Citizens' Bioregional Plan for Northeast Ohio

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Drawing lines

"Life is like art. You have to draw the line somewhere."

We've been thinking about that saying recently. Here at EcoCity Cleveland we've been drawing a lot of lines. And we've been drawing the lines on *maps*, which can be a dangerous thing to do.

After all, maps do more than show us how to get from place to place. They describe how humans have divided the land for various purposes. They tell us where our property begins and ends. They define the boundaries of our communities and where our children go to school. In many ways they are graphic representations of our hopes and fears.

When you try to draw a new line on a map—whether for a new road, subdivision, shopping center, or park—all kinds of interests can be disturbed. People's expectations can be violated, communities can feel threatened, and property values can be altered. So you should be careful about drawing lines on maps.

On the other hand, it is inevitable that lines will be drawn. If we don't draw lines for ourselves, someone will draw them for us. Therefore, if we care about our homes and communities, we should become involved as citizens in drawing the maps that will shape our future. And, since many of the forces that affect land use occur at the regional scale, we should join with citizens throughout Northeast Ohio to plan, set priorities, and create a regional vision.

That is a motivating impulse behind our Citizens' Bioregional Plan project. We believe that many citizens in the region are concerned about development patterns—particularly the sprawling, low-density development around the edges of the metropolitan area and the lack of redevelopment in older urban areas. But citizens lack the data and tools to create alternative scenarios. Public planning agencies, while often sympathetic to the concerns, reflect the fragmented political structure of the region and also have trouble taking a regional perspective. So there is room for a nonprofit organization such as EcoCity Cleveland to step in and play a role. This special publication summarizes the results of our two-year Bioregional Plan project—an effort that involved citizens throughout the region, raises questions about development patterns, and proposes positive alternatives. We hope that it will inform the civic dialogue and inspire us all to become better stewards of the wonderful lands, waters, and communities of Northeast Ohio.

Grand River in Lake County

Photo by Gary Meszaros

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For more maps and information, check out our Web site at www.ecocleveland.org.

Thanks

The development of our Bioregional Plan was supported by generous grants from the George Gund Foundation, Cleveland Foundation, and Abington Foundation. Funding for this special publication came from the Cyrus Eaton Foundation. Software for geographic information systems was donated by the Environmental Systems Research Institute (ESRI). And the U.S. Environmental Protection Agency supported the creation of our Web site, which features interactive mapping capability.

We also thank the staff at Cleveland State University's Northern Ohio Data and Information Service, who assisted with data analysis, map creation, and Web site construction. Staff at local metropark districts and planning agencies shared data with us and participated on the project's technical advisory committee. And hundreds of people across the region attended meetings to learn about the project and offer their comments.

With all the help, we believe this report reflects the collective wisdom of some of the best minds in our region. It's been exciting to work with everyone to draw new lines on our bioregional map.

—David Beach, Director
—Bradley Flamm, Project Manager

Map from 1826 of the Ohio Western Reserve and Fire Lands Western Reserve Historical Society

Change in the Western Reserve

This used to be one of the greatest counties in the world for a great variety of game. There were the Elk, Deer, Bear, Wolf, Panther, Wild Cat, Otter, Beaver, Wollynigs, Porcupine, Raccoon, and a great variety of small animals. Of the feathered flock, there were Swans, Geese, Ducks, Turkeys, Bald Eagles, Grey Eagles, Ravens, Buzzards, Crows, Owls, and a great variety of small birds, that used to make the forest ring with their sweet songs, as one happy family of the forest. And where are they now? The white man has thrown death and destruction among them, and they have all disappeared and gone to return no more forever.

—Christian Cackler,
Recollections of an Old Settler
Portage County, c. 1870

Surveying the wilderness

While early surveyors in North America used a system of metes and bounds that divided the land along its natural contours, Gen. Moses Cleaveland's party laid down an artificial grid that divided the land into 5-mile by 5-mile squares. Each square was identified as a numbered "township" in a numbered "range." Initially, this work was carried out only on land east of the Cuyahoga River, since at this time the river marked the western boundary of the United States.

