
UPPER YELLOWSTONE WATERSHED BASIN

MILL CREEK SUBCOMMITTEE

UPPER YELLOWSTONE WATERSHED BASIN

MILL CREEK SUBCOMMITTEE

*November 13, 2009
St. John's Church, Emigrant*

-DRAFT MINUTES-

People Present (16)

Alan Redfield, Chairman

Elaine Skinner Hale, Vice Chair

Jim Robinson, DNRC

Jesse Aber, DNRC

Art Burns

Duane Neal

Riley Shimmin

Patrick Byorth, Trout Unlimited

Jacquie Nelson, Coordinator

Jessica Cox, Asst. Coordinator

Dave Amman, DNRC

Betty Melin

Lynda Moss, State Senator

Keith Neal

Kerry Fee, Trout Unlimited

Marty Malone, Park County Commissioner

Topics Covered:

- | | |
|----------------------------------|--------------------|
| 1. OPENING | 6. PUBLIC COMMENT |
| 2. END-OF-SEASON FLOW MONITORING | 7. CLOSING REMARKS |
| 3. WATER SUPPLY FORECAST | 8. ADJOURN |
| 4. MINUTES | |
| 5. NEXT MEETING | |

1. OPENING

- Alan Redfield called the Mill Creek Subcommittee meeting to order at 1:04 PM.

2. END-OF-SEASON FLOW MONITORING

- Dave Amman, DNRC Hydrologist and Program Manager of the Water Measurement program gave a presentation to report on the results of the end-of-season flow monitoring. The Mill Creek Water Measurement Project is a planning and hydrologic study aimed at addressing the water levels of Mill Creek. The study involves measuring and monitoring stream flows and irrigation diversions so that informed decisions regarding water management can be made by water users and residents. The four Mill Creek monitoring stations are located above pipeline, above Carter headgate, Mill Road bridge and at East River Road. Overall, the monthly flows were comparable to 2008. With exception of the station above Carter headgate, the 2009 average monthly flows for August – October were 92-95% of the 2008 flows. The Carter

[HTTP://DNRC.MT.GOV/WRD/WATER_MGMT/PLANNING_ACTIVITIES/MILL_CREEK/](http://dnrc.mt.gov/wrd/water_mgmt/planning_activities/mill_creek/)
(406) 222-2899x111 OR JACQUIE.NELSON@MT.NACDNET.NET

[HTTP://DNRC.MT.GOV/WRD/WATER_MGMT/PLANNING_ACTIVITIES/MILL_CREEK/](http://dnrc.mt.gov/wrd/water_mgmt/planning_activities/mill_creek/)
(406) 222-2899x111 OR JACQUIE.NELSON@MT.NACDNET.NET

UPPER YELLOWSTONE WATERSHED BASIN

MILL CREEK SUBCOMMITTEE

headgate station being at 68%. For the 2010 monitoring season, Amman hopes to install the monitoring gauges in July, rather than August, but was unable to do that due to high water. Furthermore, Amman referenced relating flows to snowpack in 2010.

(To view Amman's PowerPoint presentation visit the website at the bottom of the page)

3. WATER SUPPLY FORECAST

Jesse Aber, with DNRC Water Resources and member of the Governor's Drought Advisory Committee, gave a water supply forecast presentation to the group. This was his first basin specific water supply forecast analysis during an El Nino event and was based on historical information. The UYWB specific findings were primarily based on Monument Peak and Box Canyon NRCS Snotel sites. The concentration of the data analysis was based on patterns and tendencies of the global climate anomaly termed ENSO (El Nino-Southern Oscillation), or El Nino and La Nina. These are defined as a one month or more positive warm (El Nino) or negative cool (La Nina) sea surface temperature anomaly of 0.5C or greater observed in the Nino region of the equatorial Pacific Ocean defined as "Niño-3.4" - (5°N-5°S, 170°W-120°W). Currently, we are experiencing an El Nino disturbance. Based upon current observations and model forecasts, El Nino's effects of warmer temperatures and less precipitation during winter for the Northern Rockies are expected to continue through at least early spring, or the Northern Hemisphere winter '09 -'10. There is an increased probability of rain falling instead of snow in the early weeks of the water year (defined as Oct 1 – September 30 of following year) and for an early spring first pulse of runoff from warm spells from El Nino. But because the UYWB snowpack elevations are higher in elevation than most other mountain ranges in the state, the vulnerability of the snowpack to melting early from warmer than normal temperatures presented by El Nino events is mitigated. Additionally, we are currently experiencing a Pacific Decadal Oscillation (PDO) cool phase which is a potentially mitigating factor. This climate anomaly can last from 10 to 30 years and is triggered by changes in water temperatures of the Gulf of Alaska and along the Pacific coast causing warm and cool phases that affect how the jet stream air flows over our portion of the continent. A warm phase PDO combined with El Nino has the highest likelihood of producing drought conditions. It is suspected that the cool phase PDO could serve to soften the warmer and drier effects of the El Nino. In 2008 and 2009 the PDO came into its cool phase and that was couple with a La Nina so we had outstanding water supply conditions.

(To view Aber's PowerPoint presentation visit the website at the bottom of the page)

[HTTP://DNRC.MT.GOV/WRD/WATER_MGMT/PLANNING_ACTIVITIES/MILL_CREEK/](http://dnrc.mt.gov/wrd/water_mgmt/planning_activities/mill_creek/)
(406) 222-2899x111 OR JACQUIE.NELSON@MT.NACDNET.NET

[HTTP://DNRC.MT.GOV/WRD/WATER_MGMT/PLANNING_ACTIVITIES/MILL_CREEK/](http://dnrc.mt.gov/wrd/water_mgmt/planning_activities/mill_creek/)
(406) 222-2899x111 OR JACQUIE.NELSON@MT.NACDNET.NET

UPPER YELLOWSTONE WATERSHED BASIN
MILL CREEK SUBCOMMITTEE

4. MINUTES

- Lynda Moss moved to approve the August 20th meeting minutes, Marty Malone seconded and the motion passed.

5. NEXT MEETING DATE

- Alan Redfield suggested the subcommittee set a schedule of meeting twice a year, in April and November. Art Burns moved to adopt this schedule, Elaine Skinner-Hale seconded and the motion passed. Therefore, the next meeting will be held in April, specific date/time will be announced.

6. PUBLIC COMMENT

- Park CD Administrator, Jacquie Nelson, advised the subcommittee to define their goals and objectives, possibly in the form of a mission statement. The group outlined, through discussion, some primary concerns and intentions. These include; understanding Mill Creek hydrology in order to promote creek health, presenting positive options in a manner which circumvents conflict, developing baseline data to develop future strategy, explore funding options for a pipeline and alternative energy sources (wind, hydro), riparian development to keep livestock off creek, collaborative management of the Mill Creek water resource and outreach to fellow Mill Creek landowners. Further discussion of adopting a mission statement will be discussed at the next Mill Creek Subcommittee meeting.

7. CLOSING REMARKS

- There were no closing remarks.

8. ADJOURN

- Meeting adjourned at 2:45 p.m.