

Sustainable Cuyahoga

A toolkit of recommended best practices
for communities in Cuyahoga County



Version 3/22/2016



Cuyahoga County Executive message

We exist in a time when we have a moral obligation to the generations of current and future residents to achieve high environmental and sustainability standards. We must preserve our precious natural resources. The best practices included in this work compiled by our Department of Sustainability and the local non-profit group, GreenCityBlueLake Institute, are great examples of ways local communities can do well and do good at the same time — achieving high environmental and quality of life standards for decades into the future.

— Armond Budish
Cuyahoga County Executive

Cuyahoga County Council message

As a Cuyahoga County Councilwoman and former City Councilwoman of South Euclid, I understand the challenges cities in Cuyahoga County face in meeting their daily obligations to provide basic services for their residents. I believe the practices in this toolkit will assist with those challenges as well as facilitate forward thinking toward long-term sustainability goals. Climate change will necessitate governments, businesses, and individuals to use and produce energy differently and develop their communities in diverse ways. With all the natural resources this region has to offer, we must be proactive in protecting and ensuring their long-term sustainability. This guide provides a number of solutions to the challenges that lie ahead, and I am certain that the best practices suggested will help to get us started on the right path.

— Sunny Simon
Cuyahoga County Councilwoman

Sustainable Cuyahoga: A toolkit of recommended best practices for cities in Cuyahoga County was produced for the Cuyahoga County Department of Sustainability by the GreenCityBlueLake Institute of the Cleveland Museum of Natural History (www.gcbl.org).

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This document is available online at www.executive.cuyahogacounty.us/en-us/Sustainable-Cuyahoga.aspx. It will be updated regularly as new information becomes available. Please send corrections, additions, or other comments to the Cuyahoga County Department of Sustainability at sustainability@cuyahogacounty.us.

Call 216-443-3055 for technical assistance or more information.





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Jump in: Sustainability can seem overwhelming at first. So it's often best to begin with a few issues or specific recommendations and then gradually expand into a broader program. The important thing is to get started.

Introduction

Why pay attention to this?

In essence, sustainability is about doing things today to maintain health over the long term — the health of people, the economy, the environment, the whole community.

Local governments are on the front lines of sustainability. They are responding directly to citizen demands for more choices and better performance on issues such as energy, transportation, local food, and solid waste. They are realizing that action on such issues can make their communities healthier, more attractive, and more competitive. They also are realizing that a focus on long-term sustainability can save money and prevent problems in the long run. Moreover, in an age of climate change, they are realizing that the development of more sustainable communities not only helps to reduce greenhouse gas emissions but also

helps communities adapt and become more resilient.

To varying degrees, the 59 communities in Cuyahoga County have already begun their journeys toward greater sustainability. This toolkit is intended to highlight existing best practices and accelerate the transition. It's a resource from the county to help all communities achieve the highest possible standards of performance.

What's covered

The toolkit covers nine key issues: air quality, energy, food, green building and historic preservation, land use and development, solid waste, transportation, trees and land management, and watershed management. While the issues are presented separately, there are a lot of cross references between them. For example, the transportation section references land use issues, since

sustainable transportation is based on compact places where transit, biking and walking are feasible. Or the watershed management section references the trees and land management section, since tree cover has a big impact on water. This reflects the interconnectedness of the issues and the importance of integrated planning for sustainability.

Each issue section includes a brief summary of the issue and recommendations for what a local government can do in four areas:

- **Leadership and education** — Recommendations for informing residents and leading a civic conversation.
- **Municipal operations** — Recommendations for improving the things local governments have under their immediate control and for setting a good example.
- **Ordinances and policies** — Recommendations for enabling and/or requiring residents and businesses to do things.
- **Regional collaboration** — Recommendations about being engaged in larger initiatives that communities can't do individually.

What's not covered

This toolkit is designed to be an introductory guide — a summary of some of the key sustainability issues that communities are addressing today. It's not meant to be a comprehensive survey of the entire universe of sustainability. Important issues, such as education and economic development, aren't covered here. But it's hoped that this guide can be expanded in the future to include all three parts of the sustainability approach — environmental quality, economic prosperity, and social equity.

How was the toolkit developed?

The toolkit was commissioned by Cuyahoga County's Department of Sustainability and was compiled by the GreenCityBlueLake Institute (GCBL) of the Cleveland Museum of Natural History. To compile the ideas, GCBL consulted with many local experts and organizations. A draft was then circulated for comment to a broader network of people who work on the various issues (including those listed as local experts in each section of the toolkit). The draft was also reviewed by staff members of the Cuyahoga County Department of Sustainability, County Department of Regional Collaboration, County Planning Commission, County Soil and Water Conservation District, and County Solid Waste

Management District.

The final document reflects some of the best thinking in Northeast Ohio about the actions communities can take to become more sustainable.

Whom is this for?

This toolkit — with useful recommendations in a concise format — is intended to help busy public officials learn about the issues, get help from local experts, and take action. It's also intended to be a resource for citizens who want to work with local government officials to improve their communities.

Getting started

"Sustainability" encompasses a wide universe of issues and can seem overwhelming at first. No community can do everything at once. So it's often best to start with a few issues and recommendations and then expand gradually into a broader program. A good first step is to create a green team of municipal staff and citizens.

The important thing is to get started. Think of sustainability as a process of continual improvement.

What's next?

In the coming months, county staff will be reaching out to the cities, villages, and townships in the county to introduce this toolkit and explain the benefits of adopting its recommendations. County staff and affiliated agencies, such as the Planning Commission, will also provide technical support. To request a presentation about what your community can do, call the County Department of Sustainability at 216-443-3055.

Updates

This toolkit will be updated as new information becomes available. Please send your comments and suggestions to the Department of Sustainability at sustainability@cuyahogacounty.us.

Caveat

While this toolkit includes many proven ideas, communities should seek professional guidance before making changes to codes, ordinances, and policies.



The air is still unhealthy to breathe in Cuyahoga County, and vehicle emissions are a big part of the problem.

Air quality

The issue

While local air quality has improved in recent years, Cuyahoga County is part of a region that still does not meet federal standards for two key pollutants — ground-level ozone and fine particulate matter. (A small area in Cleveland also exceeds the lead pollution standard.) This failure to comply with the Clean Air Act not only affects people’s health but also can constrain economic development by making it more difficult to site new industrial facilities. In addition, many of the combustion sources that contribute to ozone and particle pollution also are sources of greenhouse gas pollution that causes climate change.

Ground-level ozone (not to be confused with the “good” ozone in the upper atmosphere that protects us from UV radiation) is not emitted directly into the air, but is created by chemical reactions between oxides of

nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. This is why ozone levels typically peak on hot, sunny days. Major sources of NOx and VOCs are emissions from motor vehicles, industrial facilities, electric utilities, and chemical solvents.

Breathing ozone can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. Ground-level ozone can also have harmful effects on sensitive vegetation and ecosystems. New research has consistently shown that ozone harms public health at lower concentrations. As required by the federal Clean Air Act, U.S. EPA completes a review of the science on ozone every five years and makes revisions to the standard as necessary. In October 2015, the agency strengthened the existing standard to 70 parts per billion from 75 parts per billion, based upon its latest review of the science. This revision will make it more difficult for Northeast Ohio to attain the standard.

Fine particle pollution refers to particulates in smoke and haze that are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries, and automobiles react in the air.

Fine particle pollution is hazardous because the particles can enter deep into people's lungs and cardiovascular system and can cause serious health problems, such as premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing. Particle pollution also can cause reduced visibility, environmental damage, and damage to stone building materials.

Those most vulnerable to ozone and particle pollution are children, the elderly, and people of all ages who have lung diseases such as asthma.

More information about air pollution is [here](#). For an update on air quality trends in Northeast Ohio, see this [report](#). And a current factsheet about Northeast Ohio's air quality nonattainment status is [here](#). Also, for a more critical analysis of local air quality see the [State of the Air](#) rankings by the American Lung Association.

What communities can do

Among communities in Cuyahoga County, the City of Cleveland has the most direct role in the outdoor air pollution issue, as the city's [Division of Air Quality](#) runs the region's air quality monitoring and permitting program under contract from Ohio EPA. But all communities can contribute to cleaner air.

Since [motor vehicle emissions](#) are at the root of much of the region's air pollution problems, the most important actions a community can take will help people to drive less. This means developing walkable places and improving transportation choices. So the recommendations below include references to the Land Use and Development and Transportation sections of this toolkit.

This also is an area with strong implications for environmental justice. It's important for communities to consider the disproportionate impacts of air pollution sources on minority and disadvantaged populations, and they should engage disadvantaged communities when

Air quality

Local contacts

- Air pollution regulations and monitoring — George Baker, Cleveland Division of Air Quality, (216) 664-2297, gbaker@city.cleveland.oh.us
- Climate action planning — Matt Gray, Cleveland Office of Sustainability, 216-664-2246, MGray@city.cleveland.oh.us
- Health impacts of air pollution — Rick Novicus, Cuyahoga County Board of Health, 216-201-2000, rnovicus@ccbh.net
- Health impacts on children — Aparna Bole, UH Rainbow Babies and Children's Hospital, 216-767-8259, aparna.bole@uhhospitals.org
- Indoor air quality problems — Kim Foreman, Environmental Health Watch, 216-961-4646, Kim.Foreman@ehw.org
- Regional air quality planning — Joe MacDonald, NOACA, 216-241-2414 x341, JMacDonald@mpo.noaca.org

Resources

- [AirNow air quality forecast](#)
- [American Lung Association - Ohio](#)
- [NOACA Air Quality Planning](#)
- [Oak Ridge National Laboratory Operations Best Practices Guide: Idle Reduction](#)
- [Ohio EPA Division of Air Pollution Control](#)
- [U.S. Department of Energy publications about idle reduction](#)
- [U.S. EPA ozone fact sheets](#)

making decisions.