Cleaveland's party chose the grid system for several reasons. The first was to divide the land equitably amongst the stockholders of the Connecticut Land Company. In addition, the grid would facilitate the sale of the land to the general public and provide long-term security of title for each parcel.

The resulting checkerboard bore no relationship whatsoever to the natural features of the land. In some places, the rigid survey lines took the surveyors through dense swamps. Atwater writes: "On the 56th mile is a Cranberry swamp…so miry that it is dangerous to attempt and difficult to perform a passage through either by man or beast." At other times, heavy underbrush obstructed their efforts. "The bushes are Thorns, Plums, Crabapples, Hazelnut ... all united in their branches which very much hindered our progress." Only where the grid intersected Lake Erie and the Cuyahoga River did it yield to the natural contours of the landscape.

Thus, while the grid system of surveying sped the transfer of land, it was divorced from the features of the land. By imposing a new logic on the natural landscape in the Cuyahoga Bioregion, the surveyors launched a process that would increasingly distance human inhabitants from the natural world around them. Responsibility for this separation lay not with the surveyors themselves, but rather with the mind set of their culture as a whole, which maintained a view of land ownership that contrasted sharply with that of the indigenous inhabitants.

—Benjamin Hitchings
(from an essay about the 1796 land survey of the Western Reserve in *The Greater Cleveland Environment Book*)

Bioregional values

The Citizens' Bioregional Plan is designed to enhance our region's ability to guide development and create livable communities based on these values:

- Clean air and water
- Access to nature
- The ability to get from here to there
- Safe, stable neighborhoods
- Resources for future generations
- A strong regional economy

Guiding principles

- Promote understanding of the Northeast Ohio bioregion—the unique interdependence of natural ecosystems and human settlements in this place.
- Involve citizens of the region in planning for livable communities and an environmentally healthy future.
- Revitalize the older cities of the region and protect the rural character of villages and towns.
- Encourage pedestrian-friendly neighborhoods by providing a variety of housing types, mixing land uses and promoting transit.
- Give residents of the region more transportation choices and help them reduce their dependence on cars.
- Conserve green spaces throughout the region, in both urban and rural settings.
- Preserve farmland and strengthen the agricultural economy.
- Reduce long-term costs to taxpayers by building only the infrastructure communities can afford to maintain.
- Offer a pro-development vision (but be careful about where development occurs and the form it takes).

A region at the crossroads

In recent years we've seen growing concerns about development patterns in Northeast Ohio. People are realizing that they don't like what's happening to their communities—both in the urban core and out in the country.

Residents of older cities and suburbs are seeing that the "growth" at the edges of metropolitan areas is often just outmigration from the urban core—a costly and destructive shell game of population and tax base that undermines the long-term investment society has made in existing communities. Residents of the new boom towns are finding that unmanaged growth often brings sudden demands for city services, higher taxes and the loss of the rural character that attracted them to the country in the first place. Environmentalists are understanding how the way land is developed impacts air quality, water quality, and energy use. Opinion polls are showing that people see the wisdom of maintaining existing communities and preserving open space.

In sum, people are agreeing with the words of Richard Moe of the National Trust for Historic Preservation who says, "Development that destroys communities and the places people care about isn't progress. It's chaos."

