

# News Release

## OHIO DEPARTMENT OF TRANSPORTATION

OFFICE OF COMMUNICATIONS - 1980 W. Broad Street, Columbus, Ohio 43223

<http://www.dot.state.oh.us>

For Immediate Release

June 14, 2006

### ODOT ANNOUNCES 2006 SAFE ROUTES TO SCHOOL PROGRAM

(COLUMBUS)—Ohio Department of Transportation (ODOT) Director Gordon Proctor today announced ODOT's new Safe Routes to School Program (SRTS). The program will make it easier and safer for children to commute to school using their own power and is the first of its kind for Ohio.

Each year, approximately 2,000 children (grades kindergarten through middle school) are injured and 28 are killed in fatal accidents as they travel to and from Ohio's schools. With increased traffic on the road and fewer designated areas to walk or bike, the number of children traveling to and from school by walking or riding their bikes has decreased from half of all school aged children in 1969 to about 15 percent in 2006. This initiative will help reverse that downward trend, reduce congestion and increase safety.

"We are expanding ODOT's focus to improve safety by going beyond infrastructure improvements and adding an educational and encouragement component to our work," Proctor said. "The Safe Routes to School Program can help children again become active and independent."

ODOT will allocate about \$19 million dollars over the next four years for a variety of activities from educational, encouragement and health projects to infrastructure projects such as sidewalks, pedestrian and bike paths, crosswalks, traffic calming, bike racks or planning activities.

The educational, encouragement and health aspects of the program are unique for ODOT. The department will have new opportunities to work with representatives from public health, trails, parks, law enforcement, education and the public. Because these aspects of safety and outreach are so new to ODOT, these representatives are helping ODOT develop the program.

Following an extensive review process and adoption of policy and procedures, Ohio expects to request the first round of grant applications by January 2007. Likely applicants will be state, local, and regional agencies including nonprofit organizations.

-more-

## **ADD ONE**

### **Program Overview**

SRTS enables communities to make walking and bicycling to school a safe and routine activity. Funding will be available through 2009 for a wide variety of programs and projects, from building safer street crossings to establishing educational programs that encourage children in kindergarten through middle school, including those with disabilities, and their parents to walk and bicycle safely to school.

The program was created by the recent federal transportation bill, which specifies how states can spend federal gas tax dollars.

- The program is 100 percent federally funded through the Federal Highway Administration, which means there will be no required match from applicants.
- A minimum of 10 percent and a maximum of 30 percent of Ohio's allocation must be used for non-infrastructure related activities such as education, enforcement and encouragement.

For specific information visit:

<http://www.dot.state.oh.us/SafeRoutes/Default.htm>

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For more information about the program contact Julie Walcoff at (614) 466-3049 or at [julie.walcoff@dot.state.oh.us](mailto:julie.walcoff@dot.state.oh.us)

For media inquiries contact Lindsay Mendicino at (614)728-8915 or at [lindsay.mendicino@dot.state.oh.us](mailto:lindsay.mendicino@dot.state.oh.us)

Complete streets are designed and operated to enable safe access for all users. **Complete streets** policies direct transportation planners and engineers to consistently design with all users in mind. They have been adopted by a few states (OR, VA, SC), and a number of regions and cities. Places that adopt complete streets policies are making sure that their streets and roads work for drivers, transit riders, pedestrians, and bicyclists, as well as for older people, children, and people with disabilities.

There is no prescription for a complete street. But look for:

- sidewalks
- bike lanes
- wide shoulders
- plenty of crosswalks
- refuge medians
- bus pullouts
- special bus lanes
- raised crosswalks
- audible pedestrian signals
- sidewalk bulb-outs

Complete streets improve safety. A Federal Highways Administration safety review found that designing the street with pedestrians in mind — sidewalks, raised medians, better bus stop placement, traffic-calming measures, and treatments for disabled travelers — all improve pedestrian safety.

One study found that designing for pedestrian travel by installing raised medians and redesigning intersections and sidewalks reduced pedestrian risk by 28%.

Complete streets encourage walking and bicycling for health. The National Institutes of Medicine recommends fighting childhood obesity by changing ordinances to encourage construction of sidewalks, bikeways, and other places for physical activity.

A report of the National Conference of State Legislators found that the most effective policy avenue for encouraging bicycling and walking is **complete streets**.

One study found that 43% of people with safe places to walk within 10 minutes of home met recommended activity levels, while just 27% of those without safe places to walk were active enough.

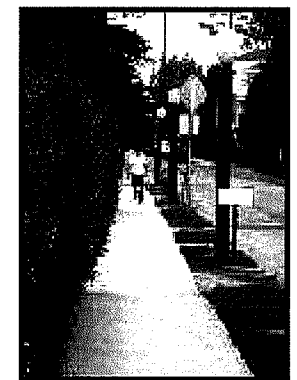
Complete streets help ease transportation woes. About one-third of Americans do not drive. **Complete streets** help provide safe access for people who use wheelchairs, have vision impairments, and for older people and children.

More than one quarter of all trips are one mile or less — and almost half are under five miles. Most of those trips are now made by car. Streets that provide travel choices give people the option to avoid traffic jams and increase the overall capacity of the transportation network.

Complete streets make fiscal sense. Integrating sidewalks, bike lanes, transit amenities, and safe crossings into the initial design of a project spares the expense of retrofits later.



