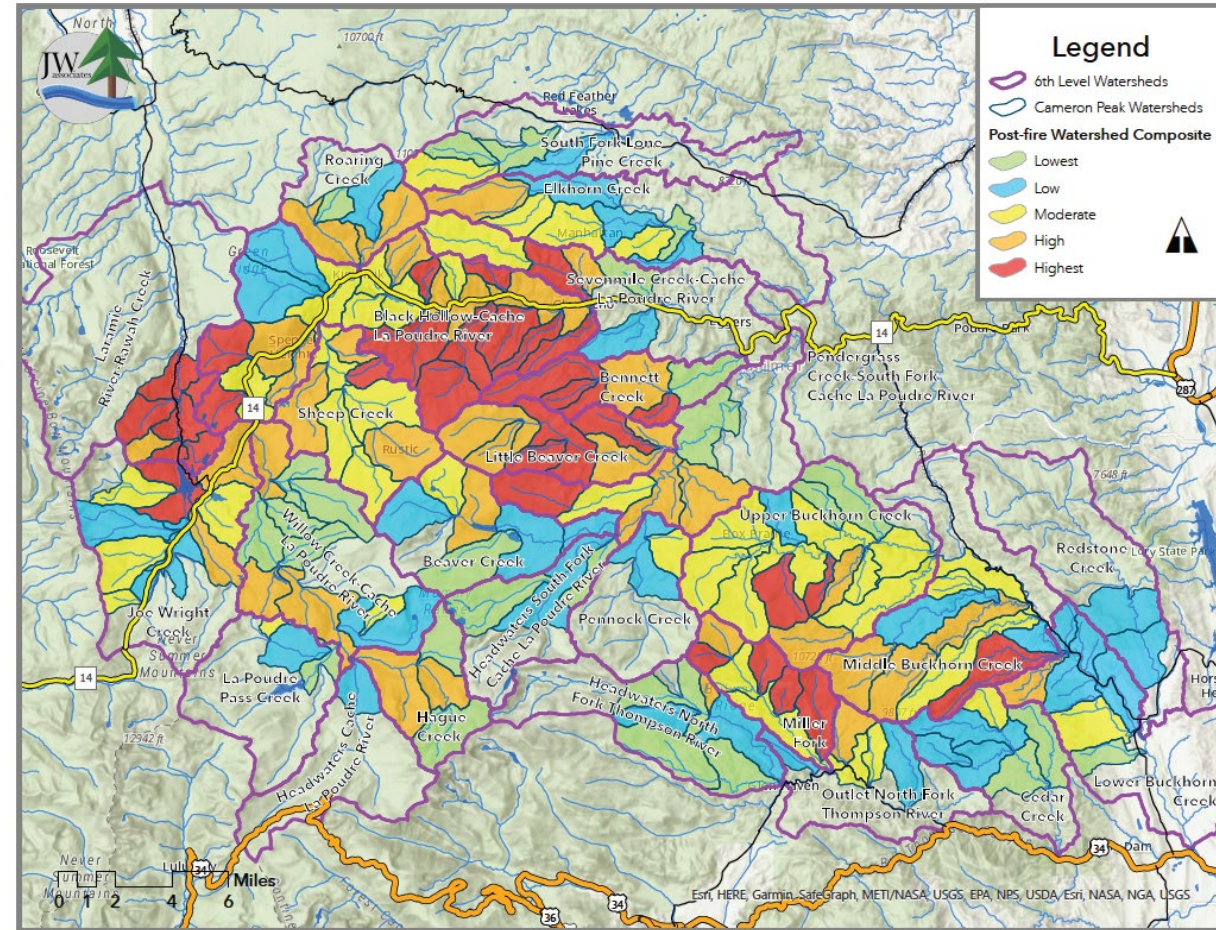


Cameron Peak Fire

