Hydropower Summary

The Boardman River: A River Reborn

- The dams on the Boardman River are owned by the City of Traverse City and Grand Traverse County and have been operated by Traverse City Light and Power.
- The Boardman River: A River Reborn project is the result of a comprehensive and impartial community assessment of options regarding the dams and their impact in the Boardman River watershed.
- The Boardman River Dams Committee (BRDC) was formed by the dam owners in 2005 to recommend the best solution for the dams.

Hydropower Feasible?

- A main reason for considering hydropower is to utilize available renewable energy sources.
- The BRDC retained an impartial engineering firm to conduct an Engineering and Feasibility study to assess the social, economical and environmental affects of numerous dam disposition options, including the option to generate hydropower.
- Bringing the dams up to regulation standards for hydropower would cost the same initially as removing the dams.
- The estimated cost of restoring hydroelectric power generating capacity is $9 million to $17 million. The estimated revenue brought in from selling electricity is $8.5 million over thirty years, which may not recover the costs incurred during restoration.
- Studies conducted on other renewable and green energy sources showed that wind power has the potential to produce, at a minimum, double the amount of energy while spending the same amount of money to install five wind turbines.
- Since wind power is considered a green energy, producing double the amount of energy as hydropower also means displacing twice the amount of harmful emissions associated to generating fossil fuel, including carbon dioxide, nitrogen oxide, sulfur dioxide and mercury.
- The Michigan Public Utility Commission does not consider hydropower a green energy source because it causes an unnatural warming and release of water that is potentially harmful to fish and other aquatic organisms.
- Dams are not considered to be a green energy source because of the significant negative impact they have on aquatic species and habitat.

Removing the dams and modifying the Union Street dam has many environmental, community, regional and educational benefits. Many are highlighted below.

An Environmental Look

- Restore the river to its natural state as a free-flowing, cold-water river.
- Enhance and restore habitat for native and naturalized fish species and organisms preferring cold water\(^1\).
- Restore over 3.4 miles and reconnect 160 miles of high-quality river habitat\(^\text{ii}\).
- Restore more than 250 acres of wetlands and nearly 60 acres of upland habitat\(^\text{iii}\).

Community Benefits

- An estimated increase of $3 million in revenue will come from increased recreation, tourism and property values.
• Promote business growth and new business opportunities because of increased interest in water-related activities, including fishing, kayaking, canoeing and tubing, in addition to other economic growth opportunities.

• Supporting the long-term goals of the Grand Vision guiding principle of “protecting and preserving the water resources, forests, natural areas and the scenic beauty of the region.”

Regional Benefits

• Engage all interests, cultivating a sense of “ownership” in study process and outcome, and ensuring that the process is community driven.

• Secure unparalleled cooperation among federal, tribal, state and local government agencies and nonprofit entities.

• Initiate the development of a model that will be transferable for use by other communities faced with similar issues.

• Document and archive – in detail – the study process as it unfolds.

• Fully integrate environmental, engineering, economic, social and cultural considerations into a single study.

• Assemble a diverse group of individuals who are building their capacity to engage in public process, community with decision-making entities, contribute to the work of local units of government and nonprofit organizations and resolve other issues that may face the community in the future.

Educational Benefits

• Create an on-the-ground laboratory for local schools to participate in place-based environmental learning initiatives

• Support a variety of scientific research initiatives to assess the environmental, economic and social effects of dam removal and initiate a working model that will be transferable for use by other communities faced with similar issues

Outcomes

• After thoroughly analyzing all options, the dam owners concluded that socially, environmentally and economically, removing three of the dams and modifying the Union Street dam is the best option.

• The results of comprehensive study show that while the potential exists for hydro generation, the cost to license, repair and upgrade the dams in order to comply with state and federal rules and regulations outweigh the revenue to be generated by selling electricity generated at the dams. The decision to remove the dams was made after methodical evaluation of this and all other available data and options, as well as a comprehensive public input process.

• Green energy is a top priority, but so is restoring our natural rivers for social, environmental and economic benefits. Other renewable and green energy solutions have been reviewed and are more feasible for the cost of long-term maintenance and the life of the energy source. While hydropower is considered to be a renewable energy source, it is not considered to be green, as it causes thermal pollution and impacts water quality.