BEFORE

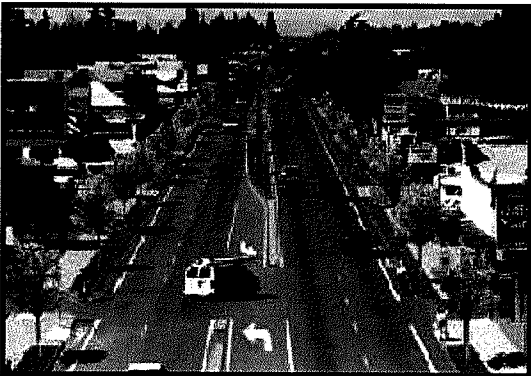


AFTER

**Become part of the movement toward complete streets. For more information, visit [www.completestreets.org](http://www.completestreets.org)**



**NOT COMPLETE**



**COMPLETE**

**Complete the Streets.**



A broad coalition of advocates and transportation professionals are working to enact complete streets policies across the country.

**Join us!**

Institutional membership is \$100.

For more information, visit [www.completestreets.org](http://www.completestreets.org) or write [info@completestreets.org](mailto:info@completestreets.org).

Organizations serving on the National Complete Streets Coalition Steering Committee are:

AARP  
America Bikes  
America Walks  
American Council of the Blind  
American Planning Association  
American Public Transportation Association  
American Society of Landscape Architects  
Association of Pedestrian and Bicycle Professionals  
City of Boulder  
Institute of Transportation Engineers  
League of American Bicyclists  
McCann Consulting  
National Center for Bicycling and Walking  
National Parks Conservation Association  
Natural Resources Defense Council  
Paralyzed Veterans of America  
Smart Growth America  
Surface Transportation Policy Partnership  
Thunderhead Alliance

**National Complete Streets Coalition**  
1707 L Street NW, Suite 1050  
Washington, DC 20036  
(202) 207-3355  
[info@completestreets.org](mailto:info@completestreets.org)  
[www.completestreets.org](http://www.completestreets.org)



The streets of our cities and towns ought to be for everyone, whether young or old, motorist or bicyclist, walker or wheelchair user, bus rider or shopkeeper. But too many of our streets are designed only for speeding cars, or worse, creeping traffic jams. They're unsafe for people on foot or bike — and unpleasant for everybody.

Now, in communities across the country, a movement is growing to complete the streets. States, cities and towns are asking their planners, engineers and designers to build road networks that welcome all citizens.

[www.completestreets.org](http://www.completestreets.org)



2030 long range transportation plan | EASTGATE's transportation improvement progr.  
 rideshare commuter services | transit planning | annual listing of projects with federal fundi  
 GAP analysis report | Intelligent transportation (ITS) | congestion solutions | transportation enhanceme

## Transportation Enhancements

### Introduction

The Eastgate Regional Council of Governments is a designated Metropolitan Planning Organization (MPO) for Trumbull and Mahoning counties. Eastgate will be responsible for overall administration of this urban area component of the Transportation Enhancement (TE) program, including recognition of sponsor and project eligibility; development of local program policies and schedules; project evaluation, ranking, and final allocation of funding to awarded projects. It is important to note that sponsors of awarded projects will be required to enter into a contract with the Ohio Department of Transportation (ODOT) for the implementation phase of the project.

Eligible TE projects must demonstrate a direct relationship to the surface transportation system. The TE program is intended to encourage transportation related activities that go beyond the customary cultural or environmental mitigation required when developing a transportation improvement project. The intent of the program is to creatively integrate transportation improvement facilities into their surrounding communities and the natural environment, thus "enhancing" the traditional transportation system. Enhancement projects can be either supplemental to a planned roadway project, or a stand alone project. Both Eastgate and ODOT encourage adding enhancements to planned programmed projects rather than stand alone projects.

Transportation Enhancement Activities are defined as follows, with ODOT grouping the activities into three main categories:

#### Historic and Archaeological Transportation Enhancements

- Acquisition of historic sites
- Historic highway programs
- Historic preservation
- Rehabilitation and operation of historic transportation buildings, structure, or facilities (including historic railroad facilities and research)
- Archaeological planning and research
- Establishment of transportation museums

#### Scenic and Environmental Transportation Enhancements

- Acquisition of scenic easements and scenic sites
- Scenic highways programs including the provision of tourist and welcome center facilities
- Landscaping and other scenic beautification
- Anti-litter Education
- Control and removal of outdoor advertisement Mitigation of water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity

#### Pedestrian and Bicycle Facilities

- Provision of facilities for pedestrian and bicycles

- Provision of safety and educational activities for pedestrians and bicycles
- Preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails)

## Funding Provisions

The Transportation Enhancement program is not a grant program. The federal-aid program operates on a reimbursement basis as work progresses. In no case will cost be eligible for reimbursement until the project is approved by Eastgate, ODOT and Federal Highway Administration (FHWA). Cost estimates documented in the sponsor's application must be certified by a professional engineer, architect, or other appropriate professional discipline. The funding amount will be capped at the cost estimate used in the original application. Applicants are cautioned to be thorough in the development of cost estimates, as requests for supplemental funding to cover cost overruns may not be considered.

The Transportation Enhancement program will provide up to 80% of the total construction cost for the project, including Construction Engineering, Inspection and Testing. The applicant is required to provide a minimum, in cash match, of 20% of the construction cost. The applicant additionally shall finance the architecture/engineering plans, environmental assessment studies, right-of-way plans, right-of-way purchase (except when property acquisition is part of the TE proposal) and environmental remediation, if necessary.

These expenses can not be credited toward the applicant's 20% local share of the construction or implementation costs.

## Eligibility Guidelines

### Eligible Applicants

Applicants are limited to political subdivisions of the State of Ohio located inside of the boundaries of an MPO (Eastgate). Political subdivisions outside of the boundaries of an MPO may apply through the appropriate ODOT District Office for TE funding. Eligible applicants also include park districts and other agencies of state government. Any citizen group or other private organization may sponsor a project by coordinating with and making application through the eligible entity having jurisdiction over the transportation facility involved.

