

# Greater Yellowstone Hydrologists

2008 Winter Meeting

February 6 & 7, 2008

Bozeman Public Library, Montana

**Host:** Mark Story, Gallatin NF

**Note taker:** Brad Higginson, Caribou-Targhee NF

## Attendees:

Mark Story and Cheryl Taylor (Gallatin NF), Dave Salo (Beaverhead-Deerlodge NF), Dave Callery (Helena NF), Karri Cary and Greg Bevenger (Shoshone NF), Dan Scaife (Bighorn NF), Sean Eagan (Yellowstone NP), Mark Nienow (Custer NF), Virginia Kelly (GYCC), Jeanette Langley, Ronna Simon, & Terry Clark (Bridger-Teton NF), Louis Wasniewski and Brad Higginson (Caribou-Targhee NF & Curlew NG), Pete Bengeyfield (Beaverhead-Deerlodge NF, retired)

Joined on February 7: Jim Brammer (Beaverhead-Deerlodge NF), Jim Brammer (Beaverhead-Deerlodge NF), and Jody Canfield & Dale White (Gallatin NF).

## February 6<sup>th</sup> Meeting Notes

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**Agenda item:** Welcoming Remarks and Introductions

**Presenter:** Mark Story, Gallatin NF

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**Agenda item:** GYCC/GYACAP Overview

**Presenter:** Virginia Kelly, GYCC Coordinator

### Discussion:

The GYCC recently revised its emphasis items:

- Ecosystem health
- Sustainable operations
- Connecting people to the land
- Land patterns of GYA

There is also new energy on aquatic nuisance species in the GYA. GYCC is supporting crews for inspection, education, and wash stations.

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**Agenda item:** GYH Roundtable – Forest and Park Summaries

**Presenter:** All

### Discussion:

**Mark Nienow (Custer NF):** The Forest travel plan is between draft and final EIS. One of the main issues is seasonal closures. Also working on range allotment NEPA. The Red Lodge area had some big wind events causing a lot of blow-down in campgrounds and along roads. The Forest received an application for permit to drill for oil exploration in the Stillwater/Rosebud area.

**Sean Eagan (Yellowstone NP):** Examining geo-thermal features across the park. Sean presented a poster titled “*Twenty-five years of chloride flux data from the Yellowstone drainage: temporal trends and spatial distribution.*” Data indicate a decrease of 1% per year for Yellowstone drainage. Sean noted that the decline is much less subtle in Madison River drainage, which contains approximately 40% of thermal features in Park.

**Dan Scaife (Bighorn NF):** Working on water right issues within Region 2. Grazing permittees are applying for water rights on National Forest range allotments. If awarded, these rights would be on equal par with Forest water rights. The Forest has already applied for all range water rights under the adjudication process. The Forest’s view is that these rights should be held by the Forest Service, not the grazing permittee.

**Karri Cary and Greg Bevenger (Shoshone NF):** The Forest is back to forest plan revision; expect a draft by summer. WFU is on hold. The SNF is continuing with range and fire BMP reviews and are planning on doing recreation BMP reviews. Greg is working on a Wyoming weather modification study and on the issue of slash pile burning with FS research station. Wyoming DEQ has asked the Forest to apply for turbidity waivers when doing emergency work. Karri is working on a wild river management plan for the Clark’s Fork (scoping phase), travel

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management, and developing fire resource advisor packets (a basic plan for crews concerning resource issues).

**Ronna Simon (Bridger-Teton NF):** In the middle of forest plan revision; new rule in affect. Travel planning on North zone (Jackson area). Oil and Gas: the Forest received an application for lease in Wyoming Range. Lots of District Ranger turnover: five out of six rangers are new. Supervisor's Office conveyance – looking at options for moving. Doing range NEPA in the upper Gro Ventre area. Starting BMP reviews and wants to involve DEQ.

**Jeanette Langley (Bridger-Teton NF):** Emphasis on aquatic hitchhikers/aquatic nuisance species.

**Terry Clark (Bridger-Teton NF):** Water rights coordinator. Working closely with range con's on range water rights. BAER work. Water rights for summer homes and campgrounds and NRIS water rights.

**Dave Gallery (Helena NF):** Selling Forest land to combine offices. Working through reorganization. Working on travel management final EIS: open/close decisions. Gearing up for range NEPA. Also working on Mike Horse Mine in the Blackfoot River headwaters. The latest proposal is a large treatment plant. Also looking at Tenmile Creek (Helena municipal water) for a fuels reduction project.

