MONDAY, OCTOBER 4, 2004

7:00 am – 5:00 pm REGISTRATION, Red Lion Hotel Lobby, Helena

8:00 am
Meet in Red Lion Colonial lobby for optional Field Trip to burn areas near Canyon Ferry. Please bring a hard hat, boots and appropriate outdoor gear. Bo Stuart, Hydrologist with the Helena National Forest, and Chuck Parrett, Hydrologist with USGS, will be our tour guides.

Noon
Return from Field Trip
Lunch on Your Own

SESSION 1 (Plenary). CHALLENGES TO MONTANA’S WATER FUTURE

1:00 pm
-- David Salo, President, Welcome and Introductions
-- Water Center Welcome, Liz Galli-Noble
-- Chuck Dalby, Vice President, Local Logistics and Announcements

Moderator: Susan Higgins, Montana Water Center

1:30 pm
Jane Jelinski, Director, MSU Local Government Center. “Challenges faced by local decision-makers making land-use and water-use findings.”

2:05 pm

2:40 pm
Break

3:00 pm

3:30 pm
Mike Roberts, Montana Department of Natural Resources and Conservation, Helena. “Water management in the upper Big Hole.”

4:00 pm
Jim Robinson and Chuck Dalby, Montana Department of Natural Resources and Conservation, Helena. “Historic channel and floodplain modifications of the upper Yellowstone River.”
4:30 pm Chuck Dalby, Jim Robinson, and Jane Horton, Department of Natural Resources and Conservation, Helena. “Estimation of historic effects of channel modification on the upper Yellowstone River using a morphology-based sediment budget.”

5:00 pm Adjourn

5:30 pm Poster Session: Poolside. Beer, wine, lemonade and appetizers on the house. Entertainment from Helena’s acoustic group, “Irish Stew”

7:00 pm Banquet: Western Barbeque (with options for vegetarians)
Afterwards: Special announcements from the officers, photo contest (to include INCREDIBLE prizes for all who submit photos), and a slide show presentation on water management in MADAGASCAR. Also: May Mace oil painting raffle!

TUESDAY, OCTOBER 5, 2004

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<th>SESSION 2 (Concurrent). MINING AND WATER QUALITY</th>
<th>SESSION 3 (Concurrent). GROUND-WATER STUDIES</th>
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<td>Moderator: TBA</td>
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<td>8:00 am Investigation of microbial ecology structure and function on coalbed aquifers: Powder River Basin, Montana. Patrick Ball, University of Montana.</td>
<td>8:00 am Bitterroot Valley ground-water quality. John LaFave, Montana Bureau of Mines and Geology.</td>
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<td>8:20 am Fisher Creek, MT and Rio Agrio, Argentina: A geochemical comparison of a mining-impacted stream in Montana with a geogenically-derived acidic river in Patagonia. Steve Parker, Montana Tech.</td>
<td>8:20 am Predicting groundwater nitrate concentration from land use. Kristin Gardner, Montana State University, and Richard Vogel, Tufts University.</td>
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<td>9:00 am Algal bioremediation of the Berkeley Pit lake system: an in-situ test using limnocorralas. Grant Mitman and Nicholas Tucci, Montana Tech.</td>
<td>9:00 am Madison aquifer discharge to the Gallatin River and the Yellowstone National Park controlled ground-water area. Mark Schaffer, Montana State University.</td>
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<td>9:40 Break</td>
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9:40 Break
### SESSION 4 (Concurrent).
**FLOODPLAIN/CHANNEL MANAGEMENT**

**Moderator:** Mike McLane, DNRC

**10:00 am** Evaluation of riparian health assessment methods to assess conditions of perennial streams in two different geological provinces in the state of Montana. Travis Miller, Montana State University.


**10:40 am** Two-dimensional flood-plain modeling of Tenmile Creek near Helena, Montana. Katherine Chase, USGS, Helena.

**11:00 am** Determination of channel-morphology characteristics, bankfull discharge, and various design-peak discharges in western Montana. Sean Lawlor, USGS, Helena.

**11:20 am** Classification and quality criteria for streams of Montana's northern glaciated plains. Michael Suplee, Montana Department of Environmental Quality, and Vicki Watson, University of Montana.

**11:40 am** Anabranch reaches on the lower Yellowstone River. Ryan McLane, Montana State University.

### SESSION 5 (Concurrent).
**SURFACE WATER QUALITY**

**Moderator:** Tammy Crone, Gallatin County Water Quality District

**10:00 am** Effect of alternative silvicultural treatments on snow accumulation in lodgepole pine stands, Montana. Scott Woods, Robert Ahl and Jason Sappington, University of Montana.

**10:20 am** Sediment contributions to the St. Regis River due to winter traction sanding along Interstate 90 at Lookout Pass. Jeff Dunn, Land & Water Consulting, Bozeman.

**10:40 am** Travel distance and volume of forest road sediment below drivable drain dips in belt and glacial till parent materials in western Montana. Brian Parker, University of Montana.

**11:00 am** Impacts of land use and cover change in soil hydraulic properties, Rondonia, Brazil. Katharine Schultz, Brian McGlynn and Helmut Elseneer, Montana State University.

**11:20 am** A computer program for estimating instream travel time and concentrations for potential contaminants from spills along the Yellowstone River. Peter McCarthy, USGS, Helena.

**11:40 am** Temperature, plants and oxygen: how does season affect constructed wetland performance? Otto Stein and Paul Hook, Montana State University.

### CLOSING PLENARY

**12:00** Announcement of Next Year's Officers, Student Awards, Raffle Winner, etc. . . .

**12:15 pm** Adjourn – Happy Trails!
2. Characterization of metal contamination in the riparian wetlands at the headwaters of the Stillwater River, Montana. Steve Cook, Montana State University.
5. Water quality survey of nitrate levels and coliform/coliophage presence in Helena Valley compared with regional geology, land usage, and well depth. Emma Swingle and Sam Alvey, Carroll College, Helena, and Kathy Moore, Lewis and Clark County Water Quality Protection District.
7. Groundwater-surface water exchange across alpine-valley transition. Timothy Covino and Brian McGlynn, Montana State University, and Richard Sojda and Brian Edwards, USGS Northern Rockies Science Center.
9. Assessment of pre-re-naturalized groundwater exchange in two stream channels and riparian zones, Jocko Valley, western Montana. Aaron Fiaschetti, University of Montana.
11. Feasibility study of implementing EPA’s proposed ground water rule (GWR) sampling requirements for fecal indicators. Steve Kilbreath and Joe Meek, Montana Department of Environmental Quality, and Kathy Moore, Lewis and Clark County Water Quality Protection District.
14. Treefall patterns in Western Montana riparian areas, and implications for woody debris recruitment modeling. Ron Steiner and Jeff Light, Plum Creek Timber Company.
18. An aerial photo comparison of hailstone lake hydrology since 1941. Jay Hanson, Montana Bureau of Mines and Geology.