Images for alternative futures

What people have a harder time seeing is how things could be different. They lack mental images of more desirable patterns of land use. They have a hard time imagining methods which could change development patterns. Moreover, they lack a vision of the

Continued on the next page

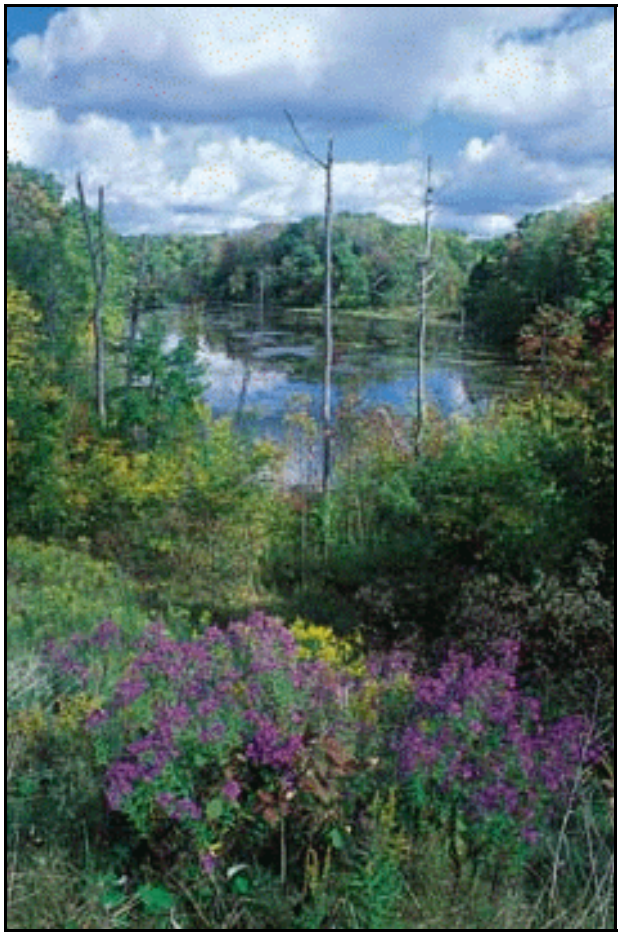
bioregion—a landscape knitted together by natural

Americans initially moved to the suburbs for privacy, mobility, security and home ownership. What we now have is isolation, congestion, rising crime, pollution and overwhelming costs—costs that ultimately must be paid by taxpayers, businesses and the environment. This sprawling pattern of growth at the edges now produces conditions which frustrate rather than enhance daily life.

—Peter Calthorpe,
architect and author of
The Next American Metropolis

...[I]nstead of perceiving the landscape as a commodity to be exploited, landscapes should be perceived in the same way as works of art and cherished and treated with respect. Integrating art and life implies a reciprocal relationship with the land: that when we take something from the land, we must give something back.

—Philip Lewis, *Tomorrow By Design*



Punderson State Park Photo by Gary Meszaros

systems rather than a region divided by cities and counties.

The Citizens' Bioregional Plan project, which is summarized in this publication, attempts to provide some of these images. It offers conceptual maps to help people envision alternative land use futures for the region. The maps will help citizens think about questions such as:

- What lands in our region are likely to be developed in the next decade?
- Where might a regional greenbelt (an outer Emerald Necklace) be created?
- Where should new development be concentrated to promote livable communities and mixed land uses?
- How could the building industry's legitimate need for buildable land be satisfied in the most sustainable manner possible?
- Where should transportation improvements be focused to link town centers and reduce dependence on the automobile?
- How might sensitive natural areas and open spaces be preserved for future generations and to protect the region's biological diversity?
- How can farming have a viable future in Northeast Ohio?

The Bioregional Plan seeks to make these questions part of the public dialogue. It's an attempt to promote a wide-ranging discussion about what it would mean to create a sustainable pattern of settlement in Northeast Ohio. It provides citizens with a positive vision to work towards, so they don't always have to be NIMBYs opposing development. And it will help public officials think regionally.

Our process

During the past two years the staff of EcoCity Cleveland developed the plan through a process of GIS (geographic information system) analysis and citizen involvement. GIS allowed us to process vast amounts of data about land use trends and then produce computer-generated maps of alternative scenarios. Most of the data came from local planning agencies, park districts and universities. We had help on technical mapping issues from a technical advisory committee of local GIS experts and from the Northern Ohio Data and Information Service at Cleveland State University's College of Urban Affairs.

