

UPPER YELLOWSTONE WATERSHED GROUP

PARK CONSERVATION DISTRICT

*General Meeting
December 10th, 2020, 6-7:30 pm
Virtual meeting via Zoom*

-MINUTES-

PEOPLE PRESENT: (33 people present)

Call meeting to order, Welcome/Introductions – Druska Kinkie, Co-Chair

Coordinator Updates - Ashley Lowrey

- New Communications tools/software – apologies for blips and thanks for patience.
- Moving meetings to every other month and will be held via Zoom for the time being, while Zoom will try to keep to 1.5 hrs.
- New Logo
- Minutes approval – Jeff made motion, Druska seconded, motion to pass minutes approved.
- Drought Planning update – Focus group met in mid-November, will focus on continued communications and education, increased accessibility to data/information
- Working lands funding from AMB
- Irrigation Video funding – DNRC HB223
- Rec update meetings

Gallatin Valley Land Trust (GVLТ) & Montana Land Reliance (MLR), Peter Brown & Jessie Wiese, gave overview of groups outreach efforts and easement work in Paradise Valley. Purpose and benefits of Easements as tools for transition planning.

Paradise Valley Working Lands (PVWL) Committee update: Overview: Whitney & Druska. First meeting held via Zoom on Dec 9th. Goals, timeline, overview. Sub-Committee that will report to UYWG general meeting. Focused on Producers and ranchers.

Private Lands Public Wildlife (PLPW) Committee Meeting update: Druska & Jeff

Elk working Group update – Druska Kinkie, Revising State elk management plan. Druska applied to be on committee and was accepted, have met 3 times so far. Job was to create issues statement and will update the elk plan at the end of the process. Strong recommendation to review elk plan every 5 years.

Recreation Planning and Data collection update – Whitney Tilt & Jeff Reed
Summer data synthesis – first year. Feedback from stakeholder groups, project will continue, outreach will continue.

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Agency Updates:

NRCS TIP update, Weed Management – Dave Molebash

- Recruitment in the field
- @ 200k available for cost-share
- ID appropriate treatments
- Funding for 3 years of treatments
- Shooting for weed-free culture in the Valley
- Talking w/ FWP and FS to partner and collaborate
- Inform public
- Potential of Forestry TIP
- Looking for volunteers for inventory/monitoring

FWP, Michael Yarnall, Area Biologist –

- First CWD case in Park County (mule deer buck), not planning on CWD hunt like in other areas, want to work with landowners to increase sampling efforts and surveillance.
- If interested in getting #'s and survey reports email Michael
- Another round of antelope captures in the Valley, put out collars that were not deployed last year.

Josh Bilbou, MSU Extension –

- New agent
- Helping CWMA, mapping of Chico Grant, will apply again next year

Clint Sestrich, Fish Bio, Forest Service –

- Project on Eagle Creek in Gardiner Basin, support Cutthroat that are not hybridized, replaced culverts to provide access to more habitat (3 more miles), because the culverts were too big on a small stream.
- FS acquired land in Slip & Slide drainage, need to take hazard out of dams by reducing elevation, long term maintenance
- Curly leaf pond weed – AIS list. In the reservoirs, only population in the Upper Yellowstone, located in the upper watershed. Worked to de-water ponds, put water in fields, taking a variety of precautions, with treat water residual in ponds with herbicide next July.
- Looking at reinstating NRCS snoTEL site in Mill Creek
- Stream Table in schools (purchased by TU, FWP & AMB West), three part speaker series with 5th grade class.

Ashley Sites, Forest Fire Site Manager FS –

- Will work with Dave on Forestry TIP

Theresa Pospical, Park County Weed – new Weed Coordinator

John Lunzer, DNRC Hydrologist – Water monitoring draft almost complete

- Outreach around project
- Restoration on 6-mile

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Educational Outreach – Using digital technology to support outreach – Jeff Reed

ADJOURN 7:30



BACKGROUND: Through years of extensive information-gathering and discussion, stakeholders in the Upper Yellowstone River watershed have identified the need to better understand water inputs and outputs in the watershed (a water balance). Development of a water balance along with improved water monitoring is an essential tool to help build watershed resilience.

