

MINUTES FROM FRONT RANGE ROUNDTABLE Q2-12 QUARTERLY MEETING



Date of meeting: Friday, May 4, 2012, 9:30 am – 3:30 pm

Location: The Federal Center at USGS

Date minutes posted: August 16, 2012

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Meeting presentation: http://www.frontrangeroundtable.org/uploads/Roundtable_Q2-12_mtg_presentation_050412_ks_v3.pdf

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ACKNOWLEDGEMENTS

Thank you to Chelsea Gunsalus who took notes for these minutes. Thank you also to the USGS for hosting us in their facility and to Jenny Briggs of the USGS for bringing coffee and bagels. Finally, we wish to profusely thank Russell Graham from the Rocky Mountain Research Station for visiting us from Wyoming to make his presentation on the Fourmile Fire Report.

ATTENDEES

At the Front Range Roundtable Quarterly meeting in Lakewood, Colorado on May 5, 2012, 48 members and guests participated. If you attended the meeting but your name is not recorded in the list below, please send an email to Gali Beh at gali@behconsulting.com.

Table 1. Roundtable Meeting Attendees, May 5, 2012—Lakewood, Colorado

Full Name	Organization
Rob Addington	Colorado Forest Restoration Institute
Richard Alper	Private
Gali Beh	Beh Management Consulting, Inc.
Jenny Briggs	US Geological Survey
Peter Brown	Rocky Mountain Tree-Ring Research
Jonathan Bruno	Coalition for the Upper South Platte

Full Name	Organization
Glenn Casamassa	US Forest Service, ARP
Patty Champ	Rocky Mountain Research Station
John Chapman	Southern Rockies Conservation Alliance
Tony Cheng	Colorado State University
Dana Coelho	Colorado State University
Casey Cooley	Colorado Division of Parks and Wildlife
Megan Davis	Boulder County
Yvette Dickinson	Colorado State University
Cindy Domenico	Boulder County
Richard Dziomba	Blue Knight Group
Jonas Feinstein	Natural Resources Conservation Service
Jack Ford	US Geological Survey
Hal Gibbs	US Forest Service, ARP
Kris Gibson	Gold Hill Fire Protection District
Russell Graham	USFS Rocky Mountain Research Station
Chelsea Gunsalus	US Forest Service, ARP
Brett Haberstick	Sunshine Fire Protection District
Joseph Hansen	Natural Resources Conservation Service
Sarah Hines	Rocky Mountain Research Station
Eric Howell	Colorado Springs Utilities
Jim Ignatius	Teller County
Jon Johnson	Colorado Renewable Resource Cooperative
Elsha Kirby	US Forest Service, ARP
Kathleen Krebs	Clear Creek County
Paige Lewis	The Nature Conservancy
Susan Linner	US Fish and Wildlife Service
Ryan Ludlow	Boulder County
Jerri Marr	US Forest Service, PSICC
Mark Martin	US Forest Service
Sara Mayben	US Forest Service, PSICC
Mike McHugh	City of Aurora
Patrick McLaughlin	CDPHE
Don Moore	American Planning Association
Pam Motley	West Range Reclamation, LLC
Jill Ozarski	Office of U.S. Senator Mark Udall
Brad Piehl	JW Associates
John Ring	Bureau of Land Management
Julie Schaefers	US Forest Service
Kendall Slee	Beh Management Consulting, Inc.
Cody Smith	Colorado Renewable Resource Cooperative
Mike Smith	Colorado Renewable Resource Cooperative
Ben Wudtke	Colorado State University

REVIEW OF ROUNDTABLE VISION AND BACKGROUND

Speaker: Gali Beh, Roundtable Facilitator

- The Roundtable started in 2002 after the Hayman fire (which was only a quarter of the land that burned that year). Fire risk and challenging forest restoration problems created a need for more diversity and stakeholder groups within the Front Range Fuels Treatment Partnership. The Nature Conservancy and The Wilderness Society were critical in getting more diverse stakeholders involved.
- A report was published in 2006 and the Roundtable has been working to implement the vision for the partnership ever since.

- The Roundtable defined three forest ecosystems: subalpine, upper montane and lower montane. Lower montane is at 6,000-8,000 feet in elevation and consists mostly of ponderosa pine and Douglas-fir. The lower montane was the only forest ecosystem that met the three criteria for action (historical range of variability, big departure from variability, possibility of spread very high). The Roundtable addressed community protection needs in all ecosystems.
- Values at risk include people, water & safety, economic and natural values at risk.
- The mission is to serve as a focal point for diverse stakeholder input into efforts to reduce wildland fire risks and improve forest health through sustained fuels treatment along the Colorado Front Range”. 1.5 million acres of forest have been identified for treatment, 800,000 of those acres are in the lower montane which need ecological restoration. If treated, 400,000 of those acres can include fire risk mitigation and ecological restoration together.
- Treatments were mapped in 2006 and continue to be mapped to determine if they are taking place where the Roundtable identified priorities.
- Successes: Launching of Woodland Park Healthy Forest Initiative and CFLRP grant award. Long term stewardship contracts, biomass utilization, CWPPs, and policy implementation.
- Recommendations: The Roundtable established 4 goals with 10 initiatives; progress has been made on all of them except for one on “changing local policy to limit fire risk in WUI”.
- 2011 accomplishments: West Boulder County Healthy Forest Initiative, CFLRP monitoring plan published, monitoring team held field trips, BUSS talking point workshops for definitions, toured Fourmile site with over 20 elected officials, West Boulder County Healthy Forest Initiative area field trip, led coalition to D.C. to present Front Range issues to staffers, SM team started in November, and WUI policy team launched to make progress on policy initiative.
- Goals for 2012:
 - Executive team - Lead policy initiative team, fundraise at least \$50,000
 - IM Team – Working with West Boulder County Healthy Forest Initiative to plan and attract funding. Collecting data on treatments that have taken place since 2009
 - O&P-working with policy issues
 - SM team – NFF funding requires monitoring obligations
- Roundtable is decision making body

