LEFT HAND
watershed center

Board Minutes – March 16, 2021

Attendees

1. Jessie Olson
2. Jan Kleinbord
3. Roger Loving
4. Ken Lenarcic
5. Terry Plummer
6. David Hirt
7. Chris Smith
8. Andrew Notbohm
9. Deb Hummel
10. Gabe Tuerk
11. Greg Hanson
12. David Levitt
13. Treste Huse
14. Mary Boardman
15. Emily Rodriguez
16. Gerald Blackler
17. Audrey Butler
18. Erica Crosby
19. Dee Walsh (sp?)
20. Monica Bortolini
21. Jerome (last name unknown)
22. Sharla Benjamin
23. Nelson Holton
24. David Levitt
25. Eric Smith
26. Barbara Luneau
27. Sue Schauffler
28. Kathy Peterson
29. Roger Loving
30. Mark Schueneman
31. Yana Sorokin
32. Karen Conduff
33. Annie Noble
34. Sean Cronin
35. Alex Tennant
36. Chuck Oppermann
37. Rod Schone
38. Art Link
39. Ryan Rudolph
40. Joy Jenkins

Welcome and Introductions

- Chris S called the meeting to order at 2:02 and went through introductions.

Flood potential following wildfire

1. **David's Presentation**

- David provided a presentation on fire recovery. Showed burn severity and watershed map. Focused on Left hand Creek portion. Talked about potential threats: hillslope erosion, debris flows, and increased runoff and stream flows. Showed and discussed maps of where threats may impact the watershed (e.g. debris flows).
    - Jessie asked if the increased risk related to stream flows is temporary – so once vegetation is established will the 100-year flood event go back to what it was

before? David responded that risk decreases after two years. Gerald explained that first year is the biggest increase in flows and we can expect 5-7 years for full recovery to pre-fire flows.

- David introduced the different potential treatments. Mulch is recommended by research as the best approach to stabilize soils in the first year. Noted that seeding is less effective. Showed maps of potential mulching areas and fire severity. Discussed application approach. Also showed sediment capture techniques and larger area proposed for sediment capture.
- David walked through next steps. These include contracting aerial mulching, design and construction of sediment catchment areas, continue to ID and fund needs, implement on-the-ground projects, and data collection and adaptive management.
- David showed photos after the Fourmile fire and recovery. Emphasized that understory vegetation is important for recovery.
    - Jessie added that we received notice from the Community Foundation Boulder County to address many of the unmet needs, which also includes Left Hand Fire.
    - In response to Gabe's question, David explained that it's cost effective to fly the mulch with helicopters rather than using tree mastication treatments on site.
    - In response to Sean's question, David said that bids from contractors were generally in the ballpark or less compared to estimates.
- David added that an early warning system is also being funded with EWP funding.
    - In response to question from Deb, David explained that monsoon season will have the biggest impact compared to recent snow due to the slow melting and the cover with the recent snow on the ground. Gerald clarified that the model just shows the first year and multipliers get reduced as vegetation recovers. Also added that problem areas will become evident more quickly from the snowmelt.
    - Jan asked if there was concern about the streambed, hillsides, or both? And if recent restoration will be helpful? Jessie said that restoration will be helpful but flows will be increased. Suggested that we circle back to the question after Andrew's presentation. David added that if the new bridge puts Streamcrest neighborhood in a better position.

2. Andrew and Greg's Presentation

- Andrew with Boulder Office of Emergency Management provided presentation. Shows map of Geer Canyon and Central Gulch. Noted upcoming public meetings. Shows specific areas of concern: (1) South St. Vrain polygon, (2) Geer Canyon polygon, and (3) Streamcrest and East of 36. Introduced notification system for flashflood advisory, watch, and warning system in these areas.
- Greg with National Weather Service in Boulder provided presentation. Discussed actions after fire/before flood and during flood. Goal is lead time for people based on monitoring radar data and rain gauge data. Problem is storms are short-lived and lead time might be minimal or not at all. Flooding can occur as the rain is falling for a short storm (e.g. 15 min). Discussed what we can do – be informed by knowing the forecast, having a way to receive warnings (e.g. weather radio, FEMA app, etc.), being aware of

environmental cues (e.g. thunderstorm upstream or rising water), and a plan for evacuation. See slides for details.

