



## Sustainable Meadville

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## Sustainability Measures in Meadville

Meadville is a progressive small city. With an eye toward reducing operating costs and efficiently stewarding public tax dollars, the City has embarked upon a number of sustainability initiatives in recent years to minimize its environmental footprint and enhance the community's quality of life. According to the Environmental Protection Agency, "The sustainable community should establish goals and a vision by developing more efficient and effective ways in which to live and grow. It also will involve the participation of the entire community in creating a vision of the community's future that balances economic, environmental and social needs." City government has partnered with local business, academia, citizen volunteers and many others to advance its sustainable practices according to the definition of a sustainable community outlined by the Environmental Protection Agency. For more information on any of the projects or initiatives below, please contact Meadville City Manager Joe Christ by e-mail at [jchrist@cityofmeadville.org](mailto:jchrist@cityofmeadville.org).

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Environmental Protection Agency

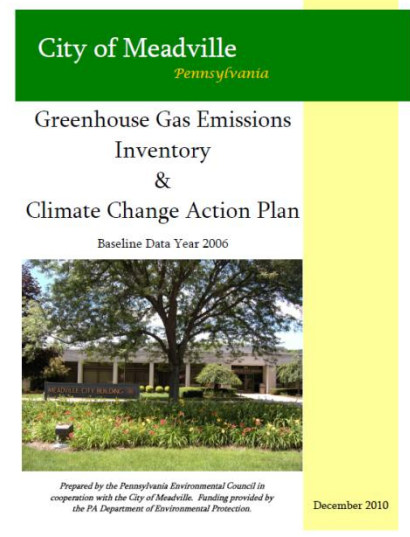


## City Building Energy Efficiency Improvements

The City of Meadville completed a series of energy efficiency improvements to the City Building in June 2011 to improve operational efficiency and increase occupant comfort. The scope of work included the installation of new indoor/outdoor lighting and heating, ventilation and air conditioning (HVAC) systems. This project updated the original systems that had remained considerably untouched since the building was built in 1973. Improvements consisted of the re-ballasting and re-lamping of existing light fixtures and the installation of state-of-the-art motion detectors. HVAC improvements included the replacement of the original boiler and chiller systems with high efficiency equipment. These updates were made possible by a “PA Conservation Works” grant provided by the Pennsylvania Department of Environmental Protection. The combined improvements are expected to reduce electricity usage by 29% and natural gas usage by 30% within the first six months of operation, resulting in approximately \$23,000 in annual savings. It is anticipated that the changes will lessen the City’s carbon footprint by 168 tons of equivalent carbon dioxide (eCO<sub>2</sub>). In addition to improvements made at the Meadville City Building, the City has completed detailed energy audits at each City-owned building.

## Greenhouse Gas Emissions Inventory and Climate Change Action Plan

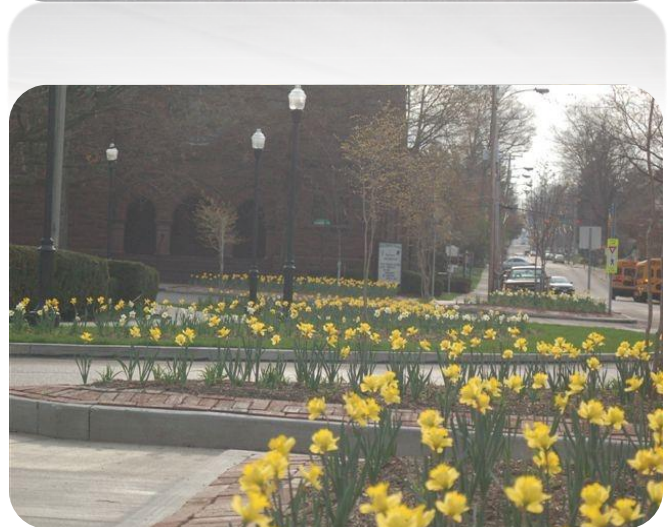
In partnership with Allegheny College and the Pennsylvania Environmental Council, the City of Meadville completed a Greenhouse Gas Emissions Inventory and Climate Change Action Plan in December 2010. The inventory addressed only those emissions generated by the City of Meadville’s own buildings, facilities and operations. The project was funded by a Pennsylvania Department of Environmental Protection’s Local Government Greenhouse Gas Pilot Grant received by the City in 2008. Completed in 2010, the study found that, in 2006, Meadville produced about 4,485 tons of equivalent carbon dioxide (eCO<sub>2</sub>), with the largest source of emissions (79%) coming from Buildings and Facilities. Street Lights and Traffic Signals produced 13% of emissions while Vehicles and Equipment produced only 7% of all emissions. Solid Waste produced a mere 1% of all emissions. It is anticipated, with the City’s increased investment in sustainable measures combined with the City’s declining population and tax base, that the City can hold future increased eCO<sub>2</sub> emissions to approximately 1% annually through the year 2025. This data was collected and analyzed with the help of inventory protocol and software programs from the International Council for Local Environmental Initiatives (ICLEI) which Meadville is a member of through funding from Pennsylvania Department of Environmental Protection. Meadville government partnered with Pennsylvania Environmental Council to create a Community Stakeholder Group that worked with ICLEI staff to use the knowledge obtained through the greenhouse gas emissions inventory to create an effective Climate Change Action Plan. This plan details how Meadville can further reduce its emissions by 208 tons within five years.