### Project Eligibility

To be eligible for funding, a Transportation Enhancement proposal must meet the criteria established and the following requirements:

- Minimum estimated construction cost of \$50,000.00
- The applicant is permitted to submit only ONE project for TE funds per funding round.
- All proposed projects must have a direct relationship to transportation.
- The applicant is responsible for all plan development, project planning, design, architecture, environmental studies and remediation (if necessary), right-of-way plans and acquisition (unless the project involves acquisition of a scenic or historic site or an abandoned railway corridor), and certified engineering cost for the project.
- Federal law requires that federally-funded projects conform to the National Environmental Protection Act and the National Historic Preservation Act. To comply with these laws, projects must have an environmental review to assess and/or mitigate effects on social, economic, and environmental factors. Similarly, work involving sensitive historic structures or archeological sites must conform to the U.S. Secretary of the Interior's standards and guidelines for archeological and historic preservation.
- Any property acquisition must conform to the Uniform Relocation Assistance and Real Property Acquisition Act, as amended.
- Engineering and architectural designs for all facilities must conform to the Americans with Disabilities Act.
- The local match is required to be cash. In-kind contributions cannot be accepted as part of the local share.
- The proposed Enhancement project must be publicly-owned and on existing publicly owned property (except when property acquisition is part of the TE proposal).
- The applicant must demonstrate ability and commitment to maintain the enhancement project.
- The structure or site must be on the National Register of Historic Places to be eligible for Historic and Archaeological Transportation Enhancements.

- All bicycle/pedestrian facilities projects must conform to the requirements of the *Guide for the Development of Bicycle/Pedestrian Facilities*, published by the American Association of State Highway and Transportation Officials (AASHTO).

### Evaluation Guidelines

Project submittals will be evaluated and prioritized by a Transportation Enhancement Selection Committee whose membership shall be represented by ONE appointment from each of the entities listed below. The selection committee will prepare a list of prioritized TE projects to be funded, with recommendations advanced to Eastgate's TAC, CAB, and General Policy Board for their approval.

- The City of Youngstown
- The City of Warren
- Eastgate Citizens Advisory Board
- Trumbull County Planning Commission
- Mahoning/Trumbull County Engineer Office
- Mill Creek Metro Parks
- Small Cities/Villages from both counties (appointed by Eastgate's TAC)
- Township Representative from both counties (appointed by Eastgate's TAC)
- Ohio Department of Transportation District 4

### Application Format

The applicant shall complete the application and include the following information:

1. A complete detailed description and general scope of the proposed project and its relation to the intermodal transportation system. Location maps, elevations, and photographs should be included, to fully illustrate the project.
2. A complete and detailed breakdown of the source of funding and cost for the proposed project, certified by a professional engineer, architect, or other appropriate discipline. The estimate should include 10 percent for inspections. If the project is approved for funding, the cost estimate will be used to cap the project amount. Cost must be forecast for two years into the future considering the time element to bring a project to construction.
3. A complete and detailed description of the proposed project's characteristics and benefits.
4. The date (month and year) when the project will be ready to proceed to construction. Include the present status of property ownership and status of plan preparation, if applicable.
5. A certified copy of a resolution from the applicant's governing body authorizing the submission of the application, agreeing to share in the project cost, and the future maintenance of the proposed project.

Twelve copies of the completed application must be received at the Eastgate office no later than 4:00 p.m. on 03/07/08.

### Project Evaluation

Projects will be evaluated on a wide range of factors, including but not limited to the following:

- Inclusion in Eastgate's 2030 Long Range Transportation Plan Update.
- Enhancement of a applicants programmed project in Eastgates current Transportation Improvement Plan.
- Overall project application.
- Project readiness to proceed to construction/implementation.
- Priority for projects of "regional significance", whose benefits will objectively extend beyond a single jurisdiction.
- Priority for projects with local participation above and beyond the required 20% local match.
- Priority for projects requesting \$250,000 or less in enhancement funds.

The above criteria will be used to generally evaluate and compare all of the proposals submitted. In addition, each

proposal will be evaluated by criteria which are specific to each of the three general TE categories. Additional information about category-specific evaluation criteria is available from the Eastgate staff.

## Ohio Department of Transportation District 4 Review Meeting

Project sponsors recommended to receive TE funds through the Eastgate evaluation process will be required to meet with representatives from Eastgate and the Ohio Department of Transportation (ODOT) District 4. The purpose of this meeting will be to discuss project time lines, project cost and what action should be taken for your project to be identified in Eastgate's Transportation Improvement Program (TIP).

## Requirements For Awarded Projects

Transportation Enhancement projects approved by the General Policy Board for funding must meet the following requirements:

- A project sponsor will have 30 days after receiving written notification of selection from Eastgate to submit a Programming Package to ODOT District 4. If it is the intention of the project sponsor to use the LPA process, District 4 should be notified at this time. If the programming package is not submitted to ODOT district 4 within 30 days, this matter will be brought to the attention of Eastgate's Technical Advisory Committee for review, possible cancellation of the project and redistribution of funds to other unfunded TE project sponsor.
- A project sponsor is required to have their project ready for sale in the Fiscal Year they applied for construction in the enhancement application. If it becomes a concern to Eastgate that this time frame can not be met this matter will be brought to the attention of Eastgate's Technical Advisory Committee for review, possible cancellation of the project and redistribution of funds to other unfunded TE project sponsor.

It is in the best interest of the project sponsor to review all necessary aspects of their project to insure the above requirements can be met. Special detail must be given to the Fiscal Year the project sponsor commits to construction and their readiness to proceed at that milestone.

