for finalizing documents and prelim discussion for 2012 submittals	All	n/a	March 1, 2011
✓ Present new Strategy to GYCC	Mark S.	4/1/2011	4/2010 GYCC meeting

**Agenda item:** C-T Forest 2009 Watershed Improvement Projects **Presenter:** Louis Wasneiwski

**Discussion:**

C-T has numerous watershed improvement projects occurring on and off Forest. Projects are integrated with other resource areas, and include fencing, bank shaping, culvert replacements, hardening and reshaping water gaps, road decommissioning, trail improvements, trail bog bridges, and channel restoration. Internal and external collaboration has been key to the success of these projects. They are typically 80-90% funded by partnerships.

**Agenda item:** Round Robin **Presenter:** All

**Discussion:** Summarized below are the items that each entity has been working on or has planned into future work.

B-T:

- Trevlyn – Range NEPA, water rights for existing uses, dam inventories, wild & scenic river water uses for acquiring instream flows
- Ronna – Has been the acting soil and water program manager, compiling wild and scenic river existing information, range work, vegetation treatment projects, adapting to personnel shift adjustments in the office, north zone travel plan

Gallatin

- Mark – Publishing air quality data, hired a hydro tech., finished the EIS for the Bozeman municipal watershed treatment project, Gallatin is a pilot forest for studying watershed sensitivity and vulnerability relative to climate change, planning 70 miles of road decommissioning in 2010, road BMP improvements, NRIS WIT, temperature monitoring is occurring in select areas around the forest

C-T

- Louis – NRIS WIT, range NEPA, restoration projects, mine plan EIS workloads, CERCLA actions, fuels projects, Bear River field verification & water rights
- Brad – MIMs work & looking at getting this more widely used, National Range BMP Handbook should be available soon

Custer

- Mark – Integrated project planning has been established and presented to leadership for decision making process. This lays out a 5-yr workload for the districts

Shoshone

- Liz – Fuels projects, Scott's well APD, legacy project coordination, air quality monitoring, developing out year watershed improvement projects, multiple stimulus projects occurring and BMP monitoring implementation associated, analyzing pebble count data
- Karri – Range NEPA, Fuels reduction NEPA & associated watershed improvement projects, trail relocation projects, corral relocation & wetland restoration projects, front & backcountry rangeland monitoring, recreation special use permit involvement

- Greg – Line Creek well, stream survey contract (found this to be an effective way to get survey done on forest), Forest is one of four that is part of a National climate change study – Shoshone will have an emphasis on climate change as related to water

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### ***NEXT MEETINGS***

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**2010 Fall Meeting:** September 22 & 23<sup>rd</sup> on the C-T, watershed restoration projects

**2011 Winter/Spring Meeting:** April 27 & 28<sup>th</sup> in Bozeman, MT