SOUTH RAMPART LANDSCAPE LEVEL NEPA PROCESS ON PSICC

Speakers: Paige Lewis, Sarah Mayben, Jeff Underhill

- **Background:** As part of the CFLR project, the forests are dealing with implementing projects and looking at NEPA. The way NEPA projects have been done in the past isn't necessarily appropriate for what we are trying to accomplish. A project is being developed on the PSICC north of Woodland Park this summer and into next year. An adaptive management principle would be ideal because it provides the ability to learn and apply what we are learning from research, which can improve on the ground management. Current NEPA decisions emphasize hazardous fuels reduction, but to a lesser extent, forest restoration and lack specific desired condition statements for restoration of different forest vegetation types occurring on landscape. This hinders adaptive mgmt.
 - Adaptive NEPA recognizes uncertainty and addresses uncertainty through learning: we can learn as we implement and from monitoring and research. Adaptive NEPA allows units to change projects on the ground and implement information that has been learned instead of focusing on what we're learning right now. Treatments should allow for large openings in lower montane ecosystems; some should be larger than

- the ½ acre allowance. Larger openings can be permitted if we are learning and applying these design criteria together.
- Adaptive NEPA allows units to modify on the ground actions but it is uncertain how it looks on paper. Range management has decisions that say “desired condition” and allows for flexibility. Forest treatments are less flexible in reference to NEPA.
 - The proposed project is located on the Pikes Peak Ranger District and is 67,000 acres. Access is through the South Rampart Range Road, is it a 5th level watershed at 6700’-9700’ in elevation. There is a mixed level of consensus about lower montane treatments, and we can come to desired conditions more easily. This project is higher in elevation; the NEPA process will require consensus on desired condition for upper montane.
 - The project area has an estimated 57,000 acres of forest cover and 70% is classified as warm, dry, ponderosa pine, Douglas-fir, and mixed conifer with a closed forest canopy cover. The intent is to open up more of the canopy.
- **Process being considered:** Pull together Roundtable members to develop a recommendation: look at project boundary and refine it. Define desired conditions of forest vegetation types in project area (if we can get to consensus of what that looks like) and recommend treatment types and locations (done before the unit begins NEPA). The recommendation would be considered by the Pikes Peak District Ranger who is the deciding official. The recommendation will be used to determine if the desired conditions can feed into the proposed action or if they are an alternative to the proposed action. Then, the unit would start the adaptive NEPA process and initiate the formal adaptive NEPA process.
 - **Timelines:** If we begin the process this summer, the unit hopes to get to the recommendation phase by next spring (2013). The NEPA process takes about 2 years, so the unit is hoping to implement in 2015 for the end of the CFLR project
 - **Group:** Mix of people from industry, user groups, Roundtable as a whole. SM group tends to be focused on environmental factors, while industry needs to be present to say what is feasible. The team that would create a recommendation would require a representation of the same diversity as is in the Roundtable. If Roundtable members commit to being in the group, it will be a long process that will require a time commitment.
 - (Paige) When TNC started talking with Sara about it, involvement was the main concern. Non-government groups are frustrated with off-the-shelf NEPA projects that made it difficult for forests to adapt to recommendations from the Roundtable. Desired conditions have been debated within the SM team and this will provide an opportunity to look at questions on a more manageable scale and to address big scale questions that the Roundtable have been facing on a more manageable landscape. The group can look at different treatment scenarios, desired future conditions, etc. TNC has been involved in convening these kinds of groups in other parts of the country and Paige is willing to assist in getting someone that can facilitate group. Other stakeholders in the geographic area that would have interest and commitment to this would be invited to participate as well. This is more of an integrated approach looking at wildlife and watershed values in addition to restoration and treatment. There will be time commitment to participate in meetings and go to site visits. If there is a group of interested people, Sara and Paige will work on a more formal structure and proposal. The forest can’t convene this type of group because it is prohibited by policy – the group will provide recommendation because the Forest Service cannot.
 - This group provides an opportunity to work through issues on SM team and CFLR group