## Program Timetable

The deadline for having proposals submitted are:

03/07/08 - Deadline for application submission to Eastgate Office no later than 4:00 p.m.  
03/10/08 - 04/14/08 - Project application reviewed by selection committee  
05/--/08 - ODOT District 4 Review Meeting  
06/--/08 - EASTGATE announces projects selected to receive TE funding allocations  
07/--/08 - Notification of awarded funding projects in writing to project sponsor  
08/--/08 - Deadline for program package to ODOT District 4

For Further Information Contact:

Ken Sympson  
EASTGATE REGIONAL COUNCIL OF GOVERNMENTS  
City Centre One  
100 E. Federal Street, Suite 1000  
Youngstown, Ohio 44503  
330-779-3800 E-Mail - [ksympson@eastgatecog.org](mailto:ksympson@eastgatecog.org)

[Please click here for a printable application](#)





<http://www.epa.gov/landrevitalization/lrso.htm>  
Last updated on Thursday, January 10th, 2008.

## Land Revitalization

You are here: [EPA Home](#) [OSWER](#) [Land Revitalization](#) Land Revitalization Initiative

### **Land Revitalization Initiative**

As part of its mission to protect human health and the environment, EPA is undertaking an Agency-wide initiative to revitalize land by restoring and reusing contaminated, and potentially contaminated, sites with continued emphasis on:

- Developing land revitalization statistics, measures, and outcomes ([more...](#));
- Conducting land revitalization public outreach; ([Land Revitalization Brochure](#)) (3 pp, 420K, [About PDF](#))
- Providing training ([Training Calendar](#))
- Promoting effective tools that address barriers to land revitalization
- Enhancing government coordination to promote land revitalization
- Building strong land revitalization partnerships

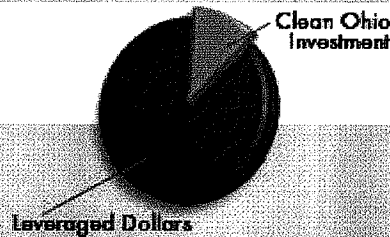
The Land Revitalization Initiative emphasizes that cleanup and reuse are mutually supportive goals and consideration of anticipated property reuse should be an integral part of EPA's cleanup decisions. Whether a property is a Superfund site, an operating waste disposal site, a petroleum facility, a former gas station, or an abandoned industrial facility, EPA believes that environmental cleanup and land restoration across all EPA programs must be achieved.

The days of erecting chain link fences around a property and posting "Keep Out" signs are over. Cleaning up previously contaminated properties for reuse can help reinvigorate communities, preserve greenspace, and prevent sprawl. Revitalized land can be used in many ways—from the creation of public parks and the restoration of ecological systems, to the construction of community development projects and the establishment of new businesses.



## Did you Know?

Ohio is home to more than 800 private & public golf courses.



The Clean Ohio Fund program invested over \$138 million toward brownfield assessment and cleanup projects over the last 4 years. It is anticipated over \$1.3 billion in community and private investment will be spent in the next 8-10 years to revitalize these properties. The current Return on Investment ratio for the program is \$9.37.

### Featured Links

- Final Stakeholder Report
- NOTICE REGARDING COAF FUNDING
- 2008 Brownfields Conference
- Project Resource and Advisory Meeting - **NEW!**

### Quick Navigation

- Brownfield Revolving Loan Fund
- Clean Ohio Assistance Fund
- Clean Ohio Revitalization Fund
- Information for Grantees
- Contacts
- Links

### BUSINESSES / INDUSTRY

### LIVING IN OHIO

### TECHNOLOGY / RESEARCH

#### Living In Ohio

## Urban Development in Ohio

The mission of the Office of Urban Development (OUD) is to assist communities in creating wealth from personal, business and community successes. OUD works to identify the resources and financing necessary to enhance the economic viability of local communities. The Office strives to improve the economic climate in Ohio's older communities by encouraging new investment, innovative land use, and job retention and/or creation.

The Clean Ohio Revitalization and Clean Ohio Assistance Funds are a portion of the \$400 million Clean Ohio Fund approved by Ohio voters in November 2000. Voters gave the state the ability to issue \$200 million for brownfield redevelopment activities and \$200 million for preservation of green space. The Ohio Department of Development, through its Office of Urban Development, is implementing the brownfield portion of the bond in consultation with the Ohio Environmental Protection Agency.

#### Clean Ohio Revitalization Fund

The Clean Ohio Revitalization Fund is a key financial component to help a community build economic capacity by providing funding for brownfield redevelopment. Brownfield redevelopment allows a community to reclaim and improve its lands, making property viable for new development.

Clean Ohio Assistance Fund - [Click Here for an important notice...](#)

The Clean Ohio Assistance Fund is an annual appropriation dedicated to brownfield redevelopment in Eligible Areas.

#### Brownfield Revolving Loan Fund (RLF)

The Brownfield Revolving Loan Fund (RLF) capitalized by a grant from the United States Environmental Protection Agency (USEPA) offers below-market rate loans to assist with the remediation of a brownfield property to return it to a productive economic use in the community.

#### Clean Ohio Council

The Ohio Department of Development (ODOD) is responsible for supporting the legislated Clean Ohio Council. The Clean Ohio Council was created to select projects that will receive grants and low-interest loans from the Clean Ohio Fund. The COC consists of the director of development, the director of environmental protection, the lieutenant governor, one member of the majority party of the senate and one member of the minority party of the senate to be appointed by the president of the senate, one member of the majority party of the house of representatives and one member of the minority party of the house of representatives to be appointed by the speaker of the house of representatives and seven members appointed by the Governor. The seven members represent local governments, business and development interests and environmental advocacy organizations. The Director of the Ohio Public Works Commission serves as a nonvoting member.