We presented preliminary maps and concepts at 30 meetings throughout the region. The meetings were hosted by environmental groups, land trusts, soil and water conservation districts, planning agencies and other organizations. Near the end of the process, we held four public meetings (in Cleveland, Akron, Elyria and Kirtland) to obtain final citizen comment on the draft plan. In all, nearly 1,000 people attended the meetings.

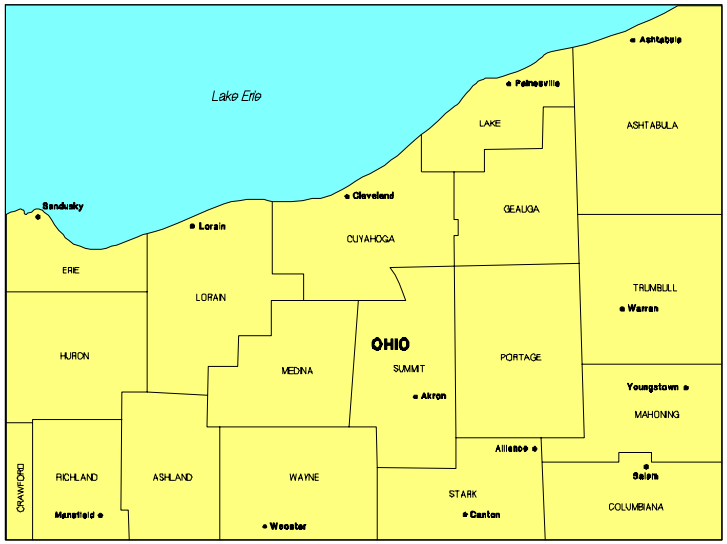
The completed plan will be presented at a Citizens' Bioregional Congress to be held in Cleveland on May 15, 1999. Citizens from around the region will be invited to attend to ratify the plan, pledge to support its implementation, and generally celebrate the bioregion.

In the coming years, EcoCity Cleveland will continue to promote the ideas contained in this plan. We will develop new projects to support implementation. And we will keep supporting the civic dialogue with our publications and interactive Web site. We hope the Web site will become a particularly useful tool for citizens, as it will allow anyone with Internet connections to view and manipulate the Bioregional Plan maps.

Sense of urgency

We feel a sense of urgency about the need to re-imagine Northeast Ohio. We are on the verge of a huge leap in the amount of developed land in the region, even though we are growing slowly in population and employment. In effect, a relatively stable population is consuming more and more land per person. As a result, we are spreading out our assets, undermining the health of existing urban areas, destroying valuable farmland and open space, and creating intractable environmental problems.

Will we find more sustainable ways to develop our communities? We can—if we imagine the alternatives and work together for a different future.



Study area: The Bioregional Plan focuses on Cuyahoga County and the six surrounding counties—Lorain, Medina, Summit, Portage, Geauga, and Lake.

What's a bioregion?

What if you couldn't use the geographical names and boundaries—cities, counties, states—which humans have imposed on the landscape to describe where you live? Well, you'd probably have to look at the landscape itself for a new way to describe your home. You might, for example, say that you live near a river or a lake. Or you might live in an area characterized by a beech-maple forest or outcroppings of a certain erosion-resistant sandstone. Or the dominant feature in your life might be an urban landscape of concrete and asphalt. In any case, you would have to look about your home with fresh eyes and find new landmarks. And, ultimately, your new way of defining your home territory—your new "address"— would tell a lot about what you value in your surroundings.

This creative act of redefining your home in terms of patterns in the landscape is the essence of bioregionalism. A bioregion, or life-place, is a geographic area of interconnected natural systems and their characteristic watersheds, landforms, species and human cultures. It's a place that "hangs together" in ecological and human terms. And it's typically small enough so that you can know it deeply and learn how to care for the natural systems that support all life within it. As Kirkpatrick Sale says in his book *Dwellers in the Land*, the bioregion is the scale at which "human potential can match ecological reality."