**Louis Wasniewski & Brad Higginson (Caribou-Targhee NF):** Placing emphasis on restoration activities. Lots of small fuel and timber projects. Oil and Gas Draft EIS for Caribou to come out soon. Snake River adjudication coming to an end, picking up on Bear River drainage. Finalizing sixth-level watershed layer with the state. Grazing BMP's and monitoring. Travel management – Bighole Mountains decision to be out soon. Current proposal from Art McKee, Rob Crabtree, Christopher Potter (SWAT model) for the Henry's Fork drainage (hydro response and water quality). Also working on Portneuf TMDL

**Dave Salo (Beaverhead-Deerlodge NF):** Working with fish biologist Jim Brammer to help out in hydro with Pete and Bryce leaving. Bryce completed forest plan analysis, which is under 1982 rules and may bring heavy scrutiny. Re-opened the plan for public comment. Working on stewardship contracting as part of fuel reduction projects around Butte. Allotment management plans – hard keeping up with schedule for updating, but doing a good job on the monitoring component. Also working on Bighole water rights decree.

**Mark Story (Gallatin NF):** Mark distributed a handout of recent and upcoming work: New World Mining District, Travel Plan FEIS, Timber sales, prescribed fire NEPA, water quality monitoring, water rights, grazing NEPA, TMDLs, Hydro SCEP recruiting, fires and BAER work, and watershed rehabilitation work that includes a lot road and trail stabilization and decommissioning.

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**Agenda item:** Gallatin NF Travel Plan & Road Decommissioning      **Presenter:** Mark Story (Gallatin NF)

**Discussion:**

Mark described the watershed improvement work in Taylor Fork, Bangtails, and Bear Canyon drainages. The road and trail decommissioning includes recontouring, sub-soiling, culvert pulling, and trail rerouting. Lots of ground cover is placed on closed routes.

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**Agenda item:** Flow Data Analysis for Minimum Bypass Flows for West Fork Rosebud Creek - FERC relicensing      **Presenter:** Mark Nienow (Custer NF)

**Discussion:**

The project is located at Mystic Lake and involved a non-traditional bypass flow for project. Data indicated that the existing fishery is robust. Therefore, Mark examined the current operational procedures. Those flows were used to establish a new license requirement, which was greater than the previous bypass flows.

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**Agenda item:** SNOTEL precipitation analysis for the Shoshone NF      **Presenter:** Greg-Bevenger (Shoshone NF)

**Discussion:**

Greg conducted a previous precipitation analysis in the 1980's using 30-yr average precip data (NRCS). At that time, he identified five basic precipitation zones on the Forest.

For this analysis, Greg now examined the active SNOTEL sites and ran statistics on the data. Also, spatial analysis is much easier now with GIS. Greg identified that the forest is split into two basic precipitation zones. The data indicated negative precipitation slopes over time, but only one is significant (which happens to be the site with longest record).

Mark Nienow presented a precipitation analysis he did for travel management and seasonal closures. Mark looked at SNOTEL site data to evaluate when SWE goes to zero. He found a trend that indicates a earlier snow

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melt date over the period of record.

Greg suggested doing a similar analysis for GYA. Virginia stated that the project relates closely with the GYCC emphasis item of understanding climate change. She suggested submittal for the 2009 GYCC project proposals. Others suggested getting NRCS and/or Phil Farns Involved.

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**Agenda item:** Hydraulic Geometry Relationships – Shoshone NF      **Presenter:** Greg Bevenger (Shoshone NF)

**Discussion:**

Greg has produced hydraulic geometry relationships based on USGS gages surrounded the Forest. One difficult issue he found during the analysis was the amount of disturbance at the gaging stations, which are mostly off-Forest. Greg found a strong correlation to losing (basin regions) and gaining reaches (mountainous areas). Greg also provided handouts summarizing the project. □□

**Agenda item:** □ Derby BAER Implementation Monitoring □ **Presenter:** □ Mark Story (Gallatin NF) □ □

**Discussion:** □ □ □

The Derby fire was 208,198 acres. The Forest conducted a review to monitor implementation and effectiveness of treatments. Seventy-seven percent of the treatments were properly implemented and adequately effective. Treatments included the first heli-mulch treatment on the Forest. There was a large weed issue for the BAER team to consider. Conclusion include the following:

Design culverts for at least a post fire flow of  $Q_{10}$  (equivalent to a prefire  $Q_{100}$ )

The amount of drain dips could have been doubled

Use more fords and armored dips at crossing due to clogging culverts □ □

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## February 7<sup>th</sup> Meeting Notes

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**Agenda item:** Multiple Indicator Monitoring: Range BMPs, Livestock Use, Stream Condition, and Trend...      **Presenter:** Brad Higginson (Caribou-Targhee NF/Curlew NG)