- (Sara) This is a collaborative opportunity, on the ground, in a manageable amount of land. The PSICC is getting close to making a selection by the end of May for its vacant District Ranger position – the unit is looking for someone who understands where we are heading as far as adaptive NEPA. The PSICC considers working with partners as a big part of the selection for the District Ranger position. This is a way to try something on a small scale and determine what to do with it; it all depends on those that are involved. District personnel will be engaged with group in the process, so when the ranger arrives, he or she will be participating to the extent that they are able. The Forest Service is working within a similar context across the country. There is interest at the national level to look at innovative ways to make the NEPA process more effective. Categorical Exclusion is not applicable to this project because it is too big. The project could include timber sales, stewardship contract, watershed restoration that involves equipment putting in culverts or barriers, (there are a number of possibilities).
- Industry and equipment operators are critical to the process.
- TNC will move forward if don't hear resounding No's – tell Sarah if you are interested in participating. Initial meetings will begin in July or August.
- The Forest Service still has ability to use CEs, but there are some additional steps

EXECUTIVE TEAM UPDATE, FUNDING AND PRIORITIES FOR NEXT FISCAL YEAR

Speaker: Gali Beh

- The Roundtable is having funding problems – overspending and under-fundraising are causing problems. The Roundtable costs almost \$47,000 each year to operate with an 8% overhead charge to ARP Foundation. The fundraising goal is \$50,000; we are \$4,000 short this year. ARP Foundation hasn't received any funding this year - \$11,000 hasn't been deposited. The ARP Foundation paid Beh Consulting out of funds without receiving money from the Roundtable.
- The Roundtable lost funding sources; contributors reduced funding levels, while some new funding sources contributed. The total amount of funding decreased \$2,000 from last year. The Roundtable is supposed to spend <\$4,000 each month. In April, we brought the budget down to \$3,000. Overspending occurred early in the year which can be attributed to the Fourmile Fire field trip, the D.C. trip, SM Team start up effort, and fundraising work.
- The Roundtable has spent \$50,000 to date, \$4,000 of which needs to go to the ARP Foundation. The Roundtable needs \$54,000 (as of April 30). There is a \$7,500 funding gap and if the Roundtable wants to go forward using Beh Consulting for May and June at the same level of work as in the past, it will need another \$6,500 (need \$14,000 to finish year).
- The Roundtable needs to decide as a group what to do next year.
- In order to reduce spending, the following will occur:
 - Paige Lewis will coordinate executive team
 - SM Team - Kendall and Gali will continue to work with
 - BUSS Team – Craig Jones will coordinate through contract with CSFS
 - WUI policy team – Megan will coordinate
 - Outreach team will merge with WUI policy team
 - IM Team:
 - Jim Webster and Megan Davis will coordinate Western Boulder County Healthy Forest Initiative

- Need volunteer for mapping
- Roundtable members can contribute by maintaining contact list, getting coffee, hosting meeting, sending out e-mails, website updates, team meeting scheduling, meeting host, and note taking at team meetings
 - CUSP can take over as fiscal agent instead of ARP Foundation at 3% overhead instead of 8%.
 - Challenge grant from TNC – willing to give additional \$2,000 if can raise \$4,000 from Roundtable.

Discussion

- End of federal fiscal year is time that federal agencies might have more money available as opposed to during the summer
- Aurora Water will contribute \$1,000 to Roundtable
- CRRC will explore e-mail coordination for Beh Mgmt Consulting
- Roundtable often puts too much on facilitator once it gets a good one; opportunity to think about how we manage ourselves, what can we take on?
- A small group will determine task assignments for Roundtable members and the level of funding that is required before new fiscal year begins for Roundtable (Mike, Hal, Megan, Jon Johnson, Cindy Domenico, Jenny, Tony). The group will come up with a proposed budget and strategy for next FY. This needs to be determined by mid-June.
 - Funding from TNC and CSFS will kick in for Roundtable on July 1
 - Federal budgets have made it more difficult to raise enough funding. The Roundtable needs to be more accountable for responsibilities and spending. Need to track the budget for Roundtable closely
- (Richard Dziomba) There is a fundraising event occurring on May 31 with the Governor and other elected officials. This is a contract with Compass Bank to raise money – we are willing to share funds with other non-profits besides the Blue Knight Group. We are exploring commercial funding and internships to take care of needs which will gain support from state elected officials because of the state’s initiative to “put college students to work”.
- Reduce focus area and find a niche for the group (Consider this for next fiscal year planning)? Focus Gali’s time on complex tasks instead of note taking and e-mail distribution; develop job descriptions
- This FY – Have Beh Mgmt focus on SM team and leave the rest to Roundtable members to pick up. \$7,500 must be raised to fill the budget gap. \$4,500 will still be needed after TNC and Aurora Water’s contributions.
- The funding call letter will be redistributed

SCIENCE AND MONITORING (SM) TEAM

- **SM Team Goals for 2012:**
 - Serve as CFLR multi-party monitoring group (collecting and evaluating data). Facilitation is funded through NFF grant. The SM Team wants to continue work as the collaborative monitoring group
 - The team is developing the adaptive management process and recommendations for CFLR. Peter Brown will discuss adaptive management process which the team would like in the monitoring plan. The South Rampart NEPA area can provide a project level case study.
 - It will also revise the 2011 CFLR monitoring plan to add metrics that the team couldn’t include last year because of time constraints. Last year monitoring plan came out in June 2011. Group had a meeting in the spring to discuss desired changes to the plan. A white

paper was created to capture historic conditions, current conditions, what a restored landscape looks like, and the no-action alternative (Rob Addington leading effort); monitoring method descriptions (Hal working on this) and make methods more uniform across forests. The team will develop more specific desired conditions on wildlife and understory vegetation that would be integrated into the plan

