Challenge and Opportunity: Addressing Critical Forest Management Issues by Attracting New Markets for Wood

Challenges:

* Minnesota is facing multiple challenges related to over-abundance of mill residuals, forestry residuals, and underutilized species.
* Management of trees killed by emerald ash borer, pine beetle, spruce bud worm, and other diseases is already a critical issue in the Twin Cities metro area and will grow over time.
* Diseased wood, if unmanaged, creates multiple risks including risk of forest fire, habitat loss, and loss of the biogenic carbon sink.
* Minnesota’s lumber mills are struggling to find markets for residuals such as wood chips and sawdust. Existing mills are key employers in their communities.
* Minnesota has withdrawn policy support for bioenergy and lost a number of markets for “low quality” wood.
* It is important that new market attraction strategies not create new competition for in-demand wood species and raise prices for existing mills.
* Minnesota is not playing a leading role in developing and attracting the most advanced forest products industries.

Opportunities:

* The “Emerging Market Opportunities for Minnesota’s Forest Products Industry” white paper (March 2020), identified numerous potential new industries that could utilize wood that requires management. A variety of industries could utilize low-quality wood and residuals, including:
  + Thermal energy, including domestic heating and international markets (pellets)
  + Renewable diesel and sustainable aviation fuel
  + Thermally-modified wood
  + Bio-char
* Further, new products could be developed from underutilized wood through research and development in the areas of biobased chemicals, extractives, and engineered and specialty wood products.
* The “Climate Change and Minnesota’s Forests” report (September 16, 2020) by the Research Advisory Committee for the Minnesota Forest Resources Council identified the potential for using forest harvest residuals and residuals from primary forest product industries as a feedstock for the production of value-added biofuels and bio-energy production if incentives and markets were developed for its use.
* Development of markets is the only realistic way to sufficiently manage the large volumes of wood from disease and insect-killed trees, mill residuals, and other underutilized wood.
* A proactive strategy can help avoid or reduce big problems for Minnesota, including forest fires, loss of wildlife habitat, reduction in the biogenic carbon sink, and loss of existing industries.

Role for the Minnesota Forest Resources Council

* MFRC’s role, according to Minnesota Statute 89A.03 is to: “develop recommendations to the governor and to federal, state, county, and local governments with respect to forest resource policies and practices that result in the sustainable management, use, and protection of the state’s forest resources.”
* This current challenge touches the three pillars of MFRC’s mission, to “give consideration to the long-term economic, ecological, and social needs and limits of the state’s forest resources”.
* MFRC is set up to address issues like this, with its multi-stakeholder representation and mandate to “broaden public involvement”.

Proposed Action Plan

* The Council, consistent with its statutory authorization, should develop a proactive plan for managing excess mill residuals, disease and insect-killed wood, forestry residuals, and underutilized wood.
* The Council should take the following steps:
  + Recommend that “Woody Biomass” (for use as Bio-Fuel and Bio-Energy) be defined in inclusive terms that encapsulate and specifically reference federal legislative definitions of “biomass” and “renewable biomass” (e.g. Energy and Policy Act of 2005, Energy Independence and Security Act of 2007, and Food, Conservation and Energy Act of 2008).
  + Assess and quantify the potential supply of woody biomass in need of management at regional landscape scales.
    - Develop management scenarios that illustrate the impacts of different strategies on key outcomes such as the state’s forestry biogenic carbon sink, forest fire risk, and wildlife habitat
  + Describe how existing federal, state, and county forest management plans, and how site-level forest management and timber harvesting guidelines relevant to woody biomass harvest, maintain and ~~Make recommendations on management practices to~~ enhance long-term economic, ecological, and social outcomes for the state’s forest resources
  + Identify new industries that best match the wood sources most of need of management and recommend policies to attract those industries.
    - Example 1. Renewable bio-diesel and aviation fuel
    - Example 2. Pellet manufacturing for residential, industrial and commercial bio-energy.
    - Example 3. Biochar uses and products
  + Engage key stakeholder sectors and the public to assure that final recommendations have buy-in.
    - Early January 2022 renewable bio-fuel and bio-energy Zoom forums.