Leadership and education

- Work with local health departments and [NOACA's Air Quality Program](#) to provide information about the ways residents and businesses can reduce air pollution (both outdoors and indoors).
- Set a goal for carbon emissions reduction and work with partners throughout the city to plan implementation strategies. The City of Cleveland's [Climate Action Plan](#) is a good model.

Municipal operations

- Improve the energy efficiency of city buildings and vehicles.
- Prohibit unnecessary idling of city vehicles. A sample anti-idling policy from Cuyahoga County is [here](#).
- Adjust city operations on Air Quality Advisory Days

to avoid unnecessary driving and refueling or other activities that emit volatile organic chemicals (e.g., street paving or painting) or fine particles (e.g., diesel engines, mowing, leaf blowing).

Ordinances and policies

- Anti-idling ordinance — Vehicle engines should not idle any more than is absolutely necessary. Excessive idling wastes fuel, causes air pollution, and shortens engine life. A simple way to communicate this message is to enact an anti-idling ordinance, which makes it illegal to idle more than a few minutes. The City of Cleveland’s [anti-idling ordinance](#) makes it illegal to idle more than 5 minutes in warm weather or 10 minutes in cold weather. Common-sense exceptions are provided for safety and emergency vehicles and other vehicles that need to idle for various reasons. Local communities with similar ordinances include Lakewood, Highland Hills, Maple Heights, North Olmsted, Orange, and South Euclid.
- Complete streets — see Transportation section.
- Mixed-use zoning — see Land Use and Development section.
- Transit-oriented development — see Land Use and Development section.
- Density bonuses — see Land Use and Development section.
- Tree protection — see Trees and Land Management section.
- City aggregation program for green power — see Energy section.

Regional collaboration

Since air pollution is not constrained by community boundaries, some of the most important actions to improve air quality will require collaboration at the regional scale. All communities in Northeast Ohio can help by:

- Supporting effective state air quality implementation planning for nonattainment areas (such plans outline the emissions budgets and control measures the areas will take to attain clean air standards).
- Supporting regional planning to develop vibrant, walkable communities that provide convenient transportation options and reduce the amount people need to drive.
- Supporting the funding of public transit service and increased facilities for biking.



Residential solar installation in Cleveland Heights by AAT Solar. How can communities facilitate the expansion of clean power?

Energy

The issue

Energy systems are in the midst of a historic transition. Renewable energy sources, such as wind and solar, are dropping rapidly in price, and carbon-based sources, such as coal, are becoming less desirable as they are forced to account for the costs of pollution that causes climate change and other health and environmental problems.

Local governments are on the front lines of this transition, especially in Ohio where the state has backed away from its leadership on energy policy. Communities are helping residents and businesses save energy (and money) through conservation and efficiency and by promoting the phase-in of clean, renewable energy sources.

It's good business for local governments to help with this transition. In the long run, it's the path to a stronger economy and a more sustainable and resilient community.

What communities can do

There are many ways for cities to accelerate the transition to clean energy — either by providing incentives or removing unnecessary barriers. For example, common deterrents to building small solar photovoltaic systems include complex or unclear local permitting requirements, inexperienced inspectors, varying permit requirements and fees across jurisdictions, and unfair and often illegal enforcement of restrictive housing covenants. The removal of such

barriers requires the coordination of permit policies and building codes to simplify the process. Cities also can help consumers learn more about the installation of clean energy systems and the financing tools available.

Leadership and education

- Develop and communicate a climate action plan that reveals the major sources of carbon pollution in your community and the energy-saving ways to reduce emissions. Cleveland's [Climate Action Plan](#) is a good model.
- Offer residents the option of purchasing clean power through community aggregation, such as the program offered by the Northeast Ohio Public Energy Council ([NOPEC](#)).
- Encourage [residents](#) and [businesses](#) to take advantage of low-cost energy audit services provided through Dominion East Ohio Gas and COSE.
- Provide services to make it easy for residents to install solar power. The [Solarize Cleveland](#) program is an example.
- Provide services to help residents be more energy efficient, such as [Cleveland EnergySaver](#).
- Inform households and businesses of financing opportunities for energy improvements, including rebates and tax credits, net metering, energy conservation subsidy exclusions, the county's [Clean Energy Financing HUB](#), and other incentives. A list of incentives in Cuyahoga County is [here](#). Money-saving energy programs for businesses, such as cash incentives for reducing power consumption at peak times, are administered free of charge by [COSE](#).
- Conduct feasibility studies to inform residents about the cost-effectiveness of energy alternatives.
- Help educate residents about energy and water conservation, including opportunities to achieve [deep energy reductions](#) in existing housing.
- Provide information about [green leasing](#) practices so the interests of building owners and tenants are aligned to save energy.
- Help educate the public about local clean energy installations via municipal publications and support of the annual [Green Energy Ohio tour](#).

Municipal operations

- Adopt goals for renewable energy or carbon emissions reductions (e.g., derive a percentage of the city's electricity from solar or wind sources). An example is the [Sustainable Cleveland Municipal Action Plan](#).
- Conduct an energy audit of all city-owned buildings

Energy

Local contacts

- Business and municipal energy procurement and efficiency programs — Nicole Stika, COSE, 216-592-2338, nstika@cose.org
- Deep energy retrofits — Mandy Metcalf, Environmental Health Watch, 216-961-4646, mandy.metcalf@ehw.org
- Energy conservation -- Tim Janos, Spectrum Energy Concepts, 440-915-1200
- Energy finance — Shanelle Smith, Cuyahoga County Department of Sustainability, 216-443-3785, ssmith2@cuyahogacounty.us
- LED street lighting — Jim Ferguson, Cleveland Public Power, jferguson@cpp.org
- Municipal aggregation — Chuck Keiper, NOPEC, 440-248-1992, ckeiper@nopecinfo.org
- Municipal aggregation — Matt Gray, Cleveland Office of Sustainability, 216-664-2246, MGray@city.cleveland.oh.us
- Municipal climate action plans — Matt Gray, Cleveland Office of Sustainability, 216-664-2246, MGray@city.cleveland.oh.us
- Municipal collaboration on energy financing — Jennifer Kuzma, Northeast Ohio First Suburbs Consortium, 216-291-2854, JKuzma@clvhts.com
- Solar permitting — Eric Romach, Ohio State University Extension, 419-294-4931, romich.2@osu.edu

Additional resources

- [American Council for an Energy-Efficient Economy - Local Energy Efficiency Policy](#)
- [Database for State Incentives for Renewables and Efficiency \(DSIRE\)](#)
- [EPA Local Government Climate and Energy Strategy Series](#)
- [Green Energy Ohio](#)
- [National Solar Permitting Database](#)
- [Sustainable Cleveland video on advanced and renewable energy](#)

and then implement cost-effective improvements in building energy performance. South Euclid utilized the NOPEC Powering Our Communities Grant Program to implement [energy efficiency projects](#) across the city. Cleveland Heights is working with [COSE](#) and Spectrum Energy Concepts, Inc.

- Conduct a citywide survey of solar suitability for public buildings. [Kansas City, MO, did this](#).
- Survey vacant sites in the city for feasibility of renewable power installations. Cleveland's [site screening report](#) is a model.

- Educate building and electrical inspectors about permit and installation procedures for renewable energy systems. A good guide is [here](#).
- Install energy-efficient and cost-effective LED street lighting.
- Vehicle fleet efficiency — See Transportation section.
- Tree planting — See Trees and Land Management section.

To help cities and other organizations think through the development and financing of energy projects, the Cuyahoga County Department of Sustainability has developed a [Clean Energy Finance Hub](#).

Ordinances and policies

- Update the zoning regulations and streamline the permitting process for small-scale solar and wind systems. The Solar America Board for Codes and Standards recommends an [expedited permitting process](#). Cleveland’s [Solar RoadMap](#) lists key steps for solar. A new solar ordinance from Orange Village is [here](#), and a summary of planning and zoning issues for wind turbine permitting is [here](#).
- Consider [benchmarking and disclosure ordinances](#) for large commercial buildings.
- Green building incentives — See Green Building section.
- Zoning for mixed-use and transit-oriented districts — See Land Use and Development section.

Regional collaboration

- Work with financial institutions and other partners, such as the Northeast Ohio [First Suburbs Consortium](#) or Northeast Ohio Public Energy Council ([NOPEC](#)), to provide energy efficiency and renewable energy financing options, such as Property-Assessed Clean Energy (PACE).
- Promote the community aggregation for clean power generation service options available in Ohio through Northeast Ohio Public Energy Council ([NOPEC](#)).
- Work with Ohio General Assembly members to restore the state’s energy policy.
- Work with other cities to get renewable energy and geothermal energy incorporated into the Ohio Building Code.
- Work in regional planning forums, such as NOACA, to promote land use patterns and methods of transportation that use less energy.



