Rocky Mountain Restoration Initiative (RMRI)
April 23, 2024, 9:00 AM-10:00 AM
RMRI Biomass Utilization Subcommittee
Meeting Summary – FINAL

RMRI BIOMASS UTILIZATION SUBCOMMITTEE	
ATTENDANCE: Megan Bragg, Patt Dorsey, Liz Dowling, Todd Gardiner, Derek Lowstutter, Megan Maxwell, Kyle Melton, Tim Reader, Josh Roberts, Jeremy Taylor, and Ashley Woolman	
ACTION ITEMS	
Tim Reader	• Distribute information on the Mass Timber Group Summit once available. • Send a list of relevant legislative bills to the Biomass Utilization Subcommittee. • Coordinate with Josh Roberts to bring the Larimer County biomass consultants to present to the Biomass Utilization Subcommittee.

MEETING SUMMARY

DISCUSSION TOPIC: Action Items Update from February Meeting

Discussion Points:

- Tim Reader organized a tour with Charm Industrial. In total, 18 people met to take a tour of the facility. Charm Industrial presented its overall strategy and structure and showcased its facilities and technologies. They are interested in producing bio-oil from forestry byproducts and using that oil to recover abandoned or orphaned oil and gas wells for carbon credits.
    - A similar business was looking to start near the Rio Grande National Forest. There are a lot of trees on the landscape that bark beetles have impacted. Not all tree components (e.g., bark, leaves, etc.) are ideal for producing bio-oil; the cellulose content is the most important consideration for bio-oil production.
    - The Upper South Platte Partnership (USPP) will tour the Charm Industrial facilities in May.
- The Colorado Mass Timber Coalition is in the process of finalizing its workstreams. The Mass Timber Group (a nationwide group focused on mass timber technology) is hosting a three-day summit in Denver. The summit will be from July 31 to August 2.

Decisions/Action Items:

- **Tim Reader:** Distribute information on the Mass Timber Group Summit once available.

PRESENTATION TOPIC: Colorado Forest Carbon Plan, presented by Ashley Woolman, Colorado State Forest Service

- The forest carbon cycle is complex. One key element of the forest carbon cycle is that trees take carbon dioxide from the atmosphere and store it in their wood, leaves, etc. On the forest side of the carbon cycle, carbon can be found in aboveground live biomass, aboveground dead biomass, belowground biomass, down woody material, litter, and soil. The aboveground live and dead biomass can be turned into harvested wood products. Those products include furniture, paper, pencils, single-family homes, and other traditional products. Some of these products eventually make their way to solid waste disposal sites or are burned, which releases the stored carbon back into the atmosphere. Depending on their use, harvesting wood products can act as long-term carbon sinks.
- Much scientific research has been conducted to quantify the different carbon pools associated with the forest carbon cycle. On a national level, the Environmental Protection Agency (EPA) has compiled an inventory to assess the amount of carbon stored in the different carbon pools. The EPA characterizes the carbon pool of harvested wood products in two ways: 1) products in use and 2) solid waste disposal sites.
- In 2019, the Colorado Governor's Office introduced the Greenhouse Gas (GHG) Pollution Reduction Roadmap, which set statewide GHG reduction goals. As part of the initiative, the Colorado Department of Public Health and Environment (CDPHE) provides an inventory of GHG emissions and sinks across all sectors. The CDPHE GHG inventory is similar to the national one, except it is Colorado-specific. The

CDPHE is required to release the inventory every two years. The most recent release of the CDPHE statewide inventory occurred at the end of 2023, and it was the third report completed by CDPHE.