- Re-evaluate Roundtable priority treatment areas to analyze different management scenarios,
 - Assemble & inventory GIS (looking at new program to do this) and other data to facilitate information sharing, and
 - Track Front Range fire and forest science research.
- **Adaptive Management Model (by Peter Brown)**
 - Here is a US DOI example – Learning by doing and adapting to what is learned. When there is a problem, design an answer, implement, monitor and adjust based on findings. Are they meeting objectives? Is the project creating a more resilient ecosystem?
 - CFLRP proposal request provides model without a feedback loop although changes may be required in the implementation process
 - The SM Team is taking on the analysis and providing feedback into the process. Analysis occurs annually within the SM team and is reported to the Roundtable. An analysis is also done in a long-term cycle (what effect are we having on Front Range ecosystems, particularly at the landscape scale?).
 - Can refine conceptual models and restoration actions, may even revise objectives and goals for entire project
 - Started with problem statement; defined desired conditions (defined by the Front Range Roundtable); define restoration areas, define restoration actions/treatments; develop/modify monitoring plan; project planning (NEPA, big component); pre-treatment monitoring; project monitoring; post-treatment project implementation; analysis/evaluation (SM Team); implementation monitoring (are we doing what we say we would? Are there major changes needed to NEPA decision?); effectiveness monitoring (did we define the problem correctly? Have we defined appropriate desired, or undesired, conditions? Are we treating the right areas? Are we monitoring the right things?); and internal/external research (the US Forest Service funded stand reconstruction data collection, fire history, stand pattern, percentage of openings, size of openings)
 - Does the Roundtable approve the model? (SM Team approved it)

Discussion

- Decision making authority in feedback? Roundtable will be making decisions.
- Some decisions that the US Forest Service has to make can't be given to another entity, up to the US Forest Service and District Manager to make decisions. The Roundtable uses a consensus model for decision making, while CFLR doesn't have a separate process. Roundtable is CFLR collaborative; there shouldn't be a distinction between the 2 because proposal was based on collaboration that occurred in 2006. Roundtable will provide feedback and input on any findings or determinations made by CFLR group.

CFRI Update (by Tony Cheng)

- CFRI plays some leadership role in collecting/evaluating CFLR data. CFRI is located at CSU, which is part of a network of 3 restoration institutes authorized by an act of Congress

to provide science and operational assistance for ecological restoration and frequent-fire ecosystems in the interior west. The goal with the CFLR project is to assist with monitoring and analysis of monitoring data. A monitoring plan was developed with Jessica Clement, which is on the Front Range Roundtable website. Protocols were identified which are attached to pre- and post-treatments related to desired conditions identified in the plan. CFRI decided to use the common stand exam protocol that ARP and PSICC use. CFRI is currently compiling and analyzing data and the report is being finalized. A financial agreement was developed with USFS to provide funding to complete the report; CFRI base funding is being used to complete as well.

- The goal of the white paper is to deepen the science basis of the Roundtable document put out in 2006 which is the foundation of the Roundtable recommendations. It should be completed by the end of the fall and could contribute to the South Rampart project.
- Reconstructing historic forest stand structures in fire regimes; monitoring will support RMRS partners.
- Monitoring project for understory.
- Data is being collected from West Range Reclamation on jobs, wood utilization, etc. for the social/economic monitoring component
- Landscape monitoring framework – have good handle on stand scale (CSE monitoring), but need to develop landscape scale monitoring process. We are organizing a work group that is compiling existing data to start putting together pre- and post-treatment data and landscape variability.
- CFRI is looking at hosting a field trip for the SM team and Roundtable on June 19 to look at historic reconstruction sites on the Front Range; the group can lay out plots and collect data (Hall and Heil Ranch in Boulder County, or move up to Redfeather); what does the data provide?
- Photograph and video of progress to capture and market to potential funders. Videographer from CSU will be present and might be able to get footage from them.

Q&A

- What is the SM Team doing to integrate the desired conditions, once it is established? How is it being included in the framework for the social aspect? *There hasn't been a framed discussion around that, but it comes up in the context of fire. NEPA process would be ideal so all proposed actions can be accounted for.*
- Decision making process: did we do what we said we were going to do and was it effective? What were the variables that removed us from the desired condition or outcome?