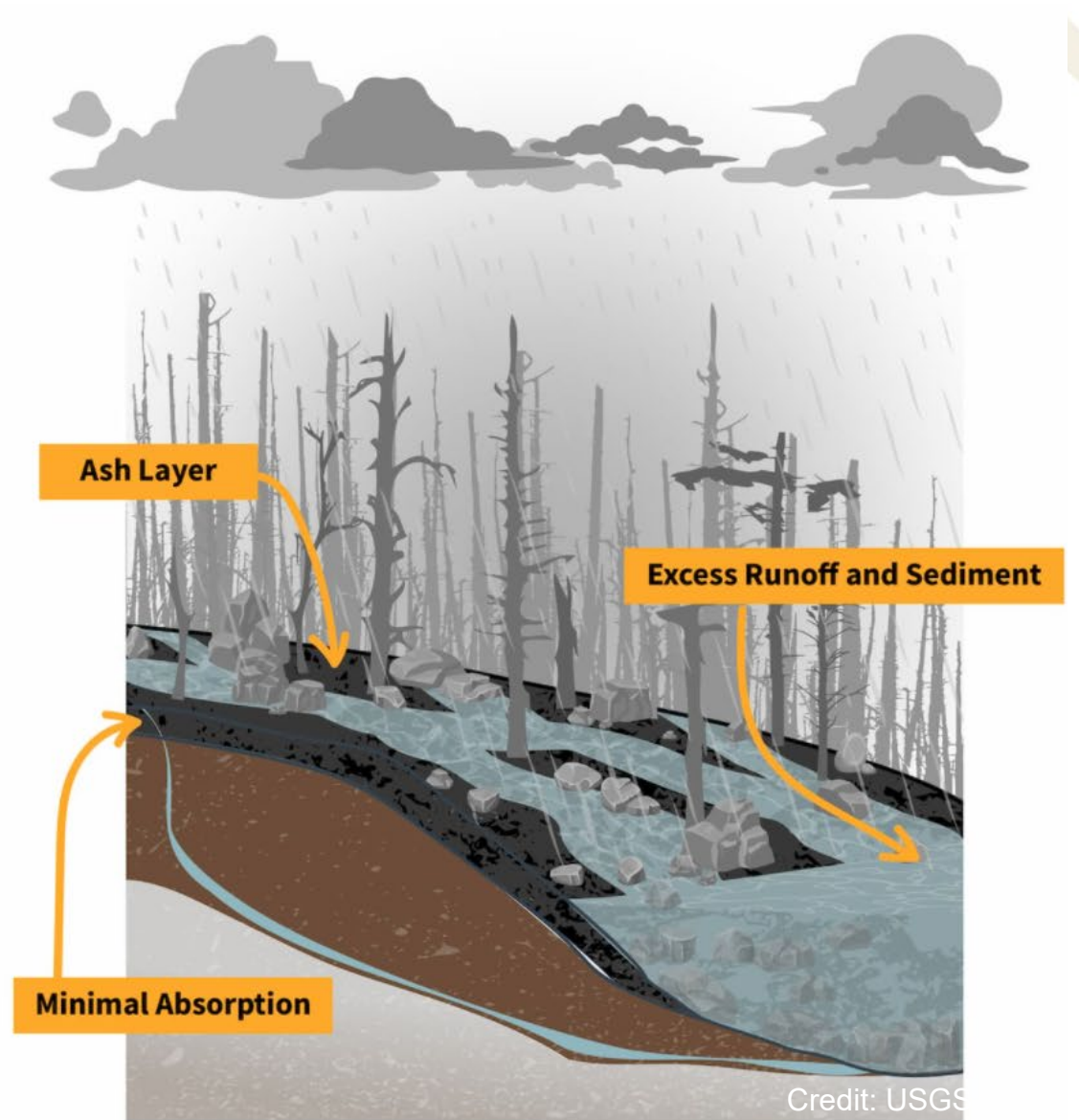
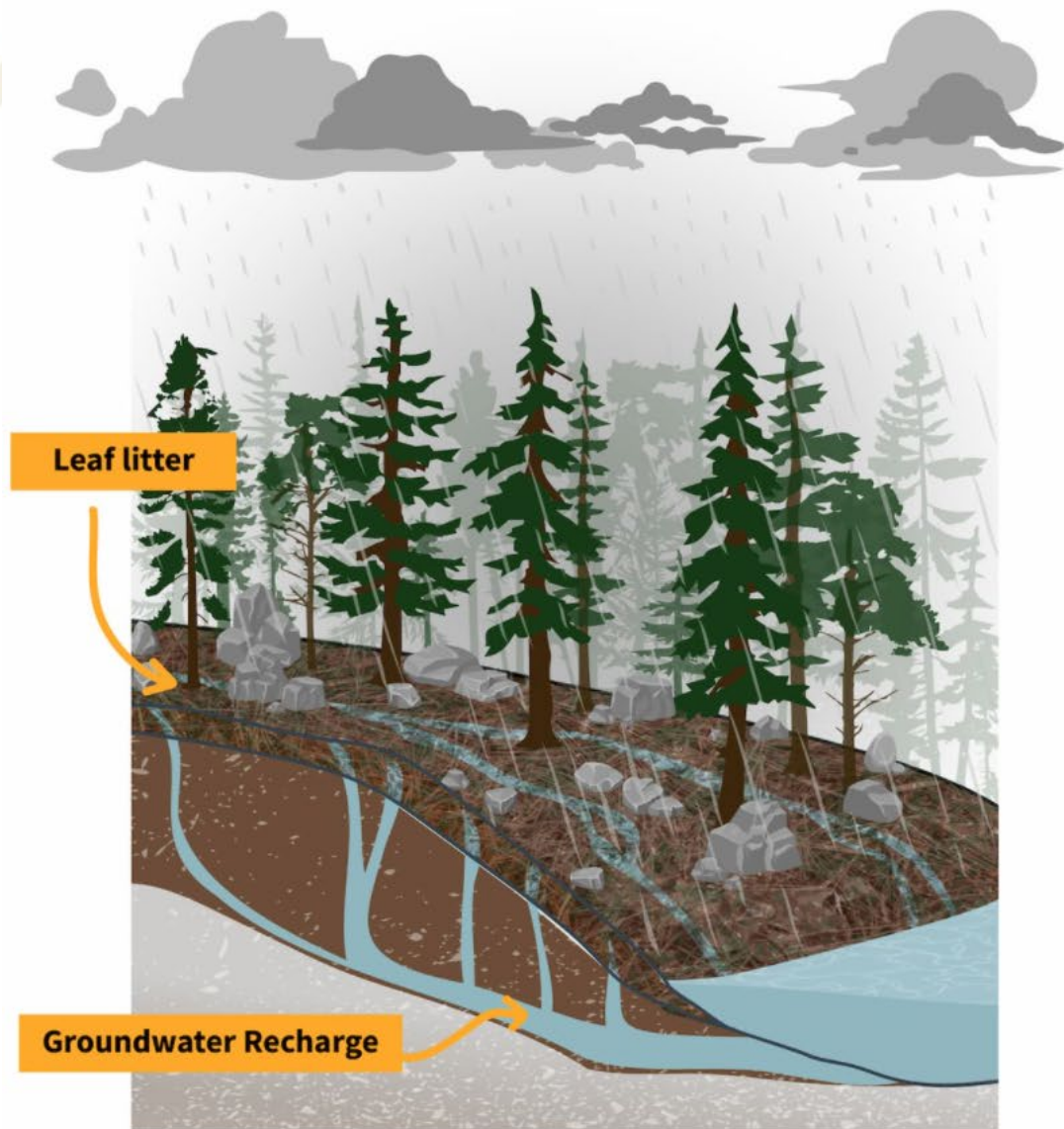