- One component of the GHG Pollution Reduction Roadmap was the development of the Strategic Plan for Climate-Smart Natural and Working Lands. This plan lays out strategic actions for several state agencies, which have organized a task force that meets quarterly to discuss strategy implementation. The Strategic Plan did not provide a baseline on how much carbon is currently stored in natural and working lands, including forests, grasslands, agriculture, wetlands, etc.
- The Colorado State Legislature passed House Bill (HB) 22-1012 to establish a baseline for forest carbon accounting. HB 22-1012 requires the Colorado State Forest Service (CSFS) to develop a publicly accessible statewide carbon accounting framework that yields carbon stock and flux estimates for ecosystems by county, forest cover type, and wood products (i.e., products in active use and products that have been discarded to solid waste disposal sites).
- The CSFS used a production approach to account for the carbon stored in harvested wood products, meaning that the CSFS only accounted for timber harvested in Colorado, whether used in the state or exported. They did not account for carbon from any imported wood products. Using a modeling framework developed by Groom Analytics LLC, the CSFS assessed current and historic timber harvests used for products. The data record spanned from 1954 to 2019.
- The assessment shows that Colorado timber product output notably decreased in 1979. From 1954 to 1979, most of the timber product output came from National Forest Service land. After 1979, the timber product output from National Forest Service land decreased. As National Forest Service land timber product output decreased, the timber product output from private and Native American land began to take up a larger share of the total output, a trend that became particularly notable in the 1990s.
- The statewide carbon accounting framework also assesses the amount of carbon stored in wood products based on the anticipated lifespan of those products. For example, some products are burned immediately (e.g., firewood), while some products, like wood chips and paper, have a short lifespan of 1-6 years. Engineered wood products, like decks, have a medium lifespan of 7-30 years. Lastly, long-term products (i.e., those with a lifespan of 31+ years) include furniture and single-family homes.
- The data indicates a decreasing trend in the number of long-term products being created using harvested timber; more specifically, there was a decrease of 41% in the total carbon stored in long-term wood products between the 1954-1979 period and the 1979-2019 period.
- The CSFS also assessed the amount of carbon stored in products in use versus those stored in solid waste disposal sites. Overall, the amount of carbon stored in wood products in use increased from 1954 to 1979 and then leveled off in 1979, while the amount of carbon stored in wood products in solid waste disposal has continually increased from 1954 to 2019. The continual increase of carbon stored in wood products in solid waste disposal sites is a function of people retiring products over time. So long as Colorado produces wood products, they will continue to act as a net carbon sink.
- Other states, including Washington, Oregon, and California, have conducted a similar carbon accounting assessment. Compared to these states, the amount of carbon stored in harvested wood products from Colorado is minimal. In Washington and Oregon, 12% and 10% of the total carbon stock within forested ecosystems is stored in harvested wood products, respectively. In Colorado, only 0.36% of the total carbon stock within forested ecosystems is stored in harvested wood products.
- The takeaways from the report are that:
    - Ongoing declines in harvests and new timber products could reduce the strength of this carbon sink.
    - Silviculture treatments and the harvested wood products industry are critical to sustaining this carbon sink.
    - Many default parameters provide coarse representation, not reflecting Colorado-specific conditions (e.g., primary product ratios, ratios of material recycled/burned).
    - The report can inform strategic planning and new policies related to forest dynamics in response to disturbances, management, and climate change.
- The report will be published in the summer of 2024. The CSFS is sharing its key findings with the legislature before May 8. They are also developing outreach efforts to share the outcomes of this report via the CSFS website, podcasts, and interactive spatial platforms. They will also publish all the code used

to develop the report. Lastly, they plan to periodically update the report as new resources and data become available.

DISCUSSION TOPIC: Colorado Forest Carbon Plan

Discussion Points:	**Decisions/Action Items:**
• The Colorado Forest Carbon Plan only accounts for the timber harvested in Colorado; it does not include an accounting of harvested timber products imported into Colorado. Theoretically, if all states conducted a carbon accounting assessment of their wood products, it would capture the total carbon storage of all wood products in the United States. Once the source code is released, it is possible to modify the total carbon stored in wood products to reflect imported wood products. • The CSFS used US Forest Service (USFS) Cut and Sold reports to arrive at primary product ratios to characterize short-, medium-, and long-term products. • There should be a strategy on how to present this information to wood product businesses interested in modifying and diversifying their products. The CSFS communications division could help develop messaging to reach businesses and communities more broadly.	None.

DISCUSSION TOPIC: Colorado State Legislature Legislative Updates

Discussion Points:	**Decisions/Action Items:**
The Colorado State Legislature are considering several bills related to forestry and biomass utilization. One of the bills is to initiate a statewide study of biochar markets (Senate Bill (SB) 24-028). Another bill is a local disaster related bill that would provide additional assistance to manage slash disposal programs in high priority counties (SB24-009).	• **Tim Reader:** Send a list of relevant legislative bills to the Biomass Utilization Subcommittee.

DISCUSSION TOPIC: Brief Partner Updates on Biomass Utilization

Discussion Points:	**Decisions/Action Items:**
• Jefferson Conservation District (JCD) recently hired Meagan Bragg to fill the role of the JCD biomass coordinator. Kyle Weber, the previous JCD biomass coordinator, has taken on a new position as a JCD forester. • The CSFS is hiring another biomass utilization specialist. This application closes on May 6. • The Gypsum Biomass Plant has closed permanently. Ultimately, the energy produced by the plant was two to three times more expensive than other energy sources. • Larimer County continues to assess current biomass markets in their county and develop strategies to encourage biomass utilization. Anyone interested should reach out to Josh Roberts for more information.	• **Tim Reader:** Coordinate with Josh Roberts to bring the Larimer County biomass consultants to present to the Biomass Utilization Subcommittee.

NEXT STEPS

Samuel will send a Doodle Poll to schedule the next Biomass Utilization Subcommittee meeting.