Harvest at the Ohio City Farm, one of the biggest sites for urban agriculture in Cleveland. How can communities facilitate the growth of the local food economy?

Food

The issue

In recent years, food has become a big part of the sustainability identity of Greater Cleveland. There has been rapidly growing interest in local food production and farmers markets, organic food, and restaurants featuring seasonal, local food.

Local governments can do a lot to help address residents' desires for fresh, local food and concerns about food security. Ohio has fertile soils and ranks in the top 10 in terms of agricultural production, but only an estimated 1% of the food consumed in Northeast Ohio is produced in the region. Although Cuyahoga County is mostly developed, it has unrealized potential for food production. It has an estimated 17,500 vacant lots with 3,423 acres of decent growing potential. A landmark 2007 study, [Reimagine a More Sustainable](#)

[Greater Cleveland](#), highlighted the tremendous opportunities to repurpose vacant land in Cleveland and Cuyahoga County for green initiatives such as urban agriculture and stormwater management.

Communities in Cuyahoga County have made progress in building the infrastructure for local food production. There are 56 acres of urban land where 200 community gardens and 20 urban farms are producing \$2.6 to 3 million from fresh produce per year. Farmers markets in Cuyahoga County have expanded from three in the 1990s to more than 20 today. And community-supported agriculture programs (CSAs) support the beginning of a farm-to-table economy.

Expanding the vision of a local food economy, a [region-wide plan](#) in 2010 set a goal to “re-localize” 25% of food. The report estimated that a 25% shift to local food would

create thousands of jobs with potential to put one in eight unemployed workers in the region back to work. The economic development potential was highlighted by the recent [Sustainable Foods Business Cluster Roadmap for Cuyahoga County](#). The roadmap recommended ways to grow local food and beverage businesses, which now account for \$1.3 billion in nonretail revenue and 11,000 jobs in Cuyahoga County.

By helping to scale up local food production and processing, cities can address important public health issues, repurpose vacant land, and build a more [sustainable and resilient economy](#). Community gardening programs are also proven ways to build social capital, reduce crime, and improve quality of life. With all the benefits, it's no wonder that many local communities are active proponents of local food.

Yet, while demand is growing for healthy, nutritious food, Cuyahoga County also has the highest number of residents facing [food insecurity](#) in the state of Ohio. In 2013 approximately 241,400 individuals lived through shortages of food throughout the year (including 66,870 children). In Cleveland, only 21% of adults report adequate daily fruit and vegetable consumption. Many of them live in “food deserts” where they lack access to full-service grocery stores.

In response, advocates have developed two different programs that aim to make local food accessible to all residents, regardless of income. [Produce Perks](#) provides a dollar-for-dollar matching incentive for customers who use their SNAP benefits at local farmers markets. [Produce Prescription](#) builds on this network of farmers markets and partners with health clinics to provide \$40 monthly “prescriptions” for fruits and vegetable for pregnant women, new moms, and patients with hypertension.

What communities can do

There are numerous ways communities can support the development of a local food economy.

Leadership and education

- Highlight the many benefits of local food in community newsletters and events.
- Encourage the development of farmers markets in your community.
- Support campaigns that encourage community members to support local food producers, artisans, businesses, and farmers in their community and the

region.

- Encourage your school district to prioritize local food. A model is Bon Appetit's sourcing of local food for Case Western Reserve University dining services. The [South Euclid-Lyndhurst Farm-to-School Program](#) purchases local fruits and vegetables and promotes wellness activities in the schools.

Municipal operations

- Set a local procurement goal (for food grown within 150 miles) for city food services. Cleveland Heights [has an ordinance](#) requiring the city to consider purchasing local and Fair Trade food.
- Offer a bid discount to local food providers when bidding contracts. Cleveland's [policy](#) is a model.
- Leverage economic development resources to provide technical assistance and financing to new and expanding food-based businesses in your community.
- Make it easy for community gardens to access water from fire hydrants or other sources.

Ordinances and policies

- Plan for food uses — Encourage creation of food businesses through land use and economic development plans. The “[Resettle Youngstown](#)” initiative, part of the Youngstown 2010 Plan, has led to a city policy allowing urban homesteads – houses with an adjacent 1-2 acre area for intensive urban food production.
- Permit urban farming uses — Allow urban gardening and small-scale agriculture on residential, commercial and other properties, as is allowed by Cleveland's zoning code update for [agriculture in residential districts](#).
- Protect urban gardens — Cleveland's [urban garden district](#) zoning classification provides legal protection to significant community garden sites.
- Permit animals — A number of local communities are revisiting restrictions on farm animals in residential areas. [Cleveland's zoning code](#) allows chickens, ducks, rabbits, bees, goats, and other livestock under certain conditions.
- Front-yard gardens — Some communities allow homeowners to use front and side yards for edible plant gardens, while defining acceptable maintenance standards. Cleveland Heights' [vegetable/edible gardens zoning amendment](#) is a model — see section 1121.12(l).
- Urban Farm Development Fund — The [NEO Food Web](#) report recommended a revolving loan or grant

fund from the costs avoided as vacant properties become used for urban agriculture. These monies would then support expansion of urban farm enterprises.

- Pesticide ban — See Trees and Land Management section.

Regional collaboration

A major part of the sustainable food picture is the development of a regional food system that links cities and the surrounding countryside. Communities in Cuyahoga County can all be thinking about how they fit into the bigger picture, and they can be engaged in a number of regional initiatives, such as:

- Efforts of the Cuyahoga County Land Bank and local food advocates to streamline the process of transferring vacant parcels to urban agriculture uses.
- Work of [OSU Extension, Cuyahoga County](#), to establish an urban agriculture model of practice with standards, site control guidelines for public access and possible discounts on property tax and water use.
- Efforts of [NEO Food Web](#) to convene sustainable food advocates and figure out ways to plug the gaps in the regional food system. The [regional food planning](#) of the Mid-Ohio Regional Planning Commission is a potential model. The [Oberlin Food Hub](#) is another.
- Efforts of the Cleveland-Cuyahoga County Food Policy Coalition, Cuyahoga County Planning Commission, and other partners to [map “food deserts”](#) in the county and then develop programs to promote the sale of healthy foods in those areas.
- Efforts to develop kitchen incubators to help launch food processing businesses.
- The [Sustainable Foods Business Cluster Roadmap](#) recommendations to build on the competitive advantage of food and beverage business clusters in Northeast Ohio, support replacement of imported products with local products, and expand regional exports to national markets.

Food

Local contacts

- Farmers markets — Donita Anderson, North Union Farmers Market, 216-751-7656, northunionfarmersmarket@yahoo.com
- Local food economy — Morgan Taggart, The Hub 55, St. Clair-Superior Community Development Corp., 216-881-0644, x113, mtaggart@stclairsuperior.org
- Local food legislation, Jenita McGowan, City of Cleveland Chief of Sustainability, 216-664-2405, jmcgowan@city.cleveland.oh.us
- OSU Agriculture Extension, Cuyahoga County office — Nicole Wright, 216-429-8200 x249, wright.1128@osu.edu
- Regional food planning — Brian Williams, Mid-Ohio Regional Planning Commission, 614-233-4187, bwilliams@morpc.org
- Regional food policy — Brad Masi, NEO Food Web, 440-935-3106, bradmasi444@gmail.com
- Sustainable food services for institutions — Stephanie Corbett, Case Western Reserve University, 216-368-6174, stephanie.corbett@case.edu
- Urban garden zoning — Fred Collier, Cleveland Planning Commission, 216-664-3468, fcollier@city.cleveland.oh.us
- Vacant land and urban agriculture — Lilah Zautner, Cuyahoga County Land Bank, 216-698-4696, lzautner@cuyahogalandbank.org

Additional resources

- [Cleveland-Cuyahoga County Food Policy Coalition](#)
- [Community Food Guide](#)
- [Developing a Sustainable Foods Business Roadmap for Cuyahoga County](#)
- [NEO Food Web](#)
- [List of local food ordinances and policies in Northeast Ohio](#)
- [Ohio Ecological Food and Farm Association](#)
- [OSU Extension in Cuyahoga County](#)



PNC SmartHome at the Cleveland Museum of Natural History in 2011, the first building in Ohio to earn Passive House certification for energy performance. How can communities promote more green building and preservation of historic buildings?

Green building and historic preservation

The issue

Most communities in Cuyahoga County now have — or will soon have — an aging stock of buildings. Therefore a lot of rebuilding and retrofitting will be needed in the coming years, and it will be very important to encourage a transition to better buildings.

Across the country, cities have been leaders in promoting this transition. They understand that the green building industry has proven that much better buildings are possible — buildings that use significantly less energy and water, require less maintenance costs, and promote greater occupant satisfaction — and it's

very cost-effective to build them. They also understand people spend most of their time indoors, and deteriorating housing is a major cause of home health hazards, such as mold and moisture, pests, lead paint dangers, and fall hazards. So green buildings are a key part of promoting public health.

It's also important for this transition of building stock to emphasize historic preservation. It's often greener to rehab an existing building than build new. The preservation of a community's historic character is a vital part of developing sustainable places. And the preservation and adaptive re-use of buildings can even provide an economic development strategy for communities.

In all these ways, the promotion of better buildings is one of the most important ways to create a legacy of sustainability.

