

Ecosystems Gain Strength Through Partnerships

by Vanessa C. Kauffman

River ecosystems are complex and perform several natural functions important to living creatures, including people. They provide habitat for many species of fish, waterfowl and wildlife, move water through the landscape and serve as wildlife migration corridors. A river ecosystem includes not only the river itself, but also the land around the river—its watershed. The land surrounding rivers provides diverse habitats, including wetlands, grasslands and woodlands. These lands, or riparian areas link river ecosystems with upland ecosystems. Given the fluid nature of water, protecting aquatic biodiversity is no easy task. Managing any one resource affects the others in an ecosystem. Human activities upstream can affect a part of the ecosystem many miles downstream.

Protecting a vibrant ecosystem like the St. Clair River is a major focus for the surrounding communities along the river. The waters of Lake Huron flow down the St. Clair River to the St. Clair Flats delta and into Lake St. Clair, connecting a vital shared resource between the United States and Canada. This 64 km connecting channel is an important international waterway, with heavy demands put on it as a shipping channel and as a source of water for power generation, municipal water supply, recreational uses--including boating and fishing--and industrial cooling and process water.

Over the years, the St. Clair River has become a heavily developed corridor, leading to habitat fragmentation and dramatically reducing the overall quality of the ecosystem. Less than five percent of all natural riparian areas still exist, in which wildlife is challenged to survive. Prairie habitat has seen the greatest impact, with less than one percent of pre-settlement habitat remaining in Ontario and southeast Michigan today. Fortunately, because of the importance of the area for waterfowl and fish populations, the St. Clair River increasingly has become a focus of international efforts to improve the existing habitats.

The St. Clair region historically was a landscape of great biodiversity. Along the shoreline of the St. Clair River and Lake St. Clair, emergent marshes would slowly transition into wet prairie, prairie and into oak-savanna communities on the beach ridges of the glacial lakeplain. Further into the interior, oak-hickory forests dominated the till plain, while beech-maple forests covered features with more relief. In lower depressions left by the glaciers, wooded wetlands--dominated by ash--pockmarked the landscape. The mosaic of natural communities that comprise these ecosystems collectively makes up the natural heritage of the region.

With the Wildlife Habitat Council (WHC), the vital link between people and habitat is being reestablished and fostered. WHC is a non-profit, non-lobbying organization whose mission is to increase the amount of quality wildlife habitat on public, private and corporate lands. Keeping in mind that 1/3 of the land base in the U.S. is corporately owned, if we are truly going to sustain populations of native wildlife we cannot depend only on public land holdings to fulfill their needs. WHC engages corporations globally in the effort to restore, protect and manage wildlife habitat.

In 1992, WHC initiated a program called *Waterways for Wildlife*. This voluntary, cooperative program engages the leadership of the private sector for the conservation and protection of the vast natural resources along river corridors and watersheds. After successfully establishing the first program, the Cooper River Corridor Project in South Carolina, WHC began developing this program in mid-1995 for the St. Clair River Basin.

This approach to ecosystem-wide habitat management in the Great Lakes area has encouraged generous support from numerous corporations, government agencies, organizations, local schools and volunteers. The web site for the St. Clair River Basin Project, <http://www.wildifehc.org/stclairwaterways>, serves as an informational source for participants, including links and articles of interest.

Wetlands

The BP St. Clair Terminal located along the Pine River and Jordan Creek in St. Clair, Michigan, has over 125 acres that surround the plant and provide habitat for numerous species of wildlife. Wildlife team members at the site began a five-acre wetland restoration project with the help of the U.S. Fish and Wildlife Service. An old culvert under an access road was replaced with a water control structure, with the help of Ducks Unlimited, Inc. Employees at the site maintain the desired water levels, which returns standing water to the area year-round. This stable water level is key for native wetland plant growth, and the new water control structure will help reestablish native wetland species throughout the area. Wetland projects help to slow the amount of stormwater runoff into streams and help to improve the health of the watershed, as well as provide habitat. Many species of birds and mammals rely on wetlands for food, water and shelter, especially during migration and breeding.



A great fritillary sucks nectar from a patch of wild bergamot at BP's St. Clair Terminal. Photo courtesy of Wildlife Habitat Council

The team partnered this past spring with the Michigan Department of Natural Resources and the U.S. Fish and Wildlife Service on a prairie project. Together, they planted approximately ten acres of native tall grass on old fields that were routinely mowed. Abundant rainfall has helped establish the prairie. The employees are working towards applying for WHC certification this year. WHC's *Corporate Wildlife Habitat Certification/International Accreditation* program recognizes commendable wildlife habitat management and environmental education programs at individual sites. The benefits of being certified by WHC are many such as third-party validation and long-term management for wildlife.

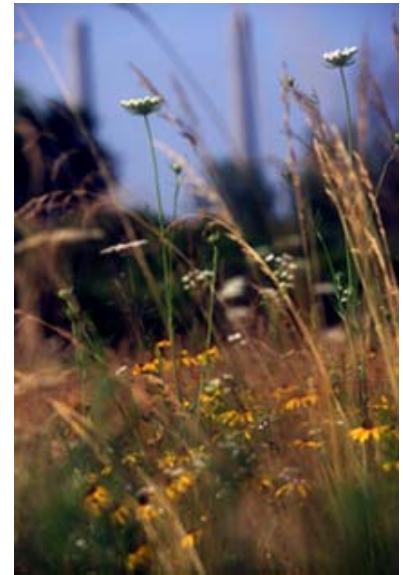
Woodlots

The Belle River Power Plant is Detroit Edison's newest fossil-fueled plant in the Detroit Edison system, a subsidiary of DTE Energy, and is located on 2,200 acres in parts of both China and East China Townships of St. Clair County. The plant is approximately two miles from the St. Clair River. When Detroit Edison initiated construction of the Belle River Power Plant property in 1973, the site contained primarily woodlots and abandoned croplands, with some

acres still under agriculture. In 1981, Detroit Edison agreed with the U.S. Fish & Wildlife Service to manage portions of the Belle River Power Plant site as wildlife habitat. The goal was to improve habitat quality on undisturbed portions of the site to offset permanent habitat losses due to plant construction. Wildlife habitat quality and quantity were assessed before and after construction and specific recommendations were made, including a requirement for site inspections at five-year intervals.