OUTREACH AND POLICY (OP) TEAM

Speaker: Megan Davis

- The team intends to do more cross-pollination of efforts moving forward; could be working together with SM team.
- **Outreach and Policy Team:** Last fall was very active, which exhausted resources in the process with the D.C. and Fourmile tour. Helped with issues the Roundtable has been working on with legislators. A mailing went out to all state legislators to give them information about the Roundtable; hopefully it is effective in reminding them that we're working on important issues.
- **WUI Policy Team:** A group from the OP Team and Executive committee has discussed how to address the recommended initiative to limit growth of fire occurrence in WUI. The group looked at a spectrum of potential policies and how to work with local and state entities to

advance them. The group has stepped back and decided on a need for comprehensive data on wildfire costs in Colorado. Fourmile cost is difficult to obtain (lost work hours, etc.) but the county is starting to get closer. Headwaters Economics has released reports that talk about the cost of development in WUI (what it costs per additional house in WUI). Can we do that in Colorado to offer locally relevant data? It would be costly; the team has discussed how to scope the study and talked about engaging students to do literature reviews to find what data exists around costs of wildfire from assessments locally and nationwide. The team is going to try to scope out specific literature reviews which can provide useful information to advance to policy makers and will identify where gaps exist. Cheri Ford is coordinating the meeting to move forward.

- DRCOG consists of Douglas, Jefferson, Boulder, Gilpin, and Clear Creek. Boulder County submitted a revision to the Metro Vision plan; the plan hasn't included anything about wildfire. The revision suggested that development be discouraged in areas designated as high wildfire hazard zones in CWPPs unless CSFS Firewise guidelines are incorporated into land development. The executive committee submitted a letter of support for Metro Vision amendment. We were asked if the Roundtable would participate in educational session through DRCOG. Roundtable will have presentation on Thursday, May 17 10-12 (Mike McHugh) about what the Roundtable is and what it is about. The session is open to anyone that wants to attend. The information will be sent out to the Roundtable group; we want a big turnout because it is important to demonstrate this is a pressing and important issue.

BIOMASS UTILIZATION AND SLASH SITES (BUSS) TEAM

Speaker: Mike Smith

- A new school was opened in Fairplay, which is 100% biomass heated. Rob Davis designed the system. Biomass boiler placed to ensure no interference on school activities. Heated sidewalks were installed to eliminate snow removal costs and the school was placed where the wind would blow behind the school. Stockpiling wood with West Range Reclamation in order accumulate enough material to heat the school. Estimating 500 tons a year at the school; the propane bill is expected to be reduced by \$70,000 per year. As one container empties, CRRC is called to pick it up and refill it. The school worked out a deal with the county to use the road and bridge lot for chipping. This is located at Hartsel which is 10 miles away. Containers have to be refilled every 4-6 days in 20 to -20 degree weather
- System can be duplicated in other locations and can compete heavily with propane. We are going to talk to Redfeather Lakes to use curtain burner material at local school. If anyone has any ideas of where this can be done, contact Mike for information. Used grants for funding, hoping to get private industry involved. EPA and LEAD were difficult to get through, but Senator Bennett helped get through it. Ski area facilities would be good candidates for this process. Contact Mike or Foss Smith for more information

Discussion

- Net cost for unit and how would it fit into a school that already has a traditional system
 - Cost per ton = \$75
 - Net cost on facilities = \$600,000 for install of boiler
 - Existing systems often have boilers already in place. Heat assessment would be necessary and boilers can be retrofitted
- Boulder County is working on rehabbing Fourmile; it has been found there is better emergence and survival of seed if wood chips are used. Boulder County received grant money and used material from CFLR to rehab Fourmile fire lands.

IMPLEMENTATION AND MAPPING

Speaker: Gali Beh

- The team has the same charter from 2009 and met the first 2 goals of mapping Front Range to pick place that was top priority, conducted RFP to choose community, and chose West Boulder County Healthy Forest Initiative (WBCHEFI). The team is struggling on goal 3.
- Have new map of HFI: originally there were 6 fire protections districts, but now 4 districts have banded together. The plan is to implement projects with money raised this summer, which is not going well right now. All grant applications have been rejected. Most grants need matching funds in hand.
- HFI has documented a mission and strategy and want to focus on expectations for the partnership.
- Roundtable commitments are still there: focusing fundraising efforts exclusively on West Boulder County Healthy Forest Initiative until we feel it is as self-sustaining as Woodland Park. The Roundtable will provide grant writing capacity and will ask Roundtable members for donations (worried about ability to do so, but are not giving up), continue to provide data and expertise as needed, work with member organizations to direct projects to take into account Roundtable designated community, local and corporate fundraising ideas, and share GIS responsibilities.
- HFI is making progress through organization, mapping, funding, and support. Designated as Roundtable demonstration community, so even if we can't do much more, we may be able to get more grants through designation (as in Woodland Park). Boulder County offered \$25,000 for capacity building for HFI effort.
- HFI has been meeting commitments
- (Kris Gibson) Previous meeting discussing budget woes of Roundtable. HFI has struggled to find time to get organized and stay organized. We are looking forward to get acres addressed, building coalitions, and finding money. The community had a successful meeting with CSFS and USFS. The community felt supported and appreciates the work the group has done.
- (Megan Davis) HFI partners are members of the FPD in Boulder County and are volunteers. The project has been very demanding; collaboratives are difficult to get off the ground. Even though the meeting was difficult, there was a strong shift and willingness to look at other things HFI can do without a need for a lot of money. We are meeting with the regional Firewise director to look at if community could be identified as a Firewise community.

