Climate Resilient Rivers – Wildfire Ready Watersheds -Technical Advisory Meeting

5/30/2024

11am-12pm

Meeting Topic: Wildfire Ready Watersheds Process Overview and Values at Risk in Boulder and St. Vrain Watersheds

Attendees:

- Boulder County: Kevin Peterson, Jenn Keyes, Sarah Heerhartz, Kelly Watson, Jack Sheehan
- Boulder Watershed Collective: Preston Brown, Maya MacHamer, Kirin Riddell
- Colorado Water Conservation Board: Andrea Harbin Monahan
- City of Boulder: Cat McIntyre
- City of Longmont: Jim Kirck
- Colorado Water Conservation Board: Andrea Harbin Monahan
- Peak Stormwater: Derek Rapp
- St. Vrain and Left Hand Water Conservancy District: Jenny McCarty
- The Watershed Center: Deb Hummel, Yana Sorokin
- Town of Nederland: Andrew Bliss
- Trout Unlimited: Katrina Hettinger
- US Forest Service: Tracy Weddle
- Watershed Science and Design: Katie Jagt

Action Items:

- Deb and Preston will follow up on data outreach
- All review values at risk discussion notes and spreadsheet and send data layers to Deb/Preston as available

Meeting Notes:

1) Introduction – Deb provided a summary of the planning effort done thus far and gave an overview of the project goals and plan for next meeting.

    a. Deb reminded all about the next meeting to showcase modeling results will be held from 10am to 12pm on July 2 at the USFS Boulder Ranger District Office.

    b. Deb introduced all participants in the meeting both in person and online.

2) Hazards Analysis – Katie Jagt with Watershed Science and Design provided an overview of the wildfire ready watersheds program and focused on the post-fire impacts to values that is driving the project approach. Katie provided a summary of conceptual approach, which involves a combination of evaluation of values at risk through the lens of post-fire impacts. Ultimately the project evaluates susceptibility of values at risk associated with

post-fire hazards. Values include infrastructure, life/property, ecosystem service. Hazards include erosion, debris flow, sedimentation, water quality degradation. Where these overlap will result in priority actions.

3) Summary of Scope of work for the project was provided by Katie – data collection, data creation, values at risk assessment, post-fire flood hazard analysis, susceptibility analysis. Once susceptibility analysis is done, decisions will include either mitigate hazards (landscape scale treatment) and/or protect specific values (retrofit or replace infrastructure).

    a. Boulder Watershed Collective scope includes final recommendations to landscape scale hazard mitigation action, infrastructure protection/operations planning in post-fire scenarios, and fluvial hazard mitigation opportunities.

    b. The Watershed Center scope include final recommendations to stream restoration opportunities for site hazard mitigations and conceptual designs for select streams reaches.

    c. Katie showed examples of maps from similar projects depicting pre-fire mitigation could occur to limit burn severity in select areas as well as downstream fluvial process enhancement and infrastructure mitigation. This will be similar to the outcomes of this project.

4) Modeling Process Summary

    a. Hazards Analysis Summary– modeling data is being generated for the project (flooding inundation, fluvial hazard, debris flow). Project will take 5 separate hydraulic models and combine them to create cumulative impacts from fire effects in several watersheds. Once the model is combined, fire will be simulated in sub-basins. Changes in flow will result from post-fire runoff scenarios. The difference between them will help inform inundation, erosion/ deposition patterns and values at risk that are downstream, sometimes far away from the burn sites. Fluvial hazard zone is area of potential impact from debris/erosion, often larger areas than inundation.

    b. Mapping fluvial hazard zones will delineate areas currently *not* mapped, primarily in the foothills and plains transition areas. Lower elevations have already been modeled.

    c. Wright Water Engineers will complete the debris flow analysis which will inform hillslope erosion susceptibility. Data gap exists for hillslope erosion data in Gilpin County. Colorado Geological Society may be completing some hillslope erosion assessment that could be incorporated into the debris flow modeling.

d. This combed modeling result will be available in a real-world post-fire landscape to evaluate risks and hazards following a real-world post-fire event quickly after a fire.

5) Values at Risk Data Summary
   a. Katie went through the spreadsheet of all the data, what's been collected, and what still needs to be found.

   b. Discussion of data sourcing, additional values to consider, and existing data gaps followed and comments/suggestion from the Technical Advisory Team are below.
      1. Jennifer Keys – mentioned CDPHE "outstanding" waters that may differ from CPW Gold Medal Waters and sent link in chat
         - CDPHE Outstanding Waters https://drive.google.com/file/d/1Fz8bWEWMhpxghWDZsV_qsgw9kItaPAXK/view
      2. Sarah noted that data from BCPOS property inventory of springs, wells, and wetlands on BCPOS lands is available and can follow up with these data. Katie suggested that widespread watershed-wide data is best, but can still be provided in the table.
         - Jenn suggested reaching out to Erin Dodge, Carl Job for wells and septic data or send full request of data needs to GIS specialist Dave Watson:
            a. Dodge, Erin <edodge@bouldercounty.gov>
            b. cjob@bouldercounty.gov
            c. Dwatson@bouldercounty.gov
      3. Kevin Petersen suggested that municipal water can be conveyed through ditches that may not be highlighted as municipal, but deliberate exploration with water supply companies may need to be considered.
         - Jenn noted that Darren Back with Boulder County will be a good contact for data related to water conveyance systems.
            a. dbeck@bouldercounty.gov
      4. Jennifer Keyes suggested Dave Watson, Public Works GIS manager, as a source for stormwater detention data but is focused mostly on municipal sites.
      5. Kevin Petersen will provide KICP water quality monitoring sites.
      6. Deb clarified if we need updated septic data and Katie said yes. Further discussion revealed that septic data could be presumed with building footprints in unincorporated areas.
      7. Katie suggested the need for home structure and driveways GIS layers for Boulder and Jefferson County.
         - Jennifer Keyes suggested contacting Dave Watson GIS specialist for BOCO Public Works to get data. She provided the contacts for the County in the chat.
         - Kelly provided BoCo Building Footprints: https://opendata-bouldercounty.hub.arcgis.com/datasets/648641d4e2a94a7abb967d507814e959_0/explore

- Maya MacHamer suggested that communications infrastructure was likely already collected in the CWPP process for Gilpin County. Jenn suggested contacting Boulder County Office of Disaster Planning for additional communications infrastructure.
    a. Boulder County also has an office of Disaster Management that I wonder if we need to involve a little more in this effort. There website is https://boulderodm.gov/

8. Katie suggested to the group to send data for trails – need data from all local sources (County, Cities).

6) Next meeting is set for July 2 at 10am at the US Forest Service Boulder Ranger District Office.

7) Meeting Adjourned