#### Clean Ohio Training

ODD sponsors and supports training opportunities for communities and other entities interested in our programs.

#### Information for Grantees

Information for CORF and COAF recipients and stakeholders to assist them in the implementation of their grants and to keep them updated on new policies.

#### **New!** Project Resource and Advisory Meeting

The Office of Urban Development is now scheduling "Project Resource and Advisory Meetings". These meetings will take place on location with communities, stakeholders and representatives from both ODOD and Ohio Environmental Protection Agency (Ohio EPA) to discuss potential projects. Interested parties must pre-register 10 days prior to the desired meeting date

#### Contacts

#### Links



**MODEL ORDINANCE FOR THE  
ESTABLISHMENT OF WETLAND SETBACKS**

**PLEASE NOTE**

- The following model wetland setback ordinance is recommended as part of a community's storm water management program for flood control, erosion control, and water quality protection. In general it should be implemented in conjunction with a riparian setback regulation for the community.
- This model ordinance **MUST BE TAILORED TO THE SPECIFIC NEEDS OF EACH COMMUNITY**. Text throughout the model indicates decision points with a ☞ symbol. It is also **IMPORTANT THAT COMMUNITIES DEVELOP A MAP OF KNOWN WETLANDS**. Please contact CRWP for assistance in tailoring this model to your community's needs and in developing such maps.
- Throughout this model duties are assigned to the "Community." These should be assigned to specific staff and departments.

**WHEREAS**, wetlands protect the public health and safety of the *[community]* by:

1. Reducing peak flood flows, storing flood waters, and maintaining stream flow patterns.
2. Minimizing streambank erosion by reducing runoff volume and velocity.
3. Protecting ground water quality by filtering pollutants from storm water runoff.
4. Recharging groundwater reserves.
5. Maintaining surface water quality by minimizing sediment pollution from streambank erosion, and trapping sediments, chemicals, salts, and other pollutants from flood waters and storm water runoff, and,
6. Providing habitat for aquatic and terrestrial organisms, many of which are on Ohio's Endangered and/or Threatened Species listings; and,

**WHEREAS**, wetlands cannot continue to provide these functions unless protected from the effects of fluctuations in storm water flow; urban pollutants; disposal of fill or dredged materials; and other impacts of land use change; and,

**WHEREAS**, replacement of the public health and safety benefits of wetlands including flood control, erosion control, ground water recharge, and water quality protection, if possible, will require significant public expenditure; and,

**WHEREAS**, the State of Ohio has lost over 90 percent of its original wetlands, and the Chagrin River watershed has lost over 80 percent of its original wetlands, due to draining, dredging, filling, excavating, and other acts; and,

**WHEREAS**, flooding is a significant threat to property and public health and safety, and wetlands lessen the damage from flooding by slowing the water velocity, enabling water to soak into the ground, and by providing temporary storage of overbank flood flow; and,

**WHEREAS**, sedimentation of eroded soil adversely affects aquatic communities and incurs



removal costs to downstream communities; and,

**WHEREAS**, there are watershed-wide efforts to minimize flooding and streambank erosion in the *[watersheds to which community belongs]* watersheds and to protect and enhance the water resources of the *[major watercourses to which community drains]* and its tributaries and *[community]* recognizes its obligation as a part of these watersheds to minimize flooding and streambank erosion by controlling runoff within its borders; and,

**WHEREAS**, the Chagrin River Watershed Partners, Inc.; the Cuyahoga Soil and Water Conservation District; the Geauga Soil and Water Conservation District; the Lake County Soil and Water Conservation District; the Natural Resource Conservation Service of the U.S. Department of Agriculture; the Northeast Ohio Areawide Coordinating Agency; the Ohio Department of Natural Resources, Division of Natural Areas and Preserves; the Ohio Environmental Protection Agency; and the U.S. Environmental Protection Agency recommend wetland setbacks as a valuable tool in an overall management program for flood risk reduction, erosion control, water quality control, and aquatic habitat protection; and, *Need support letters*

**WHEREAS**, studies undertaken by, and reviewed by, the Ohio Environmental Protection Agency and other independent scientific bodies recommend the minimum distances for wetland setbacks; and,

**WHEREAS**, the Council of the *[community]* has reviewed and adopted the recommendations of the above government agencies, and the Council finds that in order to minimize encroachment on wetlands and the need for costly engineering solutions to protect structures and reduce property damage and threats to the safety of watershed residents; to protect and enhance the scenic beauty of the *[community]*; and to preserve the character of the *[community]*, the quality of life of the residents of the *[community]*, and corresponding property values, it is necessary and appropriate to regulate structures and uses within a wetland setback surrounding Ohio EPA Category 2 and 3 wetlands in the *[community]*; and,

**WHEREAS**, Article XVIII, Section 3 of the Ohio Constitution grants municipalities the legal authority to adopt land use and control measures for promoting the peace, health, safety, and general welfare of its citizens; and,

**WHEREAS**, 40 C.F.R. Parts 9, 122, 123, and 124, referred to as NPDES Storm Water Phase II, require designated communities, including *[community]*, to develop a Storm Water Management Program to address the quality of storm water runoff during and after soil disturbing activities.