FOURMILE CANYON REPORT BY THE ROCKY MOUNTAIN RESEARCH STATION

Guest Speaker: Russell Graham

- Russell Graham is the lead author on the report requested by Mark Udall for an assessment of the Fourmile fire – Graham led the team of researchers.
- Graham has worked for the US Forest Service for over 41 years; the people and the learning experience are Russell's motivation for continuing to do big research projects and people like Mark Finney, Chuck McHugh, Jack Cohen, Rick Stratton, Larry Bradshaw, Ned Nikolov, and Dave Calki.
- Climate is the ratio of short to long pants in dresser drawer, weather is what you wear that day
- The things research scientists do today have been in existence for a long time; experimental station started in Idaho in 1911. After the great fires of 1910, J.A. Larsen went to Priest River research station in 1911. In 1913, he described forest floor conditions for different forest types and started studying the factors that influence the spread of fire and the condition of

weather and site conditions. In Region 1 (formerly district 1) in 1920, Major Kelley was hired to “solve the fire problem”. In 1921 Kelley directed Northern RMRS to hire H.T. Gisborne in 1922.

- In August of 1949, smoke jumpers jumped on a fire in Helena NF; many of the jumpers and guards were killed when the fire overran them. The managers asked for a fire review after the tragedy. Gisborne investigated the fire and included weather, fuels, humidity, and temperature in the review. Barrow’s was hired and the fire lab was opened.
- Review draft of Fourmile Fire assessment, final should be on web July 1. Managers’ comments have been incorporated into the document, but the authors are looking for science comments to be incorporated as well. Publications are free and downloadable. The report will be an important resource for groups like the Front Range Roundtable.
- There is a large amount of information available about rehabilitation as well.
- Udall and the US Forest Service Chief has asked to review the North Fork fire in light of recent events
- Fourmile Canyon Fire: September 6-17, 2010
 - **Front Range Fires:** Boulder County had 5 fires, 17,000 acres and 235 structures from 1989-2011. 8.6% of the area, 76% of structures of total in Front Range.
 - **Topography** west of Boulder is rough with a large spike in elevation 4(5% grade, 100 degree slopes) and shallow, coarse soils. The area has a long mining history (Gold Hill, Wall Street, etc.) and the mining roads are steep.
 - **Vegetation includes:** Ponderosa pine (open/dry), Cheat grass (dries out rapidly, is extremely flammable and can change ecological relationships when it is present), juniper (south facing), Douglas-fir (north facing), crown base heights are low to forest floor
 - **Land ownership:** homes built on mine tailings, shallow & erosive soils, rehabilitation work in preparation for spring floods to protect some of the debris flow, wood chips and mulch used to retain some moisture. Difficult to reach consensus when land ownership is so dispersed and home prevalence.
 - There are 8 fire districts in the area with homes scattered throughout. There are old homes along creeks that show remnants of mining
 - 6,000 acres are very complex – 450 homes & structures, 7 fire districts with many roads
 - When think about interaction of WUI to homes, think about how many firefighters are needed and how quickly would have to respond to protect homes.
 - Response and evacuations are difficult when roads are steep, narrow, and rocky
 - Boulder County has excellent emergency preparedness and sets the standard for others. Coordination among fire districts within the area was commendable; mutual aid agreements have been made among fire districts. Rules and requirements of fire districts can make them better at responding. The Fourmile fire chief didn’t rotate, so he had a legacy which provided learning of the area and activities. Had hard copy maps in each truck and trigger points to communicate with deputy sheriffs. Emergency Command Center – Type 3 IMT structure already in place to bring to bear during emergency.
 - Trigger points were quickly breached because the fire was moving too fast
 - Fuel treatments – 600 acres occurred within 6,000 acres and another 300 right outside the perimeter. Some were right below Gold Hill, Sunshine Gulch, and an escape route.
 - **Hayman fire** – counter clockwise winds lined up perfectly with South Platte River and fire start was at head of canyon, so winds and topography lined up to blow fire down drainage. In 1st day, fire ran into prescribed burn area (Polhemus). Surface fuel clean up stopped the fire going into the area. This is an example of effective fuel treatments in adverse fire conditions.