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PROJECT AREA, TIMELINE & PARTNERS: The project area extends from the Yellowstone National Park Boundary to the confluence of the Yellowstone and Shields Rivers. The timeline for this project is 2020 – 2023. Partners include MT DNRC’s Water Management Bureau in collaboration with the Upper Yellowstone Watershed Group, local citizens, NRCS, the City of Livingston, the Montana Bureau of Mines and Geology, Montana Fish, Wildlife & Parks, the National Park Service and the University of Montana Climate Office.

THE PROJECT GOAL is to develop a water balance model that can serve as a streamflow forecasting and management scenario simulation tool. The model will help the watershed community prepare for droughts and floods as well as understand impacts of *voluntary* water supply decisions at individual and watershed scales.

PROJECT DESCRIPTION:

Define a Water Balance: A water balance essentially records existing water inputs and outputs in the watershed. It provides a fundamental understanding of watershed hydrology that can aid efforts such as drought planning and guide voluntary water supply decision-making.

Improve Monitoring: This project will enhance existing water supply and water use monitoring by installing stream gages on tributaries; increasing monitoring of surface water temperature and precipitation; gathering groundwater data; and improving monitoring of soil moisture, wind speed and relative humidity. Data collection will focus on water use by sector at the watershed scale and will not examine individual water use. For example, data collection on irrigation systems will be grouped into total irrigation and individual irrigation system use will not be depicted in the water balance.

Run Predictive Management Scenarios: A water balance model can be used by the community as a tool to consider hypothetical (but realistic) changes in water supply and use and to weigh the outcomes of water supply decisions such as upgrading irrigation infrastructure or restoring a stream channel. It can also outline impacts from changes in water availability such as low snowpack or extended drought.

Forecast River Flow: Data from stream gages is currently used in other Montana watersheds to forecast future streamflow conditions. This is helpful in flagging future droughts or floods which could inform voluntary preparation on the part of individuals, the watershed group or municipalities.

HOW TO GET INVOLVED:

Local citizens and stakeholders are encouraged to get involved in the project in several ways:

1) Weigh in on the monitoring plan (monitoring locations, schedule, etc.) **2) Join** hydrologists in the field to measure water (starting in 2021); **3) Attend** Upper Yellowstone Watershed Group meetings for regular project updates and to offer feedback; **4) Contact** Sara Meloy, DNRC water planner, (406-546-3504; smeloy@mt.gov) or John Lunzer, DNRC hydrologist, (406-444-0504; john.lunzer@mt.gov) with questions, suggestions and for other ways to get involved.

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BENEFITS FOR: Upper Yellowstone Watershed Group

- Early flood and drought warning and data to support drought planning
- Data to help identify priority infrastructure improvement projects
- A tool to assess voluntary water supply projects (stream restoration, side channel reconnection)
- Modeling of possible future water supply conditions
- Ongoing tool development to fit changing group needs

BENEFITS FOR: Agricultural Producers

- Surface water measurements to help with irrigation: Stream gaging on tributaries and ditch and canal seepage tests (can determine return flow to the river and inform infrastructure projects)
- Data for public education materials highlighting the water supply benefits of agriculture
- Advanced warning of flood and drought conditions
- Data can help protect existing water rights by measuring impacts from nearby existing or potential water developments (e.g. neighboring ponds, future exempt wells, illegal diversions, etc.)
- Evapotranspiration (crop water use) data: Precise water requirements for crops, soil moisture and potential crop wilting point

BENEFITS FOR: Fisheries, Aquatic Habitat, River-Based Recreation and Tourism

- Enhanced water temperature and flow monitoring
- Improved understanding of hydrology of key tributaries – including ecologically important flows
- Streamflow forecasting for rafting/fishing conditions
- Advanced streamflow information for outfitter trip scheduling
- Early warning of potential river restrictions/closures

BENEFITS FOR: The City of Livingston and Local Landowners

- Better understanding of impacts from future developments like subdivisions and exempt wells
- New water meters for city irrigation wells
- Support for future city water planning and for currently ongoing source water protection planning
- Warning of drought and flood events

BENEFITS FOR: The State of Montana

- Improved water use and availability information to support basin water planning
- Opportunity to test various hydrologic models and tools that can support drought-related work across the state

Important Water Rights Note: *This is not a water right enforcement project.* DNRC's role in day to day operations that affect water distribution and the ongoing enforcement of water rights is limited. Montana District Courts are the primary legal authority for resolving water right disputes and enforcing water distribution actions in Montana.