What communities can do

This section recommends ways that communities in Cuyahoga County can help develop better buildings. Note that this section is about the performance of buildings. See the Land Use and Development section for topics related to how buildings should be assembled in mixed-use, walkable districts. The Energy section offers resources on topics like renewables. And the Watershed Management section recommends ways to reduce development impacts on water resources.

Leadership and education

- As part of climate change planning, set a goal to reduce carbon emissions from buildings in your community.
- Integrate energy efficiency and healthy homes resources and programs to provide a one-stop approach for assistance.
- Include green building, historic preservation, and healthy house tips in civic publications (newsletters, websites, etc.). The Bay Village Green Team provides an [example](#).
- Host educational seminars on green building and historic preservation topics. The [American Institute of Architects Cleveland Chapter](#) provides "Working with an Architect" workshops to enable homeowners to identify and pursue home improvement projects. The [Cleveland Restoration Society](#) provides guidance on historic preservation.
- Encourage your school district to adopt green building principles when building new or rehabilitating schools. The State of Ohio [requires that new schools](#) receiving state support achieve LEED-Silver status (LEED stands for Leadership in Energy and Environmental Design, and is the leading green building standard).
- Show support for green schools projects by participating in a [Green Apple Day of Service](#).
- Work with the Cleveland Restoration Society to make the [Heritage Home Program](#) available to residents, if your community does not already participate.
- Where buildings are being demolished, encourage deconstruction to reclaim building materials and recycling of construction wastes to reduce the landfilling of resources.

Municipal operations

- Adopt an energy efficiency program with targeted reductions in energy use in city buildings and operations. Cleveland has a [Municipal Climate Action Plan](#) with a building energy reduction goal of 20% across all city departments.
- Set a green building standard, such as LEED or Enterprise Green Communities for all new and major renovations in municipal buildings. Cleveland's [Sustainable Municipal Building Policy](#) is an example.
- Train building and planning department staff to provide technical assistance about green building.
- Maintain municipal buildings and grounds using safe, non-toxic products.

Ordinances and policies

- Create a sustainable building committee to explore opportunities and recommend policies.
- Green building guidelines and certification — Encourage the development of green buildings with special guidelines and recognition. Orange Village's [Orange Goes Green Certification Program](#) is an example of a community recognition program for green residential construction and commercial site development.
- Green building incentives — Make green building a requirement for public financial incentives. For example, Cleveland's [residential tax abatement](#) for new construction and major remodeling projects requires developers to meet a green building standard (either LEED Silver, the [Enterprise Green Communities](#), [Passive House](#), [Living Building Challenge](#), or the National Association of Home Builders' [Green Building Standard](#)).
- Historic preservation — Sustainability in the building sector is also about the renovation and adaptive reuse of older buildings to extend the life of the valuable materials in those buildings and preserve the historic character of the community. Communities can promote historic preservation and gain access to state grants by becoming a [Certified Local Government](#) under the state's Historic Preservation Office and by adopting a local [Historic Preservation Ordinance](#). Communities also can offer tax breaks for investments to maintain historic homes, such as Cuyahoga Falls' [Residential Tax Incentive Program](#). And communities can involve historic preservation advocates when developing strategies for vacant buildings and demolition.

- Housing management — To protect the quality of existing housing stock and promote healthy indoor air quality, develop and enforce housing management codes for maintenance, point-of-sale inspections, and rental registrations — requirements tied to proactive, healthy home inspections and lead paint maintenance requirements. Also require vacancy and foreclosure registrations. South Euclid is a [model](#).

Regional collaboration

- Support the strengthening of state building codes to require better insulation, energy performance, water conservation, and other green building practices. Better codes would reduce the need for special green building certifications, which can be expensive to obtain.
- Be engaged with regional efforts to develop financing programs for energy efficiency and renewable energy projects — See Energy section.
- Work with the [Northeast Ohio Chapter](#) of the U.S. Green Building Council to expand programs to assist the energy and water conservation upgrades of commercial buildings.
- Support financing programs for healthy home interventions, such as medical insurer reimbursement for health-related home repairs.
- Advocate for continued historic preservation tax credits and other preservation funding at the federal and state levels.

Green building and historic preservation

Local contacts

- Architectural resources for green building and historic preservation — AIA Cleveland, 216-626-5755, director@aiacleveland.com
- Commercial buildings — Cindy Cicigoi, Cleveland 2030 District, 216-577-4485, cindycicigoi@2030districts.org
- Green building policy — Jenita McGowan, Cleveland Chief of Sustainability, 216-664-2405, JMcGowan@city.cleveland.oh.us; Judson Kline, Orange City Council, 216-469-5370, jkline@civitadservices.com; Valerie Molinski, Sustainability Consultant and City of Cleveland Green Rater, 216-526-2162, Valerie.Molinski@v2vert.com
- Healthy housing — Mandy Metcalf, Environmental Health Watch, 216-961-4646, Mandy.Metcalf@ehw.org
- Historic preservation — Kathleen Crowther, Cleveland Restoration Society, 216-426-1000, kcrowther@clevelandrestoration.org
- Passive House design — David Beach, GreenCityBlueLake Institute, 216-231-4600 x3366, dbeach@cmnh.org
- Green schools — Lisa Pim Peterson, Weber Murphy Fox Architects and U.S. Green Building Council Northeast Ohio Chapter board member, 216-452-1216, lpeterson@wmf-inc.com

Additional resources

- [Energy efficiency in building codes in Ohio](#)
- [Green Buildings for Cool Cities: A guide for advancing local green building policies](#)
- [Green cleaning workshops](#)
- [Financial incentives and regulatory programs for green buildings in Ohio](#)
- [Historic preservation resources](#)
- [Life-cycle analysis and energy performance of public buildings](#)
- [Northeast Ohio Chapter of the U.S. Green Building Council](#)
- [Roadmap to Green Government Buildings](#)
- [Well Building Standard](#)



Vibrant, walkable, mixed-use districts — like E. 4th Street in Cleveland — are the new real estate trend. How can communities foster the development of more places that will be fiscally and environmentally sustainable in the long run?

Land use and development

The issue

Cuyahoga County has 59 diverse communities. They developed at different time periods with different patterns of land use. There is the core city of Cleveland and other cities with historic town centers, such as Bedford, Berea, Olmsted Falls, and Chagrin Falls. There are older, street-car suburbs. There are second-ring suburbs that developed at lower density during the highway age after World War II. And there are still newer and even less dense communities at the edges of the county.

Despite the differences, all these communities are part

of the first county in the state that will be completely developed. That means they all have made — or soon will make — the historic transition from growth and development to redevelopment. Increasingly, they have to deal with the costs of aging infrastructure and buildings. They will be pressed to meet [emerging market demand](#) for new and affordable types of housing, walkable urban places with a mix of land uses, access to bike and transit facilities, and environmental quality. And they will be part of a county that, if current trends continue, has declining population and tax base.

The challenge will be to find ways to redevelop that will maintain all the communities in the county and make them more sustainable in the future. The best and most

comprehensive set of recommendations for developing sustainably can be found in the [Vibrant NEO 2040 report](#) of the Northeast Ohio Sustainable Communities Consortium. It describes 22 [development strategies](#) (starting on page 192) tailored to the unique needs of the many different communities in Northeast Ohio. It provides guidelines for creating the highest quality outcomes, and it's a great starting point for Cuyahoga County communities that are adapting to change.

What communities can do

When thinking about land use and development, here are some of the best practices being adopted by local communities. The general theme is the promotion of more [compact](#) and cost-effective patterns of development.

It's important to think of these issues in the context of updating your community's master plan and zoning. Many local communities have not updated their plans in a long time, and, as [studies have documented](#), many older plans and zoning codes stand in the way of more sustainable practices.

Leadership and education

- Convene a civic forum series or advisory committee about the land use future of your community. The Vibrant NEO framework offers [indicators and targets](#) for moving toward greater sustainability. It's a resource to use while updating a comprehensive land-use plan.
- Organize a "[Better Block](#)" project to demonstrate ideas for redeveloping a shopping district as a vibrant, walkable place, such as the projects that cities of [Akron](#) and [Youngstown](#) did recently.

Municipal operations

- Locate government offices in a mixed-use district with foot traffic to leverage other community assets. For example, the new Cuyahoga County Administration Building was a catalyst for the redevelopment of E. 9th Street in downtown Cleveland.
- Provide municipal officials with opportunities to hear about the history and purpose of land-use planning. The Cuyahoga County Planning Commission offers [Planning 101 workshops](#). The Cleveland Section of the American Planning Association offers an annual [Planning and Zoning Workshop](#), which covers the latest trends in

planning.

- Adopt an infrastructure and land-use planning process that considers the long-term sustainability and life-cycle costs of development. The [Institute for Sustainable Infrastructure](#) offers project assessment tools. The [INVEST](#) tool from the Federal Highway Administration evaluates the sustainability of transportation infrastructure.