*☞ Remove this whereas clause if your community is not designated under the NPDES Phase II regulation.*

**NOW, THEREFORE, BE IT ORDAINED** by the Council of the *[community]*, County of *[county]*, State of Ohio, that:

**SECTION 1:** Codified Ordinance *Chapter XXXX Wetland Setbacks*, is hereby adopted to read in total as follows:



**CHAPTER XXXX  
WETLAND SETBACKS**

**XXXX.01 PURPOSE AND SCOPE**

A. It is hereby determined that the wetlands within the *[community]* contribute to the health, safety, and general welfare of the residents of the *[community]*. The specific purpose and intent of this regulation is to regulate uses and developments within wetland setbacks that would impair the ability of wetlands to:

1. Minimize flood impacts by absorbing peak flows, slowing the velocity of flood waters, regulating stream base flows, and maintaining stream flow patterns.
2. Minimize streambank erosion by reducing runoff volume and velocity.
3. Protect groundwater quality by filtering pollutants from storm water runoff.
4. Recharge groundwater reserves.
5. Protect surface water quality by minimizing sediment pollution from streambank erosion, and filtering, settling, and transforming sediments, chemicals, salts, and other pollutants from flood waters and storm water runoff.
6. Provide habitat to a wide array of aquatic and terrestrial wildlife.
7. Benefit the *[community]* economically by minimizing encroachment on wetlands and the need for costly engineering solutions such as retention/detention basins and rip rap to protect structures and reduce property damage and threats to the safety of watershed residents; and by contributing to the scenic beauty and environment of the *[community]*, and thereby preserving the character of the *[community]*, the quality of life of the residents of the *[community]*, and corresponding property values.

B. The following regulation has been enacted to protect these services of wetlands by providing reasonable controls governing structures and uses within wetland setbacks around Ohio EPA Category 2 and 3 wetlands in the *[community]*.

Due to the importance of properly functioning wetlands, minimum wetland setbacks may be given preference over minimum front, side, or rear yard setbacks as specified in this ordinance in the consideration of an appeal for a variance by the board of zoning appeals.

**XXXX.02 APPLICABILITY, COMPLIANCE & VIOLATIONS**

- A. This regulation shall apply to all zoning districts.
- B. This regulation shall apply to all structures and uses on lands containing an Ohio EPA Category 2 or 3 wetland as defined in this regulation, except as provided herein.
- C. No approvals or permits shall be issued by the *[community]* without full compliance with the terms of this regulation.



**XXXX.03 CONFLICTS WITH OTHER REGULATIONS & SEVERABILITY**

- A. Where this regulation imposes a greater restriction upon land than is imposed or required by any other provision of law, regulation, contract, or deed, the provisions of this regulation shall control.
- B. This regulation shall not limit or restrict the application of other provisions of law, regulation, contract, or deed, or the legal remedies available thereunder, except as provided in **Section XXXX.03 (A)** of this regulation.
- C. If any clause, section, or provision of this regulation is declared invalid or unconstitutional by a court of competent jurisdiction, validity of the remainder shall not be affected thereby.

**XXXX.04 DEFINITIONS**

For the purpose of this regulation, the following terms shall have the meaning herein indicated:

- A. **COMMUNITY:** Throughout this regulation, this shall refer to the *[community]* or its designated representatives, boards, or commissions.
- B. **IMPERVIOUS COVER:** Any surface that cannot effectively absorb or infiltrate water. This may include roads, streets, parking lots, rooftops, and sidewalks.
- C. **NOXIOUS WEED:** Any plant species defined by the Ohio Department of Agriculture as a "noxious weed" and listed as such by the Department. For the purposes of this regulation, the most recent version of this list at the time of application of this regulation shall prevail.
- D. **OHIO ENVIRONMENTAL PROTECTION AGENCY:** Referred throughout this regulation as the "Ohio EPA."
- E. **OHIO EPA CATEGORY 2 WETLANDS:** Those wetlands classified as Category 2 wetlands under OAC 3745-1-54, in accordance with generally accepted wetland assessment methods acceptable to the U.S. Army Corps of Engineers and Ohio EPA at the time of application of this regulation.
- F. **OHIO EPA CATEGORY 3 WETLANDS:** Those wetlands classified as Category 3 wetlands under OAC 3745-1-54, in accordance with generally accepted wetland assessment methods acceptable to the U.S. Army Corps of Engineers and Ohio EPA at the time of application of this regulation.
- G. **SOIL AND WATER CONSERVATION DISTRICT:** An entity organized under Chapter 1515 of the Ohio Revised Code referring to either the Soil and Water Conservation District Board or its designated employee(s), hereinafter referred to as *[county]* SWCD.
- H. **SOIL DISTURBING ACTIVITY:** Clearing, grading, excavating, filling, or other alteration of the earth's surface where natural or human made ground cover is destroyed and which may result in, or contribute to, erosion and sediment pollution.
- I. **SUBSTANTIAL DAMAGE:** Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would be equal to, or would exceed, 50%



of the market value of the structure before the damage occurred.

- J. WATERCOURSE: Any brook, channel, creek, river, or stream having banks, a defined bed, and a definite direction of flow, either continuously or intermittently flowing.
- K. WETLAND: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas. (40 CFR 232, as amended).
- L. WETLAND SETBACK: Those lands within the *[community]* that fall within the area defined by the criteria set forth in *Section XXXX.05* of this regulation.

**XXXX.05 ESTABLISHMENT OF WETLAND SETBACKS**

- A. Designated wetlands shall include those wetlands meeting any ONE of the following criteria:
  - 1. All wetlands ranked by an appropriate wetland evaluation methodology as Ohio EPA Category 2.
  - 2. All wetlands ranked by an appropriate wetland evaluation methodology as Ohio EPA Category 3.
- B. Wetland setbacks on designated wetlands are established as follows:
  - 1. A minimum of 120 feet surrounding all Ohio EPA Category 3 wetlands.
  - 2. A minimum of 75 feet surrounding all Ohio EPA Category 2 wetlands.
- C. The following conditions shall apply in wetland setbacks:
  - 1. Wetland setbacks shall be measured in a perpendicular direction from the defined wetland boundary.
  - 2. Wetlands shall be delineated by protocols accepted by the U.S. Army Corps of Engineers at the time an application is made under this regulation.
  - 3. Except as otherwise provided in this regulation, the wetland setback shall be preserved in its natural state.