How to read the maps

The maps on the following pages are presented in the order of an argument. They start by describing the natural features of the seven-county region (our study area). Then we present maps showing where development trends are taking the region—including the outmigration of population and the movement of wealth. Next come a zoning map illustrating that almost the entire region is zoned for development and a transportation map showing how proposed highway projects facilitate sprawling development. The data about where we're going is summarized in a "lands at risk" map that shows where development is likely to take place in the next 20 years.

Then come the alternatives. We present a map of urban centers and town centers where development should be encouraged. An Outer Emerald Necklace map presents an ambitious vision for open space protection. And, finally, a composite map brings together ideas for development zones and preservation zones.

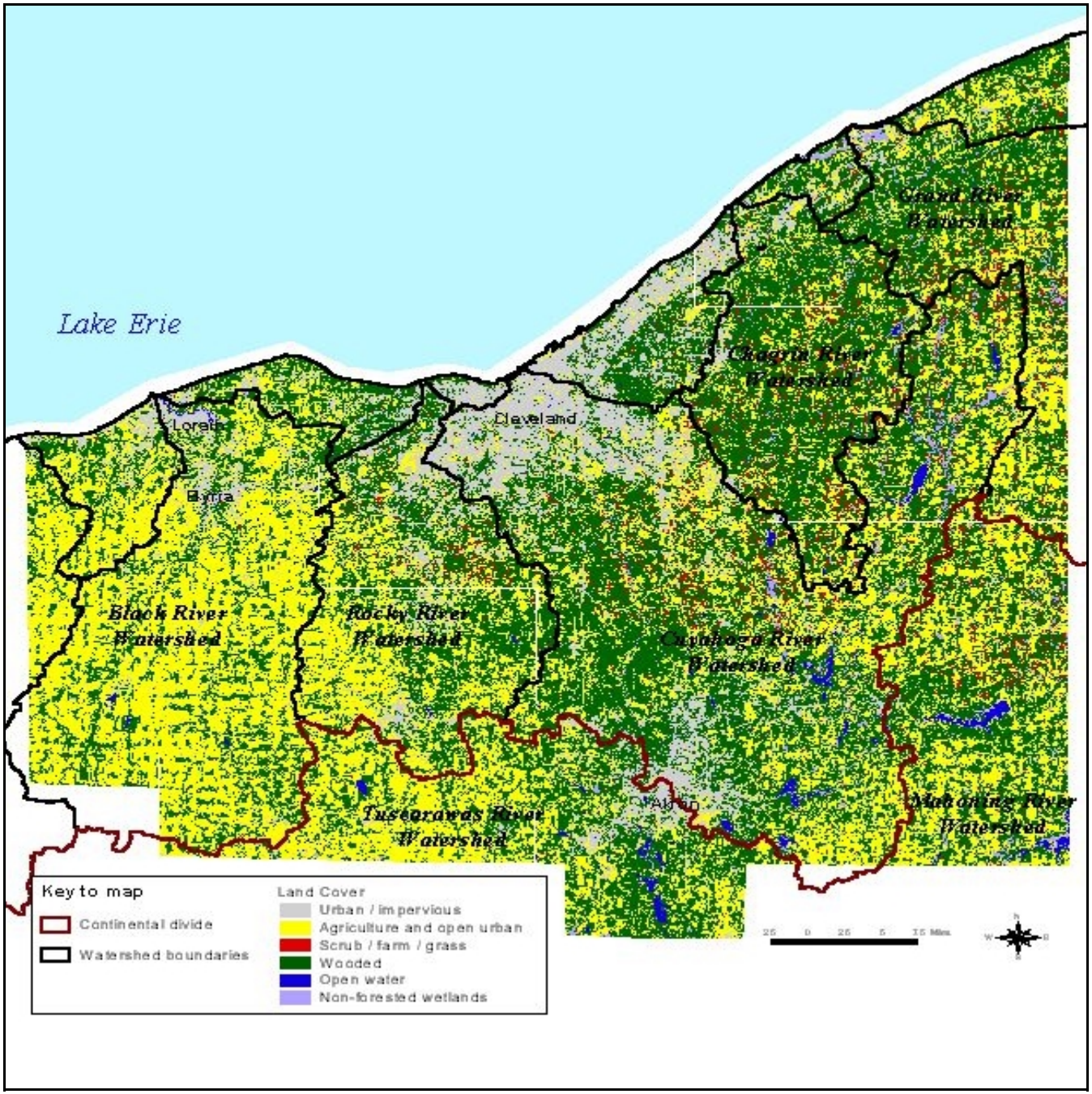
Disclaimer

Please keep in mind that the maps of future scenarios are *conceptual.* While they are based on good data and professional judgment, they are not precise land use plans. We have merely identified areas of opportunity in a general way. No map implies that any particular parcel of land will be bought or sold for development or public uses.

Church in Kirtland

Brandywine Falls Photo by Gary Meszaros

Land and water



What: Map of river drainage basins and land cover in the seven-county region, showing urban areas, forest cover, agricultural areas and water features. Note the concentration of forest cover east of Cleveland and in the Cuyahoga Valley, as well as the amount of farmland in Lorain and Medina counties.

Why: In a bioregional analysis it's important to start with the natural features of the landscape. We need to know where our rivers flow, where are the best places to grow food, what areas are best to develop and what areas should be left for nature.

How: The land cover categories were derived by the Ohio Department of Natural Resources from a 1994 Landsat satellite image.

Map prepared by Northern Ohio Data and Information Service (NODIS)
A member of the Ohio GIS-Network
The Urban Center, Levin College of Urban Affairs
Cleveland State University, 1998
Data sources: 1994 Landsat TM (processed by Ohio Department of Natural Resources), United States Geological Survey (USGS)

The bioregion from space