Ordinances and policies

- Transit-oriented development — High-quality transit supports development, and dense development supports transit. But this virtuous relationship doesn't happen by accident. It takes planning and the right policies. RTA offers [guidelines](#) for doing it right. Communities with transit-oriented development policies are in a better position to receive capital grants from federal, state and regional authorities for transit, air quality, or brownfields remediation. For instance, the transit-oriented Uptown development in Cleveland helped RTA win a \$17 million federal [TIGER grant](#) to rebuild the Little Italy-University Circle Rapid Station.
- Mixed-use districts — Encouraging mixed-use rather than single-use districts can help create vibrant places with higher property values and can help revitalize areas with outmoded real estate. Local models include:
 - ◇ Mayfield Heights' [Mixed Use District](#) in its zoning code is an overlay to encourage higher intensity mixed-use development (as an option to the underlying zoning that currently exists on the property).
 - ◇ Cleveland's code for Urban Form Overlay Districts (to preserve the pedestrian-oriented character of unique shopping districts) and Live-Work Overlay Districts.
 - ◇ Shaker Heights' [Commercial Mixed Use District](#) zoning (see Chapt. 1234), which requires designs that "encourage a compact mix of retail, service, office, housing and public activities to coexist in a manner that reflects human scale and emphasizes pedestrian orientation, taking advantage of the convenience provided by multi-modal transportation options and the vitality that mixed uses can bring to a community."
- Form-based codes — In Northeast Ohio there is growing interest in form-based zoning codes, which regulate the form and massing of buildings rather

than their uses. While a complete overhaul of zoning is a big project, local communities may want to consider a form-based code for business districts in order to promote the development of walkable districts. [Cincinnati](#) provides a good case study.

- Inclusionary zoning — The entire region is stronger and more equitable when all communities offer affordable housing. A [model](#) is Montgomery County, MD which has produced 13,000 units of affordable housing while still offering communities an opt out.
- Density bonuses — Developers can be incentivized to build in ways that are transit-oriented, mixed-use, and inclusionary by offering density bonuses (increasing the allowable floor area ratio). Cleveland Heights has a special mixed-use zoning overlay district to encourage creative development projects with higher density (see Chapter 1145 of the [city code](#)). The American Planning Association has guidance on density bonuses to incentivize the development of [affordable housing](#). Another way to encourage sustainable development practices is with expedited permitting.
- Cottage development — One way to encourage attractive housing that's affordable and relatively dense is to allow [cottages in planned unit developments](#). The units can have shared parking and greenspace.
- Conservation development — Communities with larger tracts of undeveloped land and significant natural resources are adopting conservation development codes to encourage the clustering of homes on a portion of the land, thus preserving open space and sensitive natural features and reducing infrastructure costs. Local guidelines are [here](#) and [here](#).
- [Environmental justice](#) — Consider the impacts of development and infrastructure projects on minority and disadvantaged populations and work to engage such populations in the decision-making process.
- [Health impact assessments](#) — Consider the health impacts of development and infrastructure projects. An example is the assessment being done for the [East Side Greenway](#).
- Development practices to protect water quality — See the Water section and the Ohio Balanced Growth Program's [Best Local Land Use Practices](#).

An excellent [checklist](#) of recommended codes and policies related to land use has been developed by the

Ohio Balanced Growth Program. It provides guidance for a more thorough review of local codes.

Regional collaboration

While home rule allows local governments to make their own land-use plans, these plans are affected by regional market forces and public investments (especially transportation investments). Thus, as communities in Cuyahoga County work to ensure their future stability, they should be engaged in regional initiatives, such as:

- Northeast Ohio Areawide Coordinating Agency's effort to develop a [Regional Strategic Plan](#) and Transit-Oriented Development Implementation Plan.
- The Northeast Ohio Sustainable Communities Consortium's efforts to raise awareness of the [fiscal impacts](#) of the region's current trends of low-density development and growing amount of vacant urban land.
- [Northeast Ohio First Suburbs Consortium's](#) efforts to raise awareness of the redevelopment needs of inner-ring suburbs.
- [Cuyahoga County Land Bank's](#) efforts to deal with blighted properties.
- Cuyahoga County Planning Commission's [Greenprint](#) program to encourage a regional approach to greenspace planning and trail connectivity.
- The [Ohio Balanced Growth Program's](#) efforts to promote land use practices that protect water quality in the Lake Erie watershed.

Land use and development

Local contacts

- Better Block events — Jason Segedy, City of Akron, 330-375-2770, JSegedy@akronohio.gov
- Comprehensive plans — Glenn Coyne, Cuyahoga County Planning Commission, 216-443-3700, gcoyne@cuyahogacounty.us
- Conservation development and cottage development — Kirby Date, Cleveland State University, 216-687-5477, k.date@csuohio.edu
- Environmental justice and siting facilities — Kim Foreman, Environmental Health Watch, 216-961-4646, kim.foreman@ehw.org
- Greenspace planning — Elaine Price, Cuyahoga County Planning Commission, 216-443-3721, eprice@cuyahogacounty.us
- Health impact assessments — Ann Stahlheber, Cuyahoga County Board of Health, 216-210-2001, astahlheber@ccbh.net
- Mixed-use development — Joyce Braverman, Shaker Heights Planning, 216-491-1432, joyce.braverman@shakeronline.com
- Regional planning and transportation — Grace Gallucci, Northeast Ohio Areawide Coordinating Agency (NOACA), 216-241-2414, ggallucci@mpo.noaca.org
- Transit-oriented development — Maribeth Feke, Greater Cleveland RTA, 216-566-5160, mfeke@gcrta.org
- Vacant land re-use — Lilah Zautner, Cuyahoga County Land Bank, 216-698-4696, lzautner@cuyahogalandbank.org; Terry Schwarz, Kent State Urban Design Collaborative, 216-357-3426, tschwarz@kent.edu

Additional resources

- [American Planning Association, Cleveland Section](#)
- [Cuyahoga County Greenprint](#)
- [Cuyahoga County Planning Commission](#)
- [Inclusionary zoning tool kit](#)
- [Northeast Ohio Fiscal Impact Tool](#)
- [Ohio Balanced Growth Program](#)
- [Retrofitting suburbia](#) by Ellen Dunham-Jones and June Williamson
- [Smart Growth America](#)
- [Transit-supportive density resource guide](#)
- [Vibrant Northeast Ohio](#)



Solid waste is a major responsibility of local communities. Are there better ways to reduce the amount of waste and the cost of the services?

Solid waste

The issue

Americans produce tremendous amounts of waste — more than 4 pounds per person per day. Cities are on the front lines of managing this never-ending mountain of refuse. Indeed, picking up the trash is one of the most important — and expensive — municipal services. It is vital for public health, community appearance, and quality of life. And it is one of the most frequent ways that a municipal government interacts with residents.

Local governments are now called upon to do much more than manage solid waste by hauling it to a landfill. Residents expect their communities to have programs for waste reduction, recycling, and composting. This is

especially challenging at a time of low landfill tipping fees. Communities must find innovative ways to prevent the creation of waste, conserve materials and energy, and develop markets for reuse and recycling. Successful programs can help hold down costs and make a city more competitive. And the process of involving citizens to find solutions can foster a greater sense of community and express values of environmental stewardship.

What communities can do

Leadership and education

- Provide educational information to residents and businesses about waste reduction and recycling. The

[Cuyahoga County Solid Waste Management District](#) has comprehensive resources and offers [grants](#) for community education programs.

- Host a recycling town hall meeting for residents and invite the Cuyahoga Solid Waste Management District to answer questions.
- Keep your community’s website updated with the latest information about recycling and waste disposal programs. Think about how to use the web and social media to change attitudes about waste and recycling, such as Cleveland’s “[One Simple Act](#)” campaign.
- Encourage ideas that treat waste as an opportunity to create new business and employment. The [Zero Waste NEO](#) group is working toward that goal.
- Partner with your local school district on a Zero Waste class project. See [this example](#).
- Plan a zero waste event using the [Zero Waste Event Planning Guide](#).

Municipal operations

- Benchmark residential recycling services against [top performing communities](#) in Cuyahoga County and learn best practices for waste reduction, including automated collection using carts, seasonal yard waste collection, and consistent education programs.
- Review current waste collection contracts for cost-saving opportunities, such as automated collection and separate disposal pricing. Contact the [Solid Waste District](#) for a bid template.
- Establish a program to manage organic waste, which is a large portion of the waste stream. Set up a community compost site at a community garden or other demonstration site.
- Offer year-round resident drop-off for household hazardous wastes and computers. Participate in the Solid Waste District’s annual scrap tire event.
- Follow [best practices](#) for managing hazardous wastes and training city staff.
- Cultivate city staff leaders by allowing them to participate in the [Master Recycler Program](#) or Trash Talk Workshops offered by the Solid Waste District. Join the [Solid Waste Association of North America](#) for additional resources and training.
- Implement a recycling program at city hall and other municipal buildings, then conduct a [waste audit](#) to identify the remaining sources of waste and the best ways to reduce them. Apply for a [grant](#) for the development of a recycling program in public spaces.

- Establish Zero Waste [guidelines](#) for city events. Purchase event recycling containers and make them available for events such as block club parties.
- Host a “FreeCycle” or swap meet event, as South Euclid has done.
- Consider a contract with [Simple Recycling](#) for free collection of textiles and small household goods.

Ordinances and policies

- Waste reduction — Review existing ordinances and make sure they allow all opportunities for waste reduction, such as composting, garage sales, separate pick-up days, and even scavenging.
- Composting — Review ordinances to support home composting. Invite the Solid Waste District to do a composting workshop for residents.
- Zero waste — Set a zero-waste goal and create an implementation plan, as [Oberlin](#) has done.

For other rules, policies, and programs that could be implemented at the local level to increase recycling and recovery rates and reduce solid waste management costs, see the resources of [The Institute for Local Self Reliance](#).

