

The Gehring House

Bethel, Maine

In 2022, the Northern Forest Center purchased the historic 10,000-square-foot Gehring House to create quality apartments to full-time residents in the Bethel area. Originally built in 1896, the Gehring House was home to Dr. John Gehring and Mrs. Marion True Gehring and served as a clinic to treat Dr. Gehring's patients.

For three years, the Center worked with architecture and construction firm Woodhull to revitalize the building that had sat vacant for twelve years, preserving its historical integrity while also demonstrating a wood-first and climate-smart building approach.

Extending the life of stored carbon

By refurbishing the Gehring House and reusing its existing wood products, the Center extended the life of the building, enabling the property to continue holding carbon rather than releasing it into the atmosphere at its end of life.

Trees absorb carbon from the atmosphere and then store that carbon in their leaves, trunks, branches, and roots. When trees are harvested for use as long-lived wood products such as flooring, siding, and trim, that carbon remains stored until those wood products reach the end of their lives – often decomposing in a landfill.

By extending the life of the building and using additional locally produced wood products, the **Gehring House stores 154,400 lbs of carbon dioxide equivalent**. That's **equivalent to offsetting the emissions from 7,878 gallons of gasoline burned!**

154,400 lbs +
of carbon dioxide equivalent
stored in long-lived wood
products

55,700 lbs +
of carbon dioxide equivalent
(and counting!) avoided by
opting for wood products
instead of fossil-fuel-based
materials





TimberHP wood fiber insulation being installed at the Gehring House

Opting away from fossil fuel intensive building materials

When faced with a choice in what building materials to use, the Center opted for locally grown and manufactured wood products. By using wood products instead of materials that are fossil-fuel-based, the Center **reduced the carbon footprint of the Gehring House by at least 19,600 lbs of carbon dioxide equivalent.**

Fossil-fuel-based materials such as vinyl, synthetic carpet, and fiberglass are carbon emitters meaning they release carbon dioxide at the end of their life. Whereas, wood sourced from well-managed forests will be replaced by natural regeneration, maintaining a cycle that does not contribute additional carbon dioxide to the atmosphere except for processing and transportation.

For example, the Center used TimberBatt wood-fiber insulation manufactured by Maine-based TimberHP. TimberBatt will store nearly 8,300 lbs of carbon dioxide equivalent over the lifetime of the Gehring House. From a carbon perspective, wood fiber insulation surpasses alternative materials such as fiberglass, spray foam, and XPS foam – and is healthier for occupants!

➤ Scan the QR code to learn how different building materials stack up to one another

Reducing operating emissions

The Center swapped out the Gehring House's existing oil boiler for two modern wood pellet boilers. The new system **reduces the building's heating emissions by 54%.**



SCAN ME!



For more information on the Gehring House, reach out to Kendall Gray at kgray@northernforest.org



For more information on the Northern Forest Center, go to northernforest.org