To learn more about our home region here in Northeast Ohio, most of us refer to the maps that are readily available to us. More often than not, those are road maps designed to help us navigate the region by car. With them, we can easily pick out the city, township and county borders in Northeast Ohio, as well as the highways and roads that will get us from one place to another.

But if we want to explore the bioregion, we need to look beyond those political boundaries and roads to see the underlying natural features. If we succeed, we'll see the boundaries between watersheds and the way the Allegheny plateau to the east descends to the lake and till plains to the west. Forested areas and farmland will reveal themselves, as will the protected green spaces and the urbanized areas where most of our region's residents live. Thinking bioregionally, we'll be able to follow those features where they lead us, whether they're bounded by municipal and county lines or they meander through dozens of cities and townships.

Our bioregional map includes five major watersheds drained by the Black, Rocky, Cuyahoga, Chagrin and Grand rivers. The Mahoning and Tuscarawas rivers and smaller creeks (such as Euclid Creek and Doan Brook) also drain portions of our region. These rivers and their watersheds vary widely in character from the heavily urban and industrial lower Cuyahoga to the state-designated "wild and scenic" Grand River. Protecting these rivers and their adjacent wetlands and floodplain forests is one of our most important bioregional tasks.

Silver Creek in Geauga County

Black River west branch falls in Elyria

If enough people had spoken for the river, we might have saved it. If enough people had believed that our scarred country was worth defending, we might have dug in our heels and fought. Our attachments to the land were all private. We had no shared lore, no literature, no art to root us there, to give us courage to help us stand our ground. The only maps we had were those issued by the state, showing a maze of numbered lines stretched over emptiness. The Ohio landscape never showed up on postcards or posters, never unfurled like tapestry in films, rarely filled even a paragraph in books. There were no mountains in that place, no waterfalls, no rocky gorges, no vistas. It was a country of low hills, cut over woods, scoured fields, villages that had lost their purpose, roads that had lost their way.