- **Fourmile** – agencies and land managers were doing their best to effect fire behavior if incident occurred. The area is of high risk and high hazard but low probability that the fuels will catch on fire. There was a compromise of what fuel managers wanted to do and what they could do. Surface fuel treatments were incomplete: piles of logs in fuel treatment areas. Surface fuels are the most important to treat.
 - What should managers do with surface fuels in area of mastication? Station has done work on mastication of fuels. Mastication is different than chipping. Rotting organisms are good if they are masticated to a larger size. The bigger the pieces, the better. Heterogeneity in treatments for trees and forest floor is going to push a fire differently than homogeneous treatments. Chips insulate forest floor and rotting decreases when homogenous masticated material is spread evenly.
 - 2010 wasn't abnormally dry until August and September. By September, the state was in a state of drought.
 - Fire danger (energy release component) – The energy release component of fire danger was as high on the day Fourmile started as the all-time record.
 - New technology is available – soundings of atmosphere – At 0600, the Sugarloaf RAWS station at 6,000' showed humidity at 30%. At 1800 that evening humidity, even at 12,000', was below 10%. Anytime humidity is under 10% and there is available fuel, extreme fire behavior is going to occur. High temps, wind, and low humidity will create extreme fire behavior. The RH stayed below 10% for about 12 hours with wind gusts as high as 40 mph at 10 a.m. and steadily blowing at 10-20 mph.
 - 911 call was placed at 10:02 a.m., ICP was set up at Wall Street initially, but had to keep moving because fire was moving so quickly. Fire took off up Emerson Gulch. Winds were coming from all directions, which pushed the fire in all directions.
 - Fire spread was at .5 mph @ 10:00, 1 mph spread at 14:00, .5 mile spotting at 10:00, 1 mile spotting at 1400. 60% (10:00) and 90% (1400) probability of fire-brand ignitions
 - Abundant surface fuels because Ponderosa pine needles won't rot
 - Deep duff layers with grass mats, shrubs, needle accumulation, and continuous
 - By 1830 that night, the fire made it to the Lee Hill antenna sites. The fire was spotted throughout the perimeter.
 - Sept 6 1000-1700: No aircraft could fly because of high winds, point protection, evacuations, life safety.
 - Sept 6 1700-2000: Wind shift and moderation, dropped 25,605 gallons of retardant
 - Sept 7-8: Dropped 174,149 gallons of retardant in 86 loads, which was 79% of the total amount of retardant dropped on the fire.
 - Type-1, -2 & -3 helicopters on scene from Sept 7-15. Dropped 272 gallons of retardant, 770 gallons of water, 3400 pounds of cargo, 93 passengers flown (primarily for recon).
 - Burn severity: North facing slopes more moist w/ Douglas-fir, south facing slopes of Ponderosa pine burned almost entirely.
 - Fuel treatment efficacy: 300 foot road side treatments were easily jumped because of .5 mile spotting distance. Fire spread can increase if surface fuels haven't been treated.
 - Burned masticated fuels create deep burning with large amounts of heat for long durations. Uniform treatment=uniform burning
 - The house and its surroundings are what are important to a house's survival.

- 168 of the 474 homes in the area were destroyed. 29 were associated with high intensity fire, 139 associated with low intensity fire.
- 100 foot perimeter around a house can make it secure
- Home destruction is not indicative of exposure intensity. Maintained defensible space is indicative of overwhelmed protection and is destruction is determined by materials, design, and flammable debris removal in relation to the flame of burning objects within 100 feet of home (home ignition zone). Rake up needles, weed eat surface fuels, build mote behind house if on south facing slope to prevent rolling pine cones from burning it up.
- Total cost = \$14.1 million: suppression = \$10.1 million suppression, \$571,696 = non-suppression, \$3.4 million = rehabilitation
- Less than 1% chance of this type of fire happening
- Insured losses = \$217 million, taxable losses = \$125 million; the average cost for those with insurance = \$195,000
- 83% of people aware of wildfire risk, 96% had done wildfire mitigation, though few covered vents or replaced siding. Only 9% believed physical characteristics of house were major contributor to changes of wildfire damaging property and only 20% believed vegetation on property was a contributor to damage to property.
- Approximately every 2 years, a large fire occurs on the Front Range
- Homeowners are responsible for creating and maintaining ignition potential within their Home Ignition Zones
- Safety, during the first day was exceptional when no one was seriously injured or killed.

Q&A

- Masticated hydro-axed material, after 6 years on the ground, one would assume material held moisture? *The size of the masticated material made the difference. Masticated material should be variable in size. Sawdust piles create anaerobic decomposition which can create spontaneous combustion.*
- The the US Forest Service caught grief about smoke of prescribed fire. Prescribed fire is effective, but there's a lot of public education necessary to allow for prescribed fires. Must work with state agencies to address how smoke comes off prescribed fire and there's a political environment related to it. *State agencies control smoke, so it becomes a balancing act.*
- Bald Mountain, why was it more effective? *Because it was intense, used retardant in conjunction with fuel treatment areas. Minimal surface fuels*
- Bald Mountain treatment – forester who oversaw treatment says it was more of an indirect effect; tankers used cleared area visible from air as a place to drop retardant, but fire didn't enter area and test treatment directly. Topography was a compounding factor
- Fire was dropping from the canopy to the ground because it is easier to fight that way. If surface fuels are cleaned up it is easier to fight fire that drops from canopy. In cheat grass, the spread range can increase, but the temperatures are much lower because of the fuel type
- Outreach to get homeowners better prepared, thanks to you and your team for writing this report as it helps Boulder County work with communities on “Keys to Creating and Maintaining Effective Defensible Space”. Tying scientific findings to past research and real examples are effective. Landowners are nervous and it is a powerful time to capitalize. Emphasize effective defensible space and make point to mitigate against fires. Boulder

County sets standard for preparedness – the fact that no one was hurt during that chaotic 4 hours was impressive