Regional collaboration

- Explore cooperative contracting opportunities to save money and improve services for waste collection and recycling. The [Cuyahoga County Solid Waste District](#) offers guidance and a free consulting service.
- Work with the County Solid Waste District, other communities, and local businesses to develop the local market for recycling and materials reuse, thus strengthening the economy.
- Explore the sharing of or joint bidding for recycling equipment, such as carts and trucks.

Solid waste

Local contacts

- Contracting for automated collection - Parma Heights Mayor Michael Byrne, 440-884-9600, ext. 5608, mayorsoffice@parmaheightsoh.gov
- Converting to automated collection system — Rick Glady, Lyndhurst Service Department, 440-473-5100, gladyr@lyndhurst-oh.com
- Green teams for community education — Bay Village Green Team, info@bayvillagegreenteam.org
- Solid waste management — Diane Bickett, Cuyahoga County Solid Waste District, 216-443-3749, dbickett@cuyahogacounty.us
- Solid waste and health — Dane Tussel, Cuyahoga County Board of Health, 216-201-2000 ext. 1247, dtussel@ccbh.net
- Zero Waste planning — Kristin Hall, Cleveland Office of Sustainability and ZeroWasteNEO Working Group, 216-664-3652, KHall@city.cleveland.oh.us; Lori Sprosty, Oberlin Recycling, 440-935-0096, Recycling2014@cityofoberlin.com

Additional resources

- [Cuyahoga County Solid Waste District](#)
- [Inspection of solid waste facilities](#)
- Institute for Local Self-Reliance - [Waste to Wealth program](#) and [zero-waste planning services](#)
- [Northern Ohio Service Directors Association](#)
- [Ohio EPA Division of Materials and Waste Management](#)
- [Organics Recycling Association of Ohio](#)
- [Social marketing campaigns for recycling](#)
- [Solid Waste Association of North America](#)
- [Solid Waste Management Collection Practices and Contracts](#) (all Cuyahoga County).



Demand is growing for a transportation system that offers more choices. Local governments can do a lot to promote a transition that improves health, quality of life, and the environment — and also helps create vibrant places for economic development.

Transportation

The issue

In recent decades Northeast Ohio has continued to build a transportation system primarily for motor vehicles. Since 1990, the region has added more than 300 highway lane-miles, despite a lack of growth. In Cuyahoga County 87.7% of work trips are now made by motor vehicle.

There are growing challenges with this far-flung, automobile-centric transportation system. It's increasingly costly for the public sector to maintain, and, at 58 cents per mile of driving according to AAA in 2015, it's costly for people to use. It doesn't meet the needs of large numbers of people — young, old, disabled, poor —

who can't drive. It's a major cause of air and water pollution. And it contributes to health problems by depriving people of opportunities to get exercise as part of their daily routines.

As a result, local governments are being pressured to provide better transportation options for their residents. People want more transit access and more bike facilities. They want to get out of their cars and experience walkable places.

The question for communities, then, is how to adapt their transportation infrastructure and policies to help create the healthy alternatives and vibrant, walkable places that people increasingly want.

What communities can do

This section offers practical suggestions for expanding transportation choices while revitalizing communities and improving quality of life. There are many cross-references to the Land Use and Development section, since transportation options depend heavily on having the right pattern and density of land uses.

Leadership and education

Communities can do a lot to raise awareness about alternative modes of transportation and promote a civic conversation about goals for creating a more sustainable transportation system. Here are some examples:

- **Bike mode share** (setting a goal to increase biking) — Start with a baseline assessment, with data available from the American Community Survey [Biking and Walking to Work report](#) and from the Northeast Ohio Areawide Coordinating Agency's (NOACA) [Transportation Data Portal](#) for local bike/pedestrian counts. Then conduct your own bike counts (the City of Lakewood hired college interns to help with bike counts for their Bike Plan). After bike lanes go in, conduct follow-up counts to measure impact.
- **Pedestrian and bicyclist fatalities/traffic fatalities** — [Download Ohio crash data](#) by year. Encourage Police and Planning departments to put crash data on a map and to discuss interventions.
- **Organize a walking "audit"** of your city to draw attention to gaps in the pedestrian infrastructure and raise awareness of the health, environmental and social benefits of walking.
- **Bicycle Friendly Community** — The application process is free and includes a plan to make bicycling safe, comfortable, and convenient for people of all ages and abilities. Current award winners in Cuyahoga County are Cleveland, Cleveland Heights, Lakewood, and Shaker Heights.
- **Walk Friendly Community** — This program recognizes communities supporting walking environments that are safer, more accessible, and more comfortable.
- **Safe Routes to School** — Work with your school district to develop a Safe Routes program to facilitate active transportation for students and the community in general. A school or district [travel plan](#) communicates the community's intentions around making active transportation safe and accessible, and it provides a blueprint and funding opportunities for implementation.

Municipal operations

- **Recognize employees** who participate in active living programs, such as walking a certain number of steps per day or entering national challenges like [Bike to Work Month](#).
- Participate in RTA's [Commuter Advantage](#) program, which allows employees to purchase transit passes with pre-tax income.
- Install bike racks, changing areas, and showers in government buildings for use by bike commuters.
- Install preferential parking spots in city lots for carpool and energy-efficient vehicles.
- Transition the city vehicle fleet to more fuel-efficient vehicles. [Clean Fuels Ohio](#) and the Earth Day Coalition's [Clean Transportation Program](#) can provide technical assistance and information about federal funding opportunities.
- Train police about the proper enforcement of bicycle laws. Bike Cleveland offers [training workshops](#).
- Train service department and engineering staff on best practices for designing and installing bike and transit facilities. NOACA offers workshops.
- Develop a long-range plan for bikeways to connect community facilities and amenities.
- Miles of bike lanes/trails — Set a goal to paint a certain number of bike lanes per year. Classify them by type (protected bike lane; bike lane; sharrows). [BikeCleveland](#) can advise on the best practices for installing bike facilities.
- To stretch infrastructure dollars, align bikeway planning with capital improvement plans so bike facilities are installed when streets are fixed. An example is Cleveland's [Bikeway Implementation Plan](#).
- Include funds in the capital budget for bike facilities.
- Adopt an infrastructure planning process that considers the long-term sustainability and life-cycle costs of roads and other infrastructure. The City of Lakewood will introduce a 2016 Implementation Strategy based on its Capital Campaign.

Ordinances and policies

- **Complete streets** — 700 jurisdictions nationally, including Cleveland, have adopted complete streets. The [National Complete Streets Coalition](#) reports that 39% of complete streets policies are in small suburbs. To facilitate the adoption of complete streets policies, the Cuyahoga County Planning Commission has created a [Cuyahoga County Complete Streets Toolkit](#) and offers technical assistance.

- Alternative performance measures to Level of Service (LOS) — Communities are considering the street experience for other users, like pedestrians or business owners, in addition to motorists. A [multi-modal Level of Service](#) analysis can be done using the same software as calculating regular LOS. (If still using LOS for cars, consider calculating peak flows based on four-hour averages rather than peak hours. This helps design roads for typical needs rather than for maximum congestion.)
- Parking reform — Communities in Cuyahoga County, such as [Euclid](#), are granting more flexibility in meeting parking requirements, including credits for shared parking, off-site parking, and credits for transit and bike access. Cleveland Heights has a policy for [parking maximums](#) (rather than the usual minimum number of spaces) and an innovative land-banked parking ordinance. Shaker Heights' [Commercial Mixed Use District](#) zoning (see Chapt. 1234) has parking maximum provisions. And the Chagrin River Watershed Partners have a [model parking code](#) for reducing pavement and protecting water quality.
- Transit-oriented development — See Land Use and Development section.
- [Vision Zero](#) — Adopt a goal to reduce the loss of life from road collisions to zero.
- Adopt a [safe passing](#) (3-foot minimum) ordinance for biking safely.
- Anti-idling ordinance — See Air Quality section.
- Health impact assessments — Consider the health impacts of development and infrastructure projects. An example is the assessment completed for the [East Side Greenway](#).

Regional collaboration

No community in Cuyahoga County is a transportation island. Regional collaboration and planning are needed to develop a seamless transportation system that will strengthen all communities and will be sustainable in the future. So all communities should be engaged in regional initiatives, such as:

- NOACA's effort to develop a [Regional Strategic Plan](#) and update the [Regional Bicycle Plan](#).
- RTA's [efforts to increase state funding](#) for transit improvements.
- Efforts to create alternative transportation networks, such as the [East Side Greenway](#).
- The Greater Cleveland Trails Leadership Network (for information, contact Elaine Price, Cuyahoga County Planning Commission, eprice@cuyahogacounty.us).