—Scott Russell Sanders,
Writing from the Center
(describing his childhood along
the Mahoning River
in Northeast Ohio)

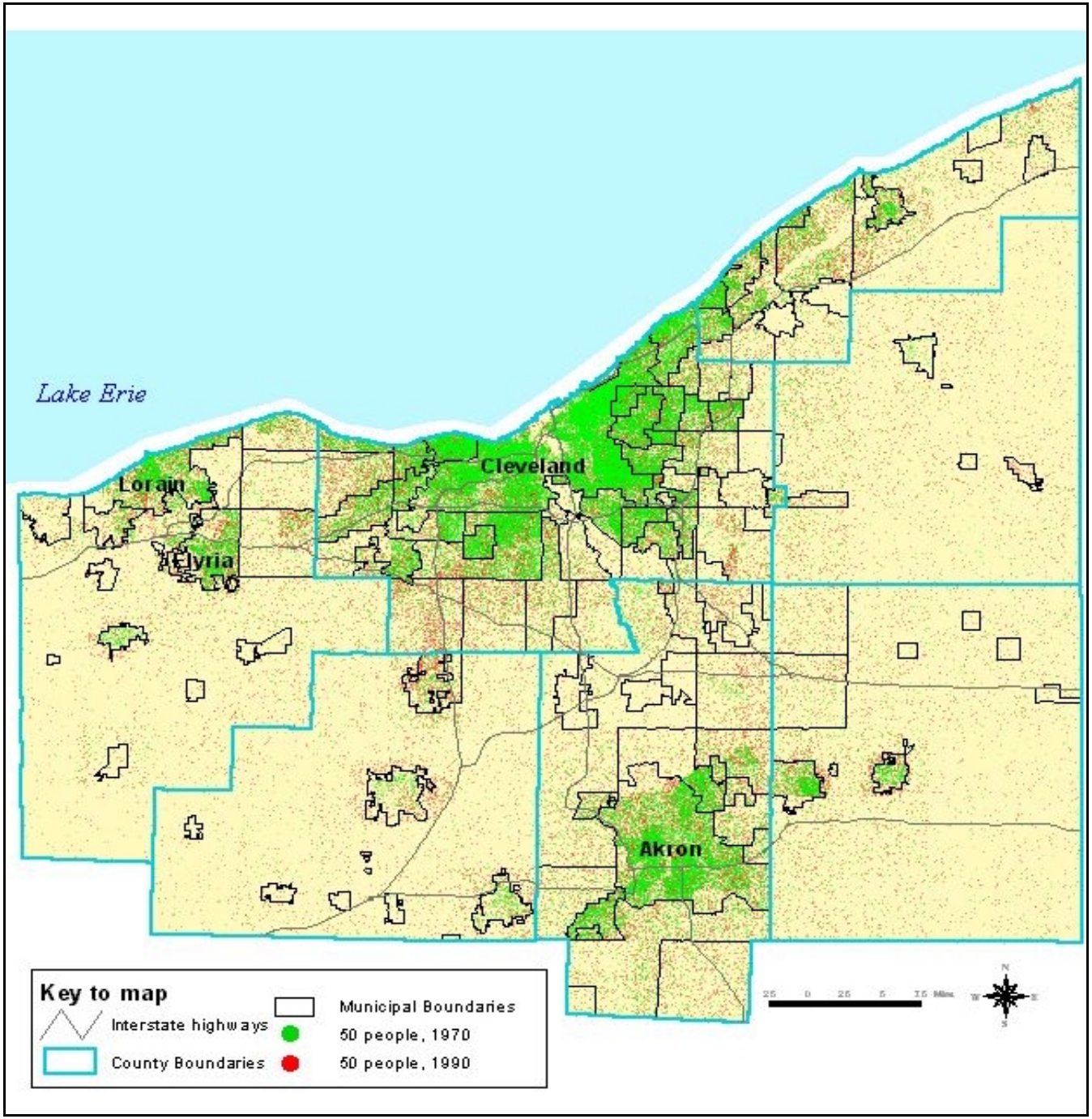
Outmigration in the region

What: Where people lived in the seven-county region in 1970 (green dots) and 1990 (red dots). The map shows that population spread out during the 20-year period, even though the region's population declined by about 200,000 people.

