

## Air & Light

- All paints, sealants, and adhesives used were **low VOC** (volatile organic compound) to reduce indoor air pollution.
- Wood cabinetry made of wheat board to **eliminate urea-formaldehyde** resins.
- **Natural daylight** and outside views provided to over 90% of occupied spaces.
- All of the windows are operable to provide control over **natural ventilation**.
- **Smoking** on the jobsite was **prohibited** (and of course in the finished building).
- An **indoor air quality management plan** was implemented during construction to control sources of air-borne pollutants.
- **Sensors** have been installed to monitor indoor air quality.
- MWA purchases **Green Power** through the local power company.



*Classroom & Meeting Room*

## Land

- Re-used an **existing developed site** and preserved a local landmark.
- Planted **riparian buffer** to conserve existing natural area.
- Stayed within **original impervious footprint** – did not disturb undeveloped areas.
- Stormwater **runoff is reduced** by using **pervious materials** in the parking area instead of blacktop, and through the use of **rain barrels**.
- Minimized the potential heat island impact on microclimate by using **Energy Star compliant roof**.
- Outdoor lighting designed to minimize light pollution, using **shielded fixtures** with lighting directed only where needed. Indoor lighting does not leave the building or has automatic shut off controls.
- A **bike rack** promotes alternative modes of transportation to the building.



*Photo by Bruce Livingston*

*View from the River Resource Center*

## River Resource Center

### *What makes it "green"?*



*Photos by Bruce Livingston*



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## Our Story

In 1998 the Musconetcong Watershed Association (MWA) received ownership of the Asbury Gristmill property, which included a small 2150 sq. ft. concrete block storehouse, essentially a shell with no roof. This building has been renovated to become the MWA River Resource Center, an administrative headquarters and environmental education center dedicated to protecting and improving the quality of the Musconetcong River Watershed and its natural and cultural resources.

The building illustrates MWA's commitment to the conservation of natural resources. In June 2010 the River Resource Center was awarded the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) Platinum certification, the highest level of recognition possible. LEED measures the effectiveness of the technologies and strategies that have been incorporated throughout the site and building. The categories on the following pages mirror the LEED certification categories and outline the ways in which the River Resource Center was able to obtain this prestigious level of achievement.



*Before Renovation*

## Materials

- **Re-used the existing building shell**, thereby reducing need for new building materials.
- Over 75% of **construction waste was diverted from the landfill** through recycling of metal, glass, cardboard, paper, plastic, wood and masonry rubble.
- **Re-used building materials** such as plywood sub floor salvaged from another construction project.
- **Recycled content** used in materials such as composite decking, light-gauge metal framing, drywall, and a blended cement mix featuring fly ash in place of traditional cement.
- Materials were used that were **harvested or manufactured locally**, such as trim wood from local sawmill.
- Flooring is made of **rapidly renewable bamboo**.

## Water

- **Native, drought-resistant plantings** minimize the need for watering and demonstrate local habitat.
- Use of **captured rainwater** for landscape watering instead of potable water.
- Use of Clivus-Multrum **composting toilets** greatly reduces potable water use and eliminates generation of wastewater.
- Use of **low flow fixtures** at sinks.

## Energy

- **Geothermal system** uses the steady temperature of groundwater to heat and cool the building. No fossil fuels used to heat building.
- **Refrigerant type (R410A)** used in the mechanical equipment is less harmful to the atmosphere and has lower leakage rates than other types.
- Building is **highly insulated** and windows are high performance.
- Design features **day lighting** and **passive ventilation**, eliminating the need for cooling systems and supplemental lighting during some months of the year.
- **Energy efficient lighting** design uses either low-voltage or compact fluorescent.
- **Solar panels** provide at least 15% of building's total energy use through renewable energy.



*Photo by Bruce Livingston*

*After, with Native Plantings*