Cameron Peak Fire

- Largest CO wildfire
- >208,000 acres
- >90% on Forest Service lands
- >50% are medium to high burn severity
- All 4 of Greeley's watersheds affected
- In addition to East Troublesome Fire, >1 million people's water supply is at risk



How Wildfires Change Watersheds



Credit: USGS

Impacts for municipalities

Water Quality

- All 4 of Greeley's watersheds were affected
- Increase in nutrients
- Excess nutrients drive algal blooms growth in reservoirs
- May remain elevated 5-15 years

Source Water Quality	Treatment Challenges
Increased nutrients	Blue green algae Taste and odor compounds Cyanotoxins
Increased turbidity	Difficult to remove during treatment
Increased TOC, alkalinity	Disinfection by-products
Increased Sediment	Sediment-bound pollutants Infrastructure Damage
Hardness	Mineral deposits

Source: Richard Thorp, City of Fort Collins

Impacts for municipalities

Water Quality

- 10+ increase in sedimentation
- Unable to treat at times
- Increases treatment costs
- Increased solids management process
 - More dry, hauling and disposal



Impacts for municipalities

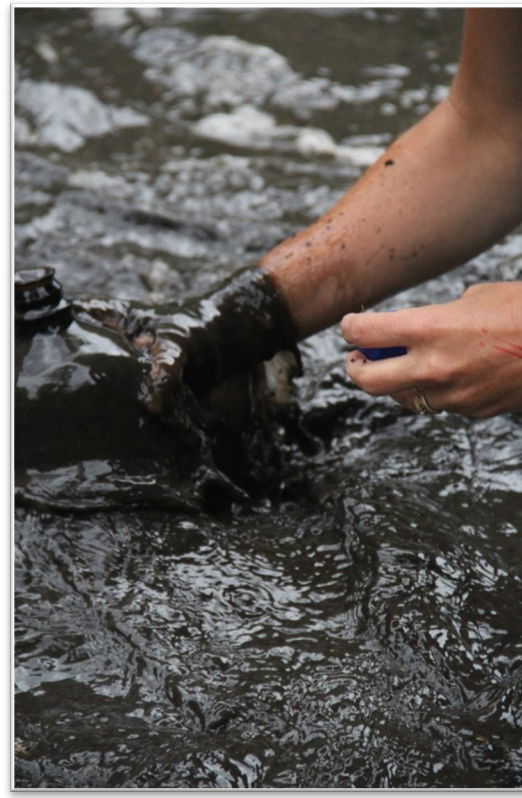
- Expected after snowmelt and precipitation events
- Greeley's diversion was off 40 days which equates to **~960 AF of water**
 - Supplies for 3,900 household annual indoor supply