Why: We need vivid pictures like this to appreciate how Northeast Ohio has experienced sprawl without growth, a wasteful process of land consumption and duplication of infrastructure.

How: Each dot on the map represents 50 persons. The region had about 3 million people in 1970 (green dots) and about 2.8 million people in 1990 (red dots). By mapping the locations residents for the two different census years and then overlaying the results, you can see where population shifted.

Map prepared by Northern Ohio Data and Information Service (NODIS),
A member of the Ohio GIS-Network
The Urban Center, Levin College of Urban Affairs
Cleveland State University, 1998
Data sources: U.S. Census Bureau Population Statistics, U.S. Census Bureau TIGER files, Ohio Department of Transportation (ODOT), Northeast Ohio Areawide Coordinating Agency (NOACA) Population Projections



Moving out

Ohioans have become profligate consumers of land. Metropolitan areas in Ohio have been spreading outward into the surrounding countryside at a rate five times faster than population growth. In Northeast Ohio, Cleveland and Cuyahoga County have seen declining populations (as have Akron and Summit County) at the same time that neighboring rural counties have been growing in population.

Some claim that this pattern of outmigration is simply the result of personal preferences (i.e., the American Dream of a big house and yard in the suburbs) and the workings of the free market. But a variety of public policies and subsidies—such as tax abatements and the highways that open up new land for development—facilitate the moves. In other words, public policy helps to create a playing field where it's easier to build on farmland than to redevelop existing urban areas.

In the next 20 years, these trends will create an extraordinary dilemma for the region's central county. Cuyahoga County will be the first county in the state to build out—to fully develop all its land. Then it will have to ask the novel question: What next? How does a county reorient itself from growth and development to maintenance and redevelopment? No county in Ohio has had to face those questions. And it's apparent that Cuyahoga County can't face that future on its own. It will need help from the state—new state policies that redirect public investment to older urban areas. One model for reform is the Smart Growth program recently adopted in Maryland.

Moving to Lorain County

Population shifts

	1970	1980	1990
Cuyahoga	1,721,300	1,498,400	1,412,140
Geauga	62,977	74,474	81,129
Lake	197,200	212,801	215,499
Lorain	256,843	274,909	271,126
Medina	82,717	113,150	122,354
Portage	125,868	135,856	142,585
Summit	553,371	524,472	514,990
TOTAL	**3,000,276**	**2,834,062**	**2,759,823**

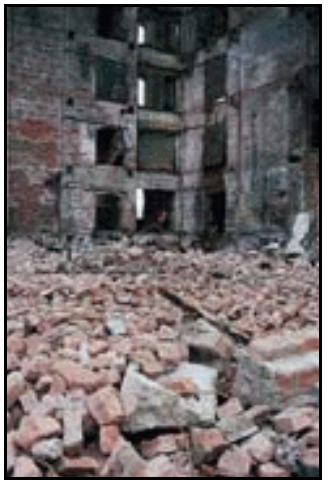
Source: U.S. Census

In 1996, officials of Cleveland's oldest suburbs formed the First Suburbs Consortium in an effort to preserve and protect mature communities across the state and to "level the playing field" in order to achieve balanced development. The Consortium is helping to organize a statewide coalition to scrutinize, and then redirect, public policies and public dollars in order to promote the following goals:

- Major reinvestment in fully developed communities and in existing infrastructure (schools, bridges, sewers and roads);
- Revitalization of traditional neighborhoods and their tax base;
- Enhanced quality of life and economic stability in our mature communities;
- Preservation of farmland and open space; and
- Protection of the environment.

If Ohio is to be a strong competitor in the global economy, it must achieve *real* growth rather than simply relocating existing businesses and duplicating expensive infrastructure.

—from a statement by the First Suburbs Consortium



Brownfield site in Cleveland