## Diamond Park Traffic Flow and Pedestrian Safety Improvements

Diamond Park, a New England style common green, is located at the center of downtown Meadville. Home to the historic cast iron Shippen Fountain and a gazebo that hosts public celebrations and summer concerts, Diamond Park is at the center of Meadville's National Register Historic District. Recognized for its commitment to eliminate traffic signals, improve traffic flow and increase pedestrian safety, the City of Meadville was the 2009 winner of the 28th Annual Road and Bridge Safety Improvement Award, given jointly by the Pennsylvania Highway Information Association, PennDOT and the Pennsylvania League of Cities and Municipalities. City of Meadville officials worked with Urban Engineers, an Erie-based engineering firm, and PennDOT planners to structure a 90-day trial that replaced outdated traffic signals with stop signs and installed temporary pedestrian islands. Flaunting narrowed roadways that reduced vehicle speed and newly aligned sidewalks that increased accessibility and safety for both pedestrians and drivers, Diamond Park's experimental changes were eventually made permanent. In addition to improving safety and walkability, the renovations to Diamond Park reduced the idling time of stopped cars and eliminated the electricity needed to power traffic lights and signals.





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## Biodiesel Production

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What initially began as a simple collaboration with Allegheny College, Professor Rich Bowden, and his Environmental Science 210 students to study the feasibility of local bio-diesel production in 2007 has resulted in year-round small-scale bio-fuel production in the City's Public Works Department garage. Implementing the recommendations of the feasibility study, the City invested in a small-scale production unit that converts used cooking oil from area restaurants and Allegheny College's cafeterias to clean bio-diesel that is blended with traditional diesel for use in City fleet vehicles. The refinement process takes four to six hours, depending on the cleanliness of the original oil. In 2009, the first year of operation, the City produced 1,600 gallons of bio-diesel. Production in 2010 increased to 5,100 gallons. In the first two years of operation the City saved \$6,700 in fuel purchases and reduced the carbon emissions associated with the combustion of traditional diesel fuel. The City of Meadville's bio-diesel initiative has provided an inspiration in sustainability for not only members of the community, but other municipalities who have interest in bio-diesel production as well. Click [here](#) to watch a video on bio-fuel production in Meadville.

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## Allegheny College Center for Economic and Environmental Development

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The City of Meadville works closely with the Allegheny College Center for Economic and Environmental Development (CEED). CEED involves faculty and students in college-community partnerships that address local and regional sustainability issues. CEED's nationally recognized accomplishments stem from faculty-driven projects that begin as in-class concepts and exercises, and grow into hands-on activities combining Allegheny students with community partners to find solutions for real world problems. These partners include numerous regional agencies, government organizations, schools, businesses, and citizens' groups. For more information about CEED, please click [here](#).

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## Meadville PA: Not Your Run of the Mill Community

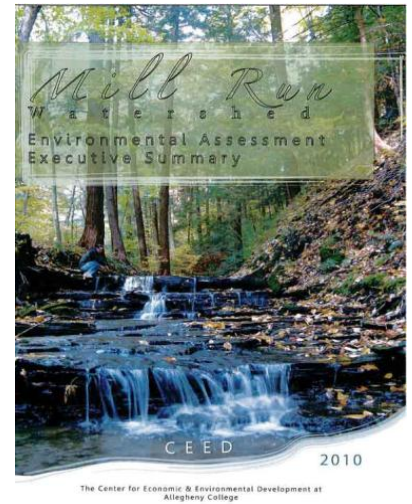
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"Meadville PA: Not Your Run of the Mill Community" is an initiative that places Meadville's natural assets at the heart of community and economic development efforts. Mill Run, recognized as a "buried treasure" by citizens participating in a 2004 community planning meeting, is the primary focus of CEED's efforts. Mill Run, a tributary of French Creek, functioned as an industrial center during Meadville's first 100 years, brimming with busy mills and factories that had an undeniably positive economic impact for Meadville, but unfortunately negative environmental impacts. In fact, Mill Run had city gridlines superimposed on top of it, covering the creek under the business district years ago. Mill Run, which begins at Tamarack Lake and travels west to French Creek, is envisioned as a thread that will weave together a number of community and economic development projects that will transform Meadville into a model of economic, ecological and social sustainability. Click [here](#) to learn how Mill Run can lead the way to revitalization and sustainability in Meadville. The following projects are part of the "Meadville: Not Your Run of the Mill Community" initiative:



## *Environmental Assessment of Mill Run*

In 2008, with the financial support from the Pennsylvania Department of Environmental Protection's Growing Greener Grant, CEED faculty and students began working on an environmental assessment of the Mill Run Watershed. The assessment focused on aquatic macroinvertebrates, fish populations, water chemistry, and habitat/corridor assessment based on recommendations from the DEP under Instream Comprehensive Evaluation (ICE) protocols. The assessment found that, from Tamarack Reservoir to Rainbow Reservoir, the waterway is impaired by storm-water runoff, fecal coliform (human and animal) and, as the watercourse continues downstream, decreased pH and dissolved oxygen levels and increased E. coli/bacteria concentrations. These findings are helping to guide the community towards improving the quality of Mill Run as an important environmental and community resource and as an aesthetic landscape in an urban setting. To learn more about the environmental assessment of Mill Run, click [here](#) for the Executive Summary. The full Environmental Assessment can be found [here](#).



## *Shadybrook Park Restoration*



Shadybrook Park, located on the banks of Mill Run at the foot of Rainbow Reservoir, had fallen victim to inattention and neighborhood neglect. Conveniently located near Meadville's middle-high school complex and sports facilities, Shadybrook Park presented a perfect opportunity to engage neighborhood stakeholders in its revitalization. Under CEED's leadership, the City of Meadville collaborated with Meadville Area Middle School, Meadville Area Senior High School, the Crawford County Career and Technical Center and interested citizens to renovate the park. Initial improvements began in 2007 with environmentally themed murals painted on outhouses with new composting toilets. With funding provided by the PA Department of Conservation and Natural Resources and the PA Department of Environmental Protection, further improvements continued through the summer of 2010 and included a new stormwater filtration system, landscaping, improved lighting, and an accessible trail and stairway connecting the park to South Morgan Street. These improvements combined both artistic and environmental efforts in order to build a greater sense of "ownership" in the community surrounding the park. For more information and pictures of Shadybrook Park, please click [here](#).



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## *Market Alley*

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In its original construction Market Alley was a traditional “service” alley that connected Park Avenue, now the main vehicular thoroughfare through downtown Meadville, and Market Street, home to Meadville’s historic Market House in the Central Business District. Market Alley was recognized years ago as an important link in the early conceptual planning of an Urban Pedestrian Walkway through downtown Meadville. Early designs and plans for improved recycling and waste collection for Market Alley came to life through a partnership with Professor Amara Geffen and CEED’s Art and the Environment Initiative. Completed in the fall of 2011, the newly renovated Market Alley boasts a new pathway, underground electricity infrastructure and new period-style lighting. A major highlight to the project is a new footbridge over a “daylighted” section of Mill Run that treats pedestrians to the view and sounds of Mill Run as it passes underfoot from beneath adjacent buildings. The pathway itself is comprised of blue pavers laid in an undulating pattern distinct from the typical red-brown brick of the alleyway, mimicking the flow of Mill Run through downtown. This project was funded by a grant from the U.S. Department of Transportation through the Intermodal Surface Transportation Efficiency Act, administered on the state level by PennDOT and matched locally by the City of Meadville.

Across Park Avenue from Market Alley is a 12’ x 73’ mural comprised of twenty-seven 4’x8’ panels painted by local citizens and businesses bursting with color (pictured below). Entitled, “Streams Converging: Meadville at the Center,” the mural hangs on what was once a bland and uninviting brick wall. Installed by Berry Greene, a 2007 graduate of Allegheny College, the mural commemorates the rich history of Meadville and Mill Run. To learn more about the mural, please click [here](#).





## Public Art

In recent years downtown Meadville has come alive with the addition of several public art installations that enliven the pedestrian environment and enrich the community. The aforementioned Market Alley mural is just one of several public art projects that adorn the walls or alleyways of downtown. Most of these projects have been led or initiated by Professor Amara Geffen and CEED. The City-owned parking garage near the corner of Water and Arch Street streets flaunts blue and white waves constructed of old street signs that celebrate and highlight Mill Run which flows beneath the garage. Another mural, entitled “Park Theatre Memories” (pictures right), was completed in 2009 by ‘07 Allegheny College Alumnus Berry Breene. “Park Theatre Memories,” a 17’ x 80’ work of art, was installed in Clinton Court Alley on the side of the former Park Theatre building and depicts the heyday of the Park Theatre’s era. The most recent project, installed in the fall of 2011, is “Blue Box Renaissance.” Conceived by Devon Stout, Distribution Manager for *The Meadville Tribune*, who partnered with CEED’s Art and the Environment Initiative, “Blue Box Renaissance” artistically transformed 11 *Tribune* newspaper racks (the blue boxes) into functional works of art that highlight the “buried treasure” that is Mill Run and promote community, environmental awareness, civic engagement, reading and literacy. Combined with other “Read Between the Signs” and “Signs and Flowers” (pictured below), earlier CEED public art installations on Route 322 in Vernon Township, the Meadville area has the beginnings of an Urban Art Trail which weaves together a great fabric of public and environmental art that tells the story of Meadville’s history and natural resources. For more information and a map on the Urban Art Trail, please click [here](#).



Courtesy of Rob Matheny



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