**XXXX.06 APPLICATIONS AND SITE PLANS**

- A. The applicant shall be responsible for indicating wetland setbacks as required by this regulation and shall identify such setbacks on a site plan included with all subdivision plans, land development plans, and/or zoning permit applications submitted to the *[community]*. The site plan shall be prepared by a professional engineer, surveyor, landscape architect, or such other qualified professional as determined by the *[community]* and shall be based on a survey of the affected land. Two (2) copies of the site plan shall be submitted. The site plans shall include the following information:





1. The boundaries of the lot with dimensions.
  2. The locations of designated wetlands.
  3. The limits, with dimensions, of the wetland setbacks.
  4. The existing topography at intervals of two (2) feet.
  5. The location and dimensions of any proposed structures or uses, including proposed soil disturbance, in relationship to all wetlands.
  6. North arrow, scale, date, and stamp bearing the name and registration number of the qualified professional who prepared the site plan.
  7. Other such information as may be necessary for the *[community]* to ensure compliance with this regulation.
- B. The *[community]* may, in reviewing the site plan, consult with the *[county]* SWCD or other such experts. Any costs associated with this review may be assessed to the applicant.
- C. If soil disturbing activities will occur within 50 feet of the outer boundary of the applicable wetland setback as specified in this regulation, the wetland setback shall be clearly identified by the applicant on site with construction fencing as shown on the site plan. Such identification shall be completed prior to the initiation of any soil disturbing activities and shall be maintained throughout soil disturbing activities.
- D. No approvals or permits shall be issued by the *[community]* prior to identification of wetland setbacks on the affected land in conformance with this regulation.

#### **XXXX.07 USES PERMITTED IN WETLAND SETBACKS**

*☞ Communities should review, and modify as necessary, the following lists of permitted and prohibited uses for consistency with existing codes and community concerns.*

- A. By Right Uses Without A Permit. Open space uses that are passive in character shall be permitted in wetland setbacks, including, but not limited to, those listed in this regulation. No use permitted under this regulation shall be construed as allowing trespass on privately held lands.
1. Recreational Activity. Passive recreational uses, as permitted by federal, state, and local laws, such as hiking, fishing, hunting, picnicking, and similar uses.
  2. Removal of Damaged or Diseased Trees. Damaged or diseased trees may be removed.
  3. Revegetation and/or Reforestation. Wetland setbacks may be revegetated and/or reforested with native, noninvasive plant species.
- B. By Conditional Use Permit Granted by the *Planning and Zoning Commission*: When granting Conditional Use Permits for the following uses, the *Planning and Zoning Commission* may, for good cause, attach such conditions as it deems appropriate. Permits issued under this regulation are issued to the applicant only, shall not be transferred, and shall be void if not implemented within one (1) year of issuance.
1. Crossings: Crossings of designated wetlands through wetland setbacks with roads, driveways, easements, bridges, culverts, utility service lines, or other means may be permitted provided such crossings minimize disturbance in wetland setbacks and mitigate



any necessary disturbances. Such crossings shall only be undertaken upon approval of a Crossing Plan by the *Planning and Zoning Commission*. Any costs associated with review of Crossing Plans may be assessed to the applicant.

If work will occur within the jurisdictional boundary of the designated wetland, proof of compliance with the applicable conditions of a US Army Corps of Engineers Section 404 Permit (either a Nationwide Permit, including the Ohio State Certification Special Conditions and Limitations, or an Individual Permit, including Ohio 401 water quality certification), shall also be provided to the *[community]*. Proof of compliance shall be the following:

- a. A site plan showing that any proposed crossing conforms to the general and special conditions of the applicable Nationwide Permit, or
  - b. A copy of the authorization letter from the U.S. Army Corps of Engineers approving activities under the applicable Nationwide Permit, or
  - c. A copy of the authorization letter from the U.S. Army Corps of Engineers approving activities under an Individual Permit.
- B. Storm Water Retention and Detention Facilities: Storm water retention and detention facilities may be constructed in the wetland setback, provided:
- a. Storm water quality treatment consistent with current Ohio EPA regulations is incorporated into the basin.
  - b. Storm water retention and detention facilities are located at least 50 feet from the jurisdictional boundary of the designated wetland.
- C. Landscaping: The removal of natural vegetation within a wetland setback and the subsequent cultivation of lawns, landscaping, shrubbery, or trees may be allowed provided that such cultivation is done in conformance with a Landscaping Plan approved by the *Planning and Zoning Commission*. Any costs associated with review of Landscaping Plans may be assessed to the applicant. Landscaping Plans shall meet the following criteria:
- a. Maintain trees in the wetland setback larger than nine (9) inches in caliper (diameter) as measured fifty-four inches above the ground to the maximum extent practicable.
  - b. Maintain trees, shrubbery, and other non-lawn, woody vegetation in the wetland setback to the maximum extent practicable.

#### **XXXX.08 USES PROHIBITED IN WETLAND SETBACKS**

Any use not authorized under this regulation shall be prohibited in wetland setbacks. By way of example, the following uses are specifically prohibited, however, prohibited uses are not limited to those examples listed here:

- A. Construction. There shall be no buildings or structures of any kind.