To expand upon the size of the woodlots on the property and to connect fragmented habitat, nearly eight acres were planted with 4,790 trees in spring 1996, including green ash, eastern red cedar, Sargent crabapple, Washington hawthorn, black locust, red maple, bur oak, and Norway spruce. In 1996, the site first received WHC certification and was recertified in 1998.

In 1997, in an effort to increase the abundance and diversity of plant species, which provide additional food and cover sources for wildlife, 22,420 new trees were planted on 35 acres, while 1,850 trees were replaced that had died after the 1996 planting. Maintenance continues today. The planting of the trees on the top, slopes and flats of the berms surrounding the eastern side of the plant property has transformed it from a mowed monoculture to a diverse wooded area which provides food and habitat for wildlife. The trees also act as a screen to block any dust from plant operations from impacting the neighbors.



Numerous species of native wildflowers bloom on the open fields that surround DTE Energy's Belle River. Photo by Joseph Crachiola

A nature trail has been proposed for inclusion in the 2001 enhancement projects. The trail will encourage employees to experience the surrounding natural area, as well as increase awareness and participation in Green Team activities. A nature trail also presents an opportunity to engage the public in learning and exploring about the natural history of the area during tours of the plant. In an area that is becoming increasingly suburbanized, the Belle River Power Plant property remains as a large tract of habitat available to wildlife.

Prairies

Historically, pockets of tall grass prairie stretched from the Great Plains into southwest Michigan, up into the thumb. Today, remnants of those prairies dot the landscape along railways and other undisturbed areas in St. Clair County. In the inland margins of the St. Clair River delta exists a special type of prairie, called lakeplain prairie. Lakeplain prairie occurs on the clay sediments left behind as the melting lobes of the Wisconsin ice sheet retreated over 10,000 years ago. Lakeplain prairies are found on poorly drained areas that seasonally flood. They are some of the most diverse plant communities found in Michigan, as they can contain as many as 200 distinct species.

In Sarnia, close to the southern end of Lake Huron, Ontario Power Generation (OPG) has begun the rehabilitation of a three-hectare tall grass prairie at its Lambton Generating Station. The site is located adjacent to the St. Clair River and contains over 136 hectares of woodlots, grasses and areas. The purpose of the prairie project was to contribute to the restoration of tall grass prairie

within its historical range, and improve and increase wildlife habitat on site. Once restored, this area would provide additional habitat for species such as butterflies and other insects, songbirds, shorebirds, waterfowl and mammals.

Employee and community volunteers together have planted over twenty different species of prairie forbs or wildflowers. The prairie now has three different genuses of warm season grasses, including switch grass, little bluestem and big bluestem. In spring 2001, a prescribed burn was conducted to encourage production and flowering of native grasses and forbs, and to discourage growth of woody and invasive species. This method has a dramatic, positive impact in increasing native plant diversity and structure in prairies. This summer, volunteers will be enhancing the prairie with a greater diversity of wildflowers. The prairie has taken a few years to establish itself, but OPG is working hard to manage the prairie and enhance its quality through planting plugs and managing invasive species. The site attained WHC certification in 1997 and for their ongoing conservation efforts, received recertification in 1999.

Conservation Efforts Continue in Michigan

Several other Michigan rivers also boast wildlife habitat programs. Consumers Energy manages wildlife habitat on its lands surrounding 11 hydroelectric plants on the Au Sable, Manistee and Muskegon rivers. The January/February 2001 issue of *Land and Water* described the utility's comprehensive wildlife habitat programs in partnership with WHC and other organizations. The programs have earned the utility the Edison Electric Institute's National Land Management Award and other recognition.

The utility's efforts on the three rivers include: maintaining a 200-foot buffer zone around most of the dam's reservoirs; an extensive streambank restoration program; a bald eagle management plan; planting warm season grasses along electric transmission line rights-of-way; and maintaining nesting structures for many bird species. Other programs focus on reintroducing the threatened trumpeter swan to the Au Sable and Manistee river watersheds, and protecting and improving habitat for the federally endangered Indiana bat (Manistee River) and Karner blue butterfly (Muskegon River). WHC certified the utility's river wildlife habitat efforts in 1999.

Involvement Builds Community

The *Waterways for Wildlife* program has also had success in the Pittsburgh region, the Three Rivers Habitat Project, and WHC will soon be launching a program along the Houston Ship Channel in Texas. Members come together to celebrate their stewardship achievements at WHC's Annual Symposium, scheduled this year for November 12-13 in our Nation's Capital.

Watershed protection is an important ongoing process in the St. Clair region. As individuals become aware of and interested in this watershed, they are increasingly becoming more involved in the decision-making, as well as the hands-on protection and restoration efforts. Through such involvement, watershed approaches build a sense of community, increase commitment to the actions necessary to meet environmental goals, and ultimately, improve the likelihood of success for environmental programs. The immense support of so many international partners has begun to restore and enhance the ecosystems of the St. Clair River that make this area biologically and economically vibrant. With the concerted efforts shared among the project partners, the

preservation of biodiversity will be ensured. L&W

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