

Wayne National Forest is Green in More than One Way

By Terry Kreinhop

Wayne National Forest (WNF), located in Southeastern Ohio, stretches through 12 counties and is made up of 238,800 acres within a forest boundary of 834,000 acres. The forest is located within a Proclamation Boundary, established by Congress in 1934 to focus land acquisition of forest lands most in need of restoration.

WNF Supervisor Office/Athens District Complex (SO/AD) located at 13700 U.S. Highway 33, just east of Nelsonville, Ohio, has implemented a strategy of sustainable and environmentally friendly operations. This is consistent with our National Policy and Regional Philosophy to aesthetically integrate natural and cultural context plus promote energy efficiency and minimize long-term maintenance by selecting the best available material even if initial costs are higher than less suitable products.

The 14,000 sq. ft. facility was constructed in 1999 with occupancy in 2001. Project architect Daryl J. Dean, AIA, LEED, AP was assisted by staff from our Regional Office in Milwaukee, WI.

Design highlights include:

- ✦ Design inspired by themes and elements of Southeastern Ohio's industrial and agricultural heritage
- ✦ Recycled historic brick pavers made from local clay and manufactured in surrounding communities
- ✦ Reuse of abandoned mine site (and former U.S. Highway 33 rest stop)

- ✦ Window glazing designed to maximize use of daylight but minimize summer heat gain
- ✦ Site and building placement to utilize existing highway entry and exit, minimized ground disturbance, and reuse of existing asphalt
- ✦ Gabled and shed metal roof lines and exterior metal siding are reminiscent of symbolic coal tippie designs and manufactured from recycled content materials that is 100 percent recyclable at the end of its useful life (allows for low long-term maintenance)
- ✦ Low-flow plumbing fixtures
- ✦ Lighting and controls to maximize day lighting and help reduce electricity demands and heat gain
- ✦ High efficiency heat pumps
- ✦ Interior finishes, cabinets, and wall and floor coverings use sustainably harvested or recycled content materials, low VOC coatings, paints, stains and adhesives
- ✦ Excavated top soil and rock were reused on the construction site
- ✦ Indigenous landscaping requiring no irrigation

USDA Forest Service Philosophy

The built environment refers to administrative and recreation buildings, landscape structures, site furnishings, structures on roads and trails, and signs installed or operated by the U.S. Department of Agriculture (USDA) Forest Service, its cooperators, and permittees.

The elements of the built environment constructed on national forest lands and grasslands, or those used for administrative purposes



in rural areas, towns and cities, shall—to the extent practicable—incorporate the principles of sustainability, reflect their place within the natural and cultural landscape, and provide optimal service to our customers and cooperators.

These elements will:

- ✦ Emphasize efficiency of energy and materials consumption in construction and operation
- ✦ Be located, planned, and designed with respect for the natural systems in which they reside
- ✦ Aesthetically integrate their natural, cultural, and experiential context
- ✦ Contain design elements, including appropriate signs that reinforce a national agency identity
- ✦ Serve as premier examples to interpret conservation of natural resources and sustainable development
- ✦ Create environments for people to enjoy and gain increased appreciation for the natural environment, and in which employees work productively, experiencing the connection to the resources they manage

In so doing, the USDA Forest Service built environment will strengthen and reinforce the image of the agency as an international conservation leader.

Mission and Vision

The phrase, “Caring for the Land and Serving People,” captures the Forest Service mission. As set forth in law, the mission is to achieve quality land management under the sustainable multiple use management concept to meet the diverse needs of people. To realize our mission and vision we use 13 guiding principles; among these is that we use an ecological approach to the multiple use management of the National Forests and Grasslands. WNF has several initiatives on-going or planned for the near future to make our facilities and operations more sustainable.

Solar Power Addition

Forest Engineer Steve Marchi, P.E. undertook the task of providing sustainable energy to the SO/AD. As with most projects funding was a major concern. It was decided to phase in a system which would eventually provide for emergency operation for our fire and law enforcement center, while also providing for present electrical needs. Another goal was for use as an educational tool for visitors to our welcome center. In June of 2007, a request for quotations was issued for materials to construct a 3.6 kW photovoltaic power system. Third Sun Solar and Wind Power, located in Athens, Ohio designed the system that was specified to allow for expansion to at least 11 kW. Our roof facing U.S. 33 is mostly a southern exposure and has enough surface area to accommodate this expansion. This system consists of 20 Evergreen ES-180 modules, all hardware, some technical direction, shipping, and a Fronius IG 4500 inverter. To save money, it was decided that WNF would do the installation in house. We hired a qualified electrician to do the final testing and electrical hook-up.

The 3.6 kW system is about 95 percent efficient. The inverter allows for displays of several system features. We expect to hard wire from the inverter to a monitor display in our welcome center so that visitors can view the elements of this system in real-time. In the future we hope to allow these display elements to be viewable on our web site. Also, we hope to enlarge our system as funding allows and possibly provide for a battery array backup. We do have net metering, so we conceivably could someday become an electrical power supplier to the grid.

Additional information about Ohio's only National Forest can be obtained at www.fs.fed.us/r9/wayne/ or by calling (740) 753-0101.