Source: Coalition for the Poudre River Watershed



Source: City of Fort Collins



Source: City of Fort Collins



Impacts for municipalities

Reservoirs

- 5 reservoirs affected
- Sediment and debris delivery to reservoirs
 - Loss of capacity
 - Sediment delivery to river from releases
 - Inability to operate
 - Didn't fill 2 reservoirs this past year
 - Risk to high hazard dams
 - Increase in maintenance



What's been done?

- Various proven mitigation methods exist
 - Mulching
 - Aerial (20-60% slopes)
 - Hand
 - Mulched ~6,000 acres



What's been done?



- Cost \$75/minute
- Each load covers 1/4 acre
- Flight times between drops=2-3 minutes
 - >\$100,000/day
- Lots of on ground personnel

What's been done?

- Sediment traps/basins at reservoirs
- Wattles
- Debris traps
- Directional felling
- Log checks



What's been done?

- Trade with a local ditch company
 - When water quality degraded, ditch company took delivery of our direct flow water rights
 - In exchange, Greeley received their water rights in Horsetooth Reservoir which can be delivered directly to our treatment plant
 - Worked 90% of the time
 - Required State approval through a Substitute Water Supply Plan



Funding Challenges

- Mitigation is expensive!
- >\$60 million gap



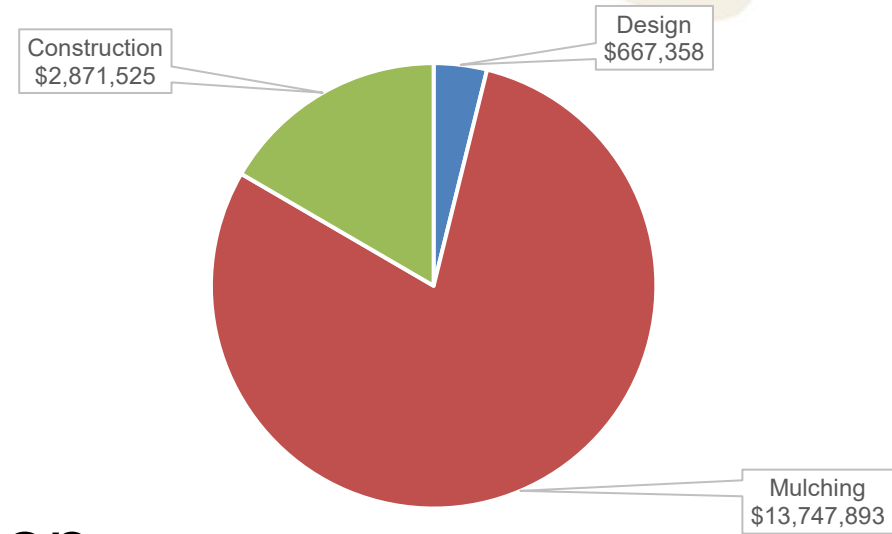
Funding Sources

- Emergency Watershed Protection Program
 - NRCS reimburses recovery expenses
 - 20% cost share
 - Policies limit use on federal lands
- Arapaho-Roosevelt National Forest
 - USFS severely underfunded
 - Infrastructure bill
- Colorado Water Conservation Board
 - Grant funding
 - 100% cost match (broadly defined)
- FEMA (limited application)
- Local dollars



Current Funding

- ~\$16.7 million
 - \$5.9 million in Emergency Watershed Protection (NRCS)
 - \$10.8 million in CWCB funds
 - \$500,000 from NOCO Community Foundation
- Greeley and Fort Collins committing \$5 million
 - Local dollars used to leverage federal and state funds



Lobbying Efforts

- Intensely lobbying for additional Federal and State funding
 - Hired federal lobbyist
 - Engaging federal and state delegates
 - Engagement with USDA at D.C. level
 - Coordination with Northern and Fort Collins
 - Hosted tour of burn area



Next steps

- Complete design of 5 sites
- Work with USFS and NRCS on approval for 2022 work plan
 - >18,000 acres of mulching
 - Point mitigation projects to complement
 - Wilderness areas? Requires Minimum requirements analysis and application
 - Participating agreement
- Get more money!



Questions?