**Discussion:**

Brad discussed the multiple indicator monitoring (MIM) occurring on the Caribou-Targhee. This monitoring has been very successful for implementing adaptive management. Data has been useful to assess resource conditions, develop long-term resource condition objectives, determine trend, and also to provide the necessary loop on whether annual triggers for livestock movement are producing progress towards the objectives for long-term resource conditions. Reference:

Burton, T.A., E.R. Cowley, S.J. Smith. 2007. Monitoring stream channels and riparian vegetation – multiple indicators, version 3.0. Idaho State Office, BLM and Intermountain Region, US Forest Service. BLM/ID/GI-07/001+1150. [http://www.blm.gov/id/st/en/info/publications/technical\\_bulletins/tb\\_07-01.html](http://www.blm.gov/id/st/en/info/publications/technical_bulletins/tb_07-01.html)

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**Agenda item:** Bozeman Public Library Tour      **Presenter:** Paula Beswick (Bozeman Public Library)

**Discussion:**

The library has a Silver LEED certification. Features of the building included recycled building materials, alternative energies, photovoltaic systems, and stormwater filtration system.

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**Agenda item:** Forest Level Riparian Monitoring Protocol.      **Presenter:** Dave Salo and Jim Brammer (Beaverhead-Deerlodge NF)

**Discussion:**

David and Jim provided a handout on the forest plan integrated riparian monitoring. The monitoring question the forest would like to examine is: What is the condition and trend of riparian systems on the forest within the suitable range of actively grazed allotments? The forest is working on developing a protocol for site selections. The forest has 690 existing monitoring sites. They are considering developing new sites that are statistically

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random. The Forest expected to visit 250 sites in 2008.

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**Agenda item:** Streambank Trampling Protocol on the Bridger-Teton NF      **Presenter:** Ronna Simon (Bridger-Teton NF)

**Discussion:**

Ronna provided a handout documenting the work she is doing to establish a streambank trampling protocol as part of the forest revision effort. She has done extensive literature review and review of other forests. Ronna is looking at establishing streambank trampling guidelines based on Rosgen stream type.

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**Agenda item:** Aquatic Hitchhiker Abatement Program      **Presenter:** Jeanette-Langston (Jackson RD, B-T NF)

**Discussion:**

Jeanette discussed impact of aquatic naissance species (ANS), transfer methods, documented expansion, education efforts, inspection and cleaning. The Bridger-Teton has installed seven dip stations along Snake River. The district will focus on education in 2008. They did a "kids in the woods" project last year to install a dip station. Planned efforts for the future include working with raft rental companies, angler outlets, and outfitters to increase educational contacts. ANS is a top priority for several state and federal agencies in the GYA.

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**Agenda item:** Caribou-Targhee NF: Stream and Watershed Restoration Accomplishments      **Presenter:** Louis-Wasniewski (Caribou-Targhee NF & Curlew)

**Discussion:**

Louis discussed the Forest watershed program and several improvement projects. As budgets decline and targets increase, the Forest is pursuing partnerships and alternate funding. Louis discussed the Allan Canyon stream restoration project with Clark County, the Pine Creek work with Idaho Transportation Department, Tincup Creek work Caribou County, the Slate Mountain Trailhead project to remove a fish passage barrier, and road and trail obliteration. Stream restoration projects incorporated the use of rock structures (j-hooks) for stabilization. The Forest's watershed accomplishment report is available at:

<http://www.fs.fed.us/r4/caribou-targhee/watershed/>

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**Agenda item:** GYA Headwaters Conference      **Presenter:** Greg-Bevenger (Shoshone NF)

**Discussion:**

The GYA Watershed Management Strategy recommended hosting a "headwaters conference". The hope to combine this with the Biennial conference for 2010, but biennial conferences have been canceled. Greg, Sean, Mark, and Virginia will get together to discuss a new forum for hosting a conference. The desire is for a technical conference with government and non-governmental people. Sherry Hazelhurst at the USFS Washington Office is supportive and suggested getting research station involved.

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**Agenda item:** Relationship between stream-type and riparian vegetation      **Presenter:** Greg-Bevenger (Shoshone NF)

**Discussion:**

Greg hosted a meeting with scientists from research stations, academia, and consultants to discuss the relationship between stream-type and riparian vegetation. The group determined that it would be very hard to pull together existing data. Undetermined on next step.

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**Agenda item:** Wrap-Up and Future Meetings      **Presenter:** Mark Story (Gallatin NF)

**Discussion:**

Next fall meeting scheduled for October 2 & 3, 2008 on the Madison District of the Beaverhead-Deerlodge NF. Dave Salo will coordinate

Next winter meeting scheduled for February 4 & 5, 2009. Proposed location is Chico Hot Springs. Mark will coordinate.

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