- B. Dredging or Dumping. There shall be no drilling, filling, dredging, or dumping of soil, spoils, liquid, or solid materials, except for noncommercial composting of uncontaminated natural materials and except as permitted under this regulation
- C. Walls: There shall be no walls.
- D. Roads or Driveways. There shall be no roads or driveways, except as permitted under this regulation.
- E. Motorized Vehicles. There shall be no use of motorized vehicles, except as permitted under this regulation.
- F. Disturbance of Natural Vegetation: There shall be no disturbance of natural vegetation within wetland setbacks except for the following:
  - 1. Maintenance of lawns, landscaping, shrubbery, or trees existing at the time of passage of this regulation.
  - 2. Cultivation of lawns, landscaping, shrubbery, or trees in accordance with an approved Landscaping Plan submitted in conformance with this regulation.
  - 3. Conservation measures designed to remove damaged or diseased trees or to control noxious weeds or invasive species.
- G. Parking Spaces or Lots and Loading/Unloading Spaces for Vehicles: There shall be no parking spaces, parking lots, or loading/unloading spaces.
- H. New Surface and/or Subsurface Sewage Disposal or Treatment Areas. Wetland setbacks shall not be used for the disposal or treatment of sewage, except as necessary to repair or replace an existing home sewage disposal system and in accordance with recommendations of the [county] Board of Health.

**XXXX.09 NON-CONFORMING STRUCTURES OR USES IN WETLAND SETBACKS**

*☞ Communities may want to remove this section if non-conforming structures and uses are addressed elsewhere in their codes.*

- A. A non-conforming use, existing at the time of passage of this regulation and within a wetland setback, that is not permitted under this regulation may be continued but shall not be changed or enlarged unless changed to a use permitted under this regulation.
- B. A non-conforming structure, existing at the time of passage of this regulation and within a wetland setback, that is not permitted under this regulation may be continued but shall not have the existing building footprint or roofline expanded or enlarged.
- C. A non-conforming structure or use, existing at the time of passage of this regulation and within a wetland setback, that has substantial damage and that is discontinued, terminated, or abandoned for a period of six (6) months or more may not be revived, restored, or re-established.



XXXX.10 VARIANCES WITHIN WETLAND SETBACKS

☞ *Sections XXXX.10 and XXXX.11 assign the authority to review and grant variances in the wetland setback to the Planning and Zoning Commission (P&Z), a role traditionally filled by the Board of Zoning Appeals. This role for the P&Z, developed by the City of Kirtland, is recommended because P&Z will be the body developing the wetland setback ordinance and recommending it to Council. Through this process of ordinance development, the members of P&Z become familiar with the intent of wetland setbacks, the technical issues involved, and the importance of adjusting other setbacks, such as side yard and rear yard, to ensure buildability while maintaining wetland areas. For this reason, the members of P&Z may be better able to grant reasonable wetland setback variances. Communities should consult their law director regarding this modification of authorities.*

- A. The **Planning and Zoning Commission** may grant a variance to this regulation as provided herein. In granting a variance, the following conditions shall apply:
1. In determining whether there is unnecessary hardship with respect to the use of a property or practical difficulty with respect to maintaining the wetland setback as established in this regulation, such as to justify the granting of a variance, the **Planning and Zoning Commission** shall consider the potential harm or reduction in wetland functions that may be caused by a proposed structure or use.
  2. The **Planning and Zoning Commission** may not authorize any structure or use in a Zoning District other than those authorized in the Zoning Code.
  3. Variances shall be void if not implemented within one (1) year of the date of issuance.
- B. In making a determination under **Section XXXX.09 (A)** of this regulation, the **Planning and Zoning Commission** may consider the following:
1. The soil type and natural vegetation of the parcel.
  2. The Ohio EPA Category of wetland. Category 3 wetlands are the highest quality wetlands in the State of Ohio and should be protected to the greatest extent possible.
  3. The extent to which the requested variance impairs the flood control, erosion control, water quality protection, or other functions of the wetland setback. This determination shall be based on sufficient technical and scientific data.
  4. The degree of hardship, with respect to the use of a property or the degree of practical difficulty with respect to maintaining the wetland setback as established in this regulation, placed on the landowner by this regulation and the availability of alternatives to the proposed structure or use.
  5. Soil-disturbing activities permitted in the wetland setback through variances should be implemented to minimize clearing to the extent possible and to include Best Management Practices necessary to minimize erosion and control sediment.
  6. The presence of significant impervious cover, or smooth vegetation such as maintained lawns, in the wetland setback compromises its benefits to the **[community]**. Variances



should not be granted for asphalt or concrete paving in the wetland setback. Variances may be granted for gravel driveways when necessary.

7. Whether a property, otherwise buildable under the ordinances of the *[community]*, will be made unbuildable because of this regulation.
8. In order to maintain the wetland setback to the maximum extent practicable, the *Planning and Zoning Commission* may consider granting variations to other area or setback requirements imposed on a property by the Zoning Code.
9. In granting a variance under this regulation, the *Planning and Zoning Commission*, for good cause, may impose such conditions that it deems appropriate to maintain the purposes of this regulation as outlined in *Section XXXX.01*.

#### **XXXX.11 PROCEDURES FOR VARIANCES & APPEALS**

- A. Any applicant seeking a variance to the conditions imposed under this regulation or an appeal to an administrative decision made under this regulation, other than a decision by the *Planning and Zoning Commission*, may apply to or appeal to the *Planning and Zoning Commission*. The following conditions shall apply:
  1. When filing an application for an appeal to an administrative decision, the applicant shall file a notice of appeal specifying the grounds therefor with the administrative official within 20 days of the administrative official's decision. Upon determining that the application is complete and upon receipt of the required fee of *\$100*, the administrative official shall transmit to the *Planning and Zoning Commission* the application and a transcript constituting the record from which the administrative decision subject