

Threats to our natural heritage

Although we are blessed with a rich natural heritage in the Lake Erie Allegheny region, this biological diversity is under great stress. More than 200 years of timbering, farming, industry, and urban development have transformed the landscape. Nature has been squeezed into small, fragmented, vulnerable patches.

Many of the natural communities that existed prior to European settlement have been degraded or lost. Some have disappeared suddenly, plowed under for farming or, more recently, bulldozed for a shopping center or a subdivision. Others have declined gradually from the impacts of pollution, livestock grazing, overabundance of white-tailed deer, or the invasion of exotic species such as purple loosestrife or zebra mussels. Still others have been altered by the effects of global climate change.

In response, people are coming together in local communities and watersheds to conserve the best places remaining—and restore those that have been degraded. They are protecting endangered species, establishing greenways, restoring river watersheds, and expanding parklands.

The motivations are obvious. People want a healthy environment. They want their children to have the opportunity to experience the wonders of nature. And they know that nature contributes to overall quality of life, which in turn will help stimulate the economic recovery of the region.

Major threats to biodiversity

- Habitat destruction from development
- Alteration of physical processes, such as lake levels, stream flows, and groundwater hydrology
- Altered species interactions, particularly competitive pressure from invasive, non-native species and the browsing of overabundant white-tailed deer
- Global climate change
- Pollution from industry, agriculture, and urbanization



Ohio's 10 worst non-native plants

- ☞ Autumn olive (*Elaeagnus umbellata*)
- ☞ Buckthorns (*Rhamnus* sp.)
- ☞ Common reed grass (*Phragmites australis*)
- ☞ Eurasian honeysuckles (*Lonicera* sp.)
- ☞ Garlic mustard (*Alliaria petiolata*)
- ☞ Japanese knotweed (*Polygonum* sp.)
- ☞ Narrow-leaved cattail (*Typha angustifolia*)
- ☞ Purple loosestrife (*Lythrum* sp.)
- ☞ Reed canary grass (*Phalaris arundinacea*)
- ☞ Tree of Heaven (*Ailanthus altissima*)

Source: Ohio Division of Natural Areas and Preserves

The deer problem

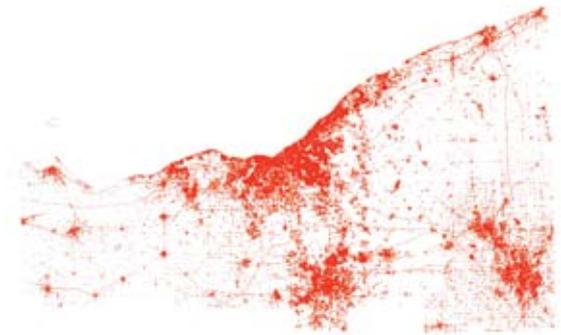
One of the greatest threats to biodiversity in the region is the overabundance of white-tailed deer. At high densities, deer can wipe out the understory plants of a forest and dramatically alter the species composition of natural plant communities. Indeed, largely because of deer pressure it's getting hard to find a forest in the region that has not been affected. Therefore, the development of humane and politically acceptable means of controlling deer populations is a priority for managers of natural areas.



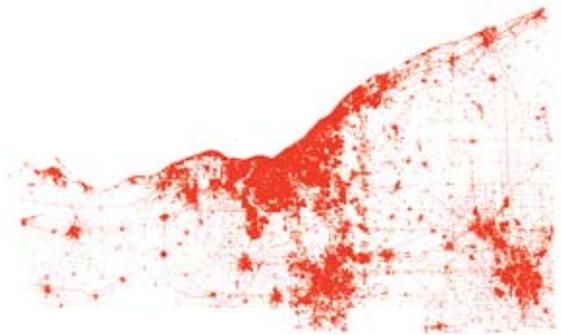
Room for nature?

These maps of the Western Reserve area in Northeast Ohio show (in red) the extent of developed land in 1980, 2000, and projected to the year 2020. While the area is not growing much in population, much more land is being developed. This trend can be seen throughout the Lake Erie Allegheny region.

(Analysis for EcoCity Cleveland by the Northern Ohio Data and Information Service at Cleveland State University)



Developed as of 1976–1981



Developed as of 2000



Projected development (2020)

Valuable in countless ways

A complex web of relationships binds humans to the natural systems all around. Not only does the beauty of nature nourish one's soul, but healthy, functioning ecosystems also serve human needs in many other essential ways by supplying:

- ☞ Clean water and air
- ☞ Climate regulation
- ☞ Flood control
- ☞ Pollination of crops
- ☞ Pest and disease control
- ☞ Nutrient cycling
- ☞ Chemicals that can be used for new drugs
- ☞ Quality of life for recreation, tourism, and economic development

Once these ecosystem services are lost, they can be very costly to recreate. It pays to conserve nature to maintain these life-giving benefits.