Transportation

Local contacts

- Active transportation — Melissa Thompson, NOACA, 216-241-2414 x344, MThompson@mpo.noaca.org
- Bike facility design — Jacob Van Sickle, Bike Cleveland, 216-245-3101, jacob@bikecleveland.org
- City bike planning — Bryce Sylvester, City of Lakewood Planning, 216-529-6635
Bryce.Sylvester@lakewoodoh.net; Marty Cader, Cleveland Planning Commission, (216) 664-2952, mcader@city.cleveland.oh.us
- Complete Streets — Jenita McGowan, Cleveland Chief of Sustainability, 216-664-2405, jmcgowan@city.cleveland.oh.us
- Health benefits of active transportation — Ann Stahlheber, Cuyahoga County Board of Public Health, astahlheber@ccbh.net
- Parking code updates — James Sonnhalter, Cuyahoga County Planning Commission, 216-443-3713, JSonnhalter@CuyahogaCounty.us
- Protected bike lanes — Tom McNair, Ohio City, Inc., tmcnair@ohiocity.org and Barb Clint, YMCA, bclint@clevelandymca.org
- Safe Routes to School — Kathryn Garvey, Chagrin Falls, saferouteschagrin@yahoo.com; Jennifer Kuzma, Cleveland Heights, 216-291-2854, JKuzma@clvhts.com; Calley Mersmann, Cleveland Metropolitan School District, 216-838-4981, Calley.Mersmann@clevelandmetroschools.org; Megan Conklin, Cuyahoga County Board of Health, 216-201-2020 ext. 1266, mconklin@ccbh.net
- Trails and greenway planning — Elaine Price, Cuyahoga County Planning Commission, 216-443-3721, eprice@cuyahogacounty.us

Additional resources

- [Center for Neighborhood Technology resources for transit-oriented development](#)
- Federal Highway Administration [guidance](#) for street design flexibility for bikes and pedestrians
- Greater Cleveland RTA's [Commuter Advantage](#) program
- [Institute for Sustainable Infrastructure](#) project assessment tools
- National Association of City Transportation Officials (NACTO) [Urban Bikeway Design Guide](#)
- [National Complete Streets Coalition](#)
- [Northeast Ohio Areawide Coordinating Agency \(NOACA\)](#)
- [Transportation for America](#)
- [Vibrant NEO 2040](#)
- [Walkscore](#)



Trees are a vital part of a community's green infrastructure. How can local governments do more to promote reforestation and sustainable land-use practices?

Trees and land management

The issue

Local governments often own and manage a great deal of land, and they can influence the way that other landowners manage land. This section presents suggestions for doing so in ways that protect environmental quality and enhance quality of life and property values.

Trees are a major emphasis. The tree canopy provides many benefits to communities — saving money, improving water quality and reducing erosion, providing natural cooling and saving energy, reducing air pollution, enhancing property values, providing wildlife habitat, and improving aesthetics. Indeed, studies have shown that a \$2 per capita investment in trees returns \$4 per capita in benefits. So trees are a great investment.

But trees are under a lot of stress these days. There are new pests like the emerald ash borer, changing climate conditions, and ongoing urban stresses such as development, soil compaction, altered hydrology, and road salt. Today many communities in Cuyahoga County lack adequate tree cover. In response, there is growing community interest in reforestation. More people are advocating for the stewardship of the urban forest as an important part of livability and sustainability.

What communities can do

Leadership and education

- Educate residents about the benefits of trees, native plants, and biological diversity. Sources of information include [Holden Arboretum](#), the [Native](#)

[Plant Society of Northeastern Ohio](#), the [Cleveland Museum of Natural History](#), and [Cleveland Botanical Garden](#). A good way to engage residents is to sponsor [Tree Steward Trainings](#), a joint program between Holden Arboretum and Western Reserve Land Conservancy. In general, it is important to emphasize education of private property owners because there is a lot more private land than public land in Cuyahoga County.

- Educate residents about the importance of maintaining soil quality. The Cuyahoga Soil and Water Conservation District has [resources](#).

Municipal operations

- The maintenance of urban trees requires knowledge and skill, so employ a qualified arborist on city staff and/or provide adequate training for existing staff. The Ohio Division of Forestry offers a [Tree Commission Academy](#) for training.
- Assess your community's tree canopy, since an accurate inventory is needed for good management. The Cuyahoga County Planning Commission has developed GIS-based [tools and tree canopy data](#) for the public to use. A field-based tree inventory can also be useful. More information about types of urban forest assessments can be found [here](#).
- Develop a municipal tree planting program funded at a level to maintain and restore the tree canopy. Make sure to follow [best practices](#) to plant the right trees in the right places in the right way so they survive. Also take projected climate changes into account when selecting tree species.
- Become a [Tree City USA](#) — If your community hasn't already done so, become a Tree City USA by meeting the four standards of sound urban forestry management: maintaining a tree board or department, having a community tree ordinance, spending at least \$2 per capita on urban forestry, and celebrating Arbor Day. While meeting these minimum standards does not guarantee a sustainable urban forest, it sends a message about the importance of trees, even in times of tight budgets.
- Include storm preparedness in municipal emergency response plans, so you can deal with tree damage and wood waste reutilization in a safe and sustainable manner.
- Use native plants on city grounds to set a good example for sustainable landscaping. Many garden centers are offering more natives these days, and a list of local native plant nurseries is [here](#). The Cuyahoga Soil & Water Conservation District offers

[workshops](#) on using native plants to create backyard habitats.

- In light of the mounting scientific evidence of the health risks of common pesticides, stop using lawn care pesticides on city-owned land. This is already the policy of [Cuyahoga County](#) and [Cleveland Heights](#). Staff training about healthy landscaping methods is offered by [Beyond Pesticides Ohio](#). Wade Oval in University Circle provides a good example of the maintenance of a high-traffic site without dangerous lawn care chemicals.

Ordinances and policies

- Tree protection ordinance — Municipal tree ordinances can address trees on public land (such as street trees), trees on private land (tree preservation and landscape planting requirements), or the ways that trees impact views or solar access. A guide is [here](#), and a summary of ordinances of communities in the Cuyahoga watershed is [here](#). Also note that there is an emerging trend to focus less on the protection of individual trees today and more on ensuring a healthy percent of tree cover in the future.
- Tree and woodland protection in developing areas — Communities with development occurring on wooded sites have different tree protection needs than urban communities. The Ohio Balanced Growth Program offers [strategies for protecting blocks](#) of trees in these areas and long-term strategies for ensuring adequate tree cover.
- Permitting native plants — To remove legal barriers to residents growing food or beneficial native plants, ordinances should be modified to allow such uses. In Cleveland Heights, for example, the updated [landscaping ordinance](#) (see Chapt. 1166) is modeled on a typical nuisance ordinance, but distinguishes native plantings and other alternatives to turf grass, and defines edible landscaping as a substitute for lawns. The ordinance requires a plan, setbacks, and maintenance of native landscaping to address the nuisance concerns that typically accompany alternatives to turf. In addition, the Ohio Balanced Growth Program offers [guidance](#) on natural areas establishment and management.
- Pesticide ban — More cities and institutions are stopping the use of pesticides for lawn care purposes, especially in locations where children play. Here are the ordinances of [Cleveland Heights](#) and [Cuyahoga County](#).
- Complete and green streets — See Transportation

section.

- Stream setbacks — See Watershed Management section.
- Green infrastructure and stormwater — See Watershed Management section.
- Urban garden zoning — See Food section.

Regional collaboration

To improve the ecological functioning and beauty of the regional landscape, all communities in Cuyahoga County can:

- Support [county-wide reforestation efforts](#).
- Participate in multi-community greenspace and trail planning efforts, such as the [Eastside Greenway](#) project and the countywide [Greenprint](#) initiative.
- Work with land protection organizations — such as the [Western Reserve Land Conservancy](#), [West Creek Conservancy](#), [Trust for Public Land](#), and the [Cleveland Museum of Natural History](#) — to protect parcels of high-quality greenspace.

Trees and land management

Local contacts

- Greenspace planning — Elaine Price, Cuyahoga County Planning Commission, 216-443-3721, eprice@cuyahogacounty.us
- Landscaping without pesticides — Barry Zucker, Beyond Pesticides Ohio, 216-371-3263, beyondpesticidesohio@gmail.com
- Native Plants — Cathi Lehn, Lake Erie Allegheny Partnership Native Plant Promotion Committee and Cleveland Office of Sustainability, 216-664-2421, clehn@city.cleveland.oh.us; Kathy Hanratty, Native Plant Society of Northeastern Ohio, envirosapesdesign@windstream.net
- Native plants, rain gardens and backyard habitats — Jan Rybka, Cuyahoga Soil & Water Conservation District, 216-524-6580 x13, JRybka@cuyahogawcd.org
- Tree canopy assessment — Dan Meaney, Cuyahoga County Planning Commission, 216-443-3709, dmeaney@cuyahogacounty.us
- Tree protection ordinances — Kirby Date, Community Planning Program, Levin College of Urban Affairs, Cleveland State University, 216-687-5477, k.date@csuohio.edu
- Tree protection and water quality — Jane Goodman, Cuyahoga ReLeaf, 216-241-2414 x610, goodmanj@cuyahogariver.org
- Urban forestry — Alan Siewert, Ohio Division of Forestry, 440-564-5883, ext. 1, alan.siewert@dnr.state.oh.us
- Urban forestry outreach and education — Chad Clink, Holden Arboretum, 440-602-3829, cclink@holdenarb.org; Colby Sattler, Western Reserve Land Conservancy, (216) 515-8300, csattler@wrlandconservancy.org

Additional resources

- [Cleveland Tree Plan](#)
- [Cuyahoga County Urban Tree Canopy Assessment](#)
- [Holden Arboretum Community Forestry Program](#)
- [International Society of Arboriculture](#)
- [iTree tools](#)
- [Lake Erie Allegheny Partnership for Biodiversity](#)
- [Ohio Balanced Growth Program](#)
- [Ohio Urban Forestry Program](#)
- [Pesticide-free policy/ordinance](#)
- [Rain gardens and native plants](#)
- [Soil health](#)
- [Sustainable Sites Initiative](#)
- [Technical Guide to Urban/Community Forestry](#)
- [Thriving Communities' Reforest Our City, a program of Western Reserve Land Conservancy](#)
- [Tree City USA - The Arbor Day Foundation](#)
- [Urban forestry toolkit for local governments](#)
- [White-tailed deer management](#)



Water quality and the protection of Lake Erie are top concerns of people in Northeast Ohio. So it's vital that local communities make water quality a priority.