  - Jan asked for clarification about climbing to safety when the road is unsafe. Greg responded that you can move to the upper level of house or opposite side of the road away from stream, but it depends on location. Andrew suggested another meeting to continue the preparation/awareness conversation and also invited people to Burnscar Spotter training is on April 20th. Jan asked if Greg can recommend one top notification option and Greg recommended that having all is best but suggested the Boulder County 911 notification and NOAA Weather Radio. Andrew elaborated on options with each notification method.
  - Karen asked about the culvert under Left Hand Drive at the bottom of Geer Canyon and if the small size is a concern. David noted that there is currently no proposal to enlarge the culvert. Added that it survived the 2013 flood. Others in the Boulder County Public Works Dept noted concerns with adjacent crack willow trees but not the culvert itself. Gerald provided clarification about modeled cfs to identify risks, stating that 1,000 cfs is not imminent. Gerald offered to investigate what Geer Creek was flowing at during 2013 floods.

- Jessie concluded that there are other community meetings available for additional information and Watershed Center will email it out to our listerv and newsletter.

How does the Left Hand ditch system work? (Presentation by Terry Plummer of the Left Hand Ditch Company)

- Terry noted Left Hand Ditch Company was established in 1856 and showed birds eye view of the entire system, zooming into upper system.
- Reviewed LHDC facts – see slides. Explained Stock Book, as well as location and legal database base. Anything about the ditch company over the last 100 years is stored in a comprehensive database.
- Showed how delivery and storage is tracked in database. This is done based on decrees and priorities. Explained how much water is lost during the process.
- Explained how computer monitoring helps shareholders with tracking.
- Explained they are a "water short company," meaning without SSV and CBT shares they can't keep the system running. Explained that 40% of the water is lost because it comes down the mountain at the wrong time. Explained that sometimes a call on the system (even from Nebraska) means they can't store water.
- Described variables that impact yield: wind, heat, cloud and tree cover, and dryness all impact evaporation. Also ditches not used get dry and cracked.
- Described Daily Operations: How is water issued? Water can only be issued when it is physically in the lake. Water issues increase over the season as the lakes fill up (snow melts). Storage issue = what's in the reservoir. Creek issue = what's coming down the mountain. Farmers pay attention to issues to determine what they plant.

- Three reservoirs: Lake Isabelle, Left Hand Park, and Gold Lake. Isabelle can fill Gold Lake, Lake Ditch, Allen's Lake, and rest of the system. Terry went on to describe which ditches can be serviced by which reservoirs. Sees slides for details.
- LHDC Goals: Keep the water as high as possible for as long as possible. Use decrees as wisely as possible. Mange the water to last as long as possible. Exchange as much LH water as possible using C-BT water out of Carter Lake. Prepare for next year by storing winter exchange water and any excess for initial issues on April 1st. Carryover any unused C-BT for the next season.
- Maintenance and Upgrades: Ongoing and necessary. E.g. Currently adding new pipe to Allen's Lake filler canal because ditch is collapsing. Typically spend $75K/year doing maintenance and this will likely be doubled with the recent wildfires. Described procedures for crews that monitor key locations continuously when flood conditions occur or there are expected flood conditions.
- Hazards include wildlife and Terry often needs to run ditches at night due to aggressive recreationists.
- <u>Questions:</u>
    - Gabe asked about when computer stations were introduced and what is measured at the stations. Terry said this was a state requirement and is still in progress. They measure CFS on the ditches and uploads it every 15 minutes. Lakes are uploaded every 24 hours. Noted that expense is high and maintenance is constant (calibration, pipe clogs, etc.).
    - Karen asked is there's a way for everyone that owns shares to work together to guarantee that there is constant flow in the creek to keep the fish alive. Terry noted that currently there is not because demand is outweighing supply but that LHDC is having conversations with the Watershed Center to explore solutions.
    - Chuck asked is there's someone he should call if he finds debris gathering upstream of the Strath street bridge. Terry said construction crews are continually walking ditches and looking for problems, and also assessing aerially 1-2 times per season. Jessie added that there is a Boulder County number for bridge clogging issues and she will send it to Chuck.
    - Kathy asked if Terry can explain the source of his revenue for running the system. Terry explained that it is through assessments, which are established at the stockholders meeting. $30 per share or $200 minimum. They use that to generate revenue for maintenance, admin, loan debt, salary, etc. Katy asked if there are grants for computerized monitoring. Terry said SVLHWCD provided resources to cover some costs of computers. Added that they are looking into potential help with grants.
    - Deb asked if the Gold Lake is primarily a headwaters fill reservoir or does he store water from the St. Vrain. Terry said he stores water.
    - Chuck asked about Brainard Lake and Terry explained that he runs water though Brainard but he doesn't know who owns it.
    - Sean noted that LHDC is a high functioning model of ditch companies across the state, in big part thanks to Terry. All agreed that we are fortunate to have Terry and his support for these conversations.

- Big thanks to Terry for the great presentation!

Adjournment

The meeting was adjourned at 4:05 pm.