- Prescribed fire is not being discussed, even if BAs are low, the duff layers are deep and Roundtable needs to think more about how to reduce surface fuel if prescribed fire isn't an option. In the absence of prescribed fire, take a four-wheeler and drag something to break up the duff layer to get moisture into lower layers. Next January, go burn 2 or 3 patches if you can get by the smoke standards. Get firefighters to break up thick layer to avoid deep burning.
- The challenge is to take studies and put together a catalytic approach to dealing with materials. If millions of insurance considered because of reactive, money could be used to further study things. Now, there's a chance to get groups together to rally around a theme toward solution of making product out of it.
- Volunteer FPDs often put fuel treatment along roads that are used as escape routes, any thoughts about that related to fire activity? *Helps with safe evacuation, if surface fire is occurring though, it will spread so quickly (treat surface fuels instead!). Describe under what conditions expect fuel treatment to perform. Homeowners should use pocket cards to know when to respond to weather conditions*
- Fuel treatments weren't effective in protecting homes? *Surveys were done in 2007 in LRX and BLX, able to pull out subset of people that were in subset. Fire Management Today has that information summarized. Surveys were conducted again in 2010 and saw shift in blaming what happens on public lands to seeing private land can be to blame.*
- Cooperation across fire districts, state, and federal partners is important. There is value to Front Range collaboration – risk keeps increasing and research helps effort.
- WUI efforts are difficult when the financial component comes into play. There was a lot of fuel left on the ground. Go out with a rake to take care of the surface fuels
- Red and green tags on each house that indicated which homes would go into or wouldn't.
- Focus efforts by taking lessons learned from fire assessments; one dimension might be education and outreach. Mobilize capacity around members of the Roundtable. Identify environmental conditions in which treatments would be effective. Fire behavior tools are easily used, which could be offered from organizations that have access to them and provide access to those that currently do not (i.e. joint fire science program).
- Take findings and see how we can implement them on the ground
- Megan Davis – Boulder County has been trying to think internally about this assessment and what the findings are. We can draw recommendations from what the findings tell us, how do we take what we're hearing and integrate it into the Roundtable? Look at key findings and develop informal (or formal) recommendations for how we're going to do some course corrections on work going forward. Discussed 4 key areas that can influence bigger challenges – need to be accepted, identified and embraced. Findings that come out of North Fork Fire will influence recommendations as well. Each committee can make a commitment to use the feedback loop to bring recommendations to the bigger group to communicate with land owners. If funding a project, why not provide follow up funding to go back and revisit project in 5 years – make sure funding associated with getting wood off the ground, which will make treatments more effective. Trying to amend defensible space guidelines at state
- (Ryan Ludlow) Policy issues, Public information and outreach, Funding, Management practices
- Federal entities won't have a robust budget. The approach in the Roundtable is about restoring landscapes, so it seems findings and conditions might prompt the need to shift the focus onto treating private lands with Roundtable supplementing to reduce risk.

- Reducing hazard, striving for condition that will create element of decreased hazard, but it might come with increased risk – we can't have both so homeowners within the WUI have to understand that reduction in hazard may cause increased risk of surface fire. When talking about focusing energy on private lands, how much public investment do we want to focus on helping people create defensible space? The public asks questions about cost share for defensible space.
- The 2 most important audiences are landowners that have opportunity to do treatments and public land managers that are doing treatments on the ground. If any ideas are generated on how the Senator's office can help assist in treatments, let Jill Ozarski know.
- Revisit idea of how much of Roundtable's energy should be spent on the question of interface and engaging with local governments. It's the 1 area the Roundtable feels hasn't made much progress. How do we focus efforts and how do we use money? If it is worth thinking about allocating more effort to WUI issues, how? Is there a group of Roundtable folks that are committed to that and want to commit the energy to it? Human and social impacts of fires are more related to interface
- West Range and CRRC talk to HOAs and get 15 minutes at their annual meeting. A 5-10 minute film that could be used as a standard for public awareness would be useful. Ecological Restoration Center in Flagstaff just released a 30 minute long video. Look into short film that precisely shows what home owners need to do and use that same tool in different places. *Jack Cohen has several good videos ("Living with Fire" 20 minutes long)*
- Case studies of effective actions at all different scales – prescribed burn impact from Hayman, Bald Mountain treatment, etc. People hear variable information and give examples of effective things that have been done on a large and small scale.
- The Roundtable needs to reach out to communities around the areas that have been identified for treatment needs.
- Who do we need to integrate into conversation that isn't here today?
- Potential recommendations – get a sense of how high of a priority this is to group as opposed to CFLR and engage the community to help address. Provide forum as Roundtable to get all appropriate folks together to take it on.
- There may be a different scale at which different issues might link and they just haven't been scaled for the group. Of the 1.5 million acres, 60% of it is private.
- Recommendation for fuels treatment partnership in WUI from Dr. Graham: *Cutting down trees is the last thing to do. Decreasing surface fuels is the first thing to do. Get homeowners to clean up around their house. Start working with people to take proactive action even though there's a small probability it will ever be needed. Look at social science of how to get people to take action. Work with local fire districts and counties to get the 100' zone around homes and take care of surface fuels on the landscape.*
- HFI is looking to address issues discussed today
- One of the original focuses was that the public had to be in favor of Roundtable actions. Private landowners have preferences for what happens on public lands, so we can combine the two. One distinct finding is individuals who interact with private landowners do more and take action.

WRAP UP, CALENDAR

- a. Executive Team Meets on June 22
- b. Quarterly Mtg for Roundtable August 23
- c. Nov 2nd Quarterly meeting
- d. Executive meeting meets Nov. 30.