Watershed management

The issue

Since the passage of the Clean Water Act in 1972, Northeast Ohio has made a lot of progress reducing water pollution from point sources, such as industry and wastewater treatment plants. Now a lot more attention is being paid to diffuse nonpoint sources, especially the stormwater that washes pollution off the land.

[Stormwater regulations](#) give local governments more responsibilities for water quality. And communities are learning about the rapidly evolving field of green infrastructure — techniques to retrofit the developed landscape to increase the infiltration of stormwater, mimic natural hydrology, and restore ecological function.

Fortunately, there are many local resources to help

public officials and citizens learn about the best practices. There's even a new [Watershed Stewardship Center](#), a facility with educational programming developed by Cleveland Metroparks and the Northeast Ohio Regional Sewer District.

Water quality and the protection of Lake Erie are top concerns of people in Northeast Ohio. Water is part of our identity, and, as the climate changes, it's likely to become a bigger competitive advantage for our region. So it's vital that local communities make water quality a priority.

What communities can do

Communities can help to protect and restore water quality in many ways, including mandated programs and

other actions that go beyond the minimal mandatory requirements. In addition, it's important to take an [integrated planning approach](#) to watershed management, a flexible approach that can help identify the most cost-effective solutions.

Leadership and education

- Distribute water quality tips to residents and businesses. Educational resources are available from a number of local organizations, including the [Cuyahoga Soil & Water Conservation District](#), [Cuyahoga County Board of Health](#), [Chagrin River Watershed Partners](#), and [Cuyahoga River Restoration](#).
- Promote [rain barrel workshops](#) offered by Cuyahoga Soil and Water Conservation District.

Municipal operations

- Do a superior job complying with the spirit of Ohio EPA's Municipal Separate Storm Sewer System (MS4) [permit requirements](#). Municipalities in the urbanized area must adopt a stormwater management plan that details best management practices for six minimum control measures:
 - ◇ public education and outreach
 - ◇ public participation and involvement
 - ◇ illicit discharge detection and elimination (IDDE)
 - ◇ construction site runoff control
 - ◇ post-construction runoff control
 - ◇ pollution prevention/good housekeeping for municipal operations

Many local organizations can help communities comply with stormwater requirements, including the Cuyahoga Soil and Water Conservation District, Cuyahoga County Board of Health, and watershed groups.

- Train municipal employees on stormwater regulations and innovative practices for stormwater management. A group of local water quality organizations is offering free stormwater management trainings to municipal service department employees in Northeast Ohio in 2016, with topics focused on the maintenance of stormwater systems such as permeable pavement, rain gardens, green roofs, etc. For information, contact Cathi Lehn at clehn@city.cleveland.oh.us or 216-664-2421. The Cuyahoga County Board of Health, Cuyahoga Soil and Water Conservation District, and other organizations also provide trainings for municipal personnel.
- Set a good example by following these [guidelines](#) for municipal landscaping, used motor oil, street

sweeping, salt storage and application, vehicle washing, spill clean-up, and catch basin maintenance.

- If you are in combined sewer area of the Northeast Ohio Regional Sewer District, consider applying for one of the District's [green infrastructure grants](#).
- Tree program — see Trees and Land Management section.

Ordinances and policies

- Model ordinances/regulations to protect streams and manage stormwater — In recent years, local water quality experts have given a lot of thought to the essential regulatory tools a community needs to protect water quality, public health, and safety. Chagrin River Watershed Partners has worked with local and state agencies to develop a recommended [suite of model ordinances/regulations](#). There are models for:
 - ◇ Conservation development
 - ◇ Erosion and sediment control
 - ◇ Flood damage reduction
 - ◇ Illicit discharge detection and elimination
 - ◇ Off-street parking
 - ◇ Riparian setbacks
 - ◇ Stormwater management
 - ◇ Wetland setback
- Green infrastructure incentives — Provide [incentives](#) for private property owners to install green infrastructure (such as rain gardens, bioswales, bioinfiltration basins, or pervious pavement) to reduce stormwater runoff.

Local watershed coordinators

- Big Creek — Bob Gardin, [Big Creek Connects](#)
- Chagrin River — Christina Znidarsic, [Chagrin River Watershed Partners](#)
- Cuyahoga River — Jane Goodman, [Cuyahoga River Restoration](#)
- Doan Brook — Tori Mills, [Doan Brook Watershed Partnership](#)
- Euclid Creek — Claire Posius, [Friends of Euclid Creek](#)
- Rocky River — Jared Bartley, [Rocky River Watershed Council](#)
- Tinkers Creek — Babette Gouda, [Tinkers Creek Watershed Partners](#)
- West Creek — Derek Schafer, [West Creek Conservancy](#)

- Green streets — Require green infrastructure for stormwater management to be included when maintaining city rights-of-way. Cleveland’s complete and green streets program provides [guidance](#).
- Downspout disconnection — Allow homeowners to disconnect downspouts and/or install rain barrels. [Chagrin River Watershed Partners](#) can supply guidance about the requirements for doing this safely. Parma has [model language](#) (see Chapter 2309).
- Tree protection — See Trees and Land Management section.
- Pesticide ban — More cities and institutions are stopping the use of chemical pesticides for lawn care purposes, especially in locations where children play. Here are the ordinances of [Cleveland Heights](#) and [Cuyahoga County](#).

An excellent [checklist](#) of recommended codes and policies related to watershed protection has been developed by the Ohio Balanced Growth Program.

Regional collaboration

Just as watersheds cross municipal boundaries, many of the actions to protect and restore water quality must occur at a regional scale. Communities can work collaboratively to support initiatives such as:

- Regional training and information-sharing programs, such as the [Northeast Ohio Storm Water Training Council](#).
- Northeast Ohio Regional Sewer District’s [stormwater](#) and [combined sewer overflow](#) programs.
- NOACA’s [regional water quality planning](#).
- Ohio’s [Balanced Growth Program](#), which links land use to water quality.
- [Northeast Ohio Sustainable Communities Consortium’s](#) efforts to promote development in existing urban areas to reduce increases in impervious land cover in the region.
- [Cleveland Water Alliance’s](#) work to leverage clean water for economic development in Northeast Ohio.
- Watershed reforestation efforts — see Tree and Land Management section.

Watershed management

Local contacts

- Best land use practices for water quality — Kirby Date, Ohio Balanced Growth Program, 216-687-5477, k.date@csuohio.edu
- Citizen education about watersheds — Jennifer Grieser, Watershed Stewardship Center at West Creek, 440-331-8679, jmg2@clevelandmetroparks.com
- Integrated planning for stormwater management — Lou McMahon, 216-367-1407, lmcmahon@mdllp.net
- Municipal stormwater training — Laura Travers, Cuyahoga County Board of Health, 216-201-2000, ltravers@ccbh.net
- Ordinances for water protection — Heather Elmer, Chagrin River Watershed Partners, 440-975-3870, helmer@crwp.org
- Rain garden design — Jan Rybka, Cuyahoga Soil & Water Conservation District, 216-524-6580 x 13, jrybka@cuyahogawcd.org
- Regional stormwater policies — Kyle Dreyfuss-Wells, NEORSD Watershed Program, 216-881-6600, Dreyfuss-WellsK@neorsd.org
- Regional water quality planning — Pamela Davis, NOACA, 216-241-2414, pdavis@mpo.noaca.org
- Stormwater facility planning and design — Brent Eysenbach, Cuyahoga Soil and Water Conservation District, 216-524-6580 x11, beysenbach@cuyahogawcd.org
- Trees and water quality — Jane Goodman, Cuyahoga River Restoration, 216-241-2414, x610, goodmanj@cuyahogariver.org; Chad Clink, Holden Arboretum, 440-602-3829, cclink@holdenarb.org; Colby Sattler, Western Reserve Land Conservancy, (216) 515-8300, csattler@wrlandconservancy.org
- Water and economic development — Bryan Stubbs, Cleveland Water Alliance, 216-309-2426, bstubbs@clewa.org

Additional resources

- [Community riparian and wetland guidance](#)
- [Cuyahoga Board of Health stormwater resources](#)
- [Cuyahoga SWCD stormwater services](#)
- [GreenCityBlueLake sustainability agenda for water](#)
- [NOACA stormwater planning](#)
- [Northeast Ohio Regional Sewer District Stormwater Management Program](#)
- [ODNR Rainwater and Land Development Manual](#)
- [Ohio Balanced Growth Program](#)
- [Ohio EPA Storm Water Program](#)
- [Rain Garden Manual](#)
- [Stream maintenance guide for communities](#)
- [Watershed Stewardship Center at West Creek](#)

Sustainable Cuyahoga

www.executive.cuyahogacounty.us/en-us/Sustainable-Cuyahoga.aspx



Need help with sustainability policies?

Call the Cuyahoga County Department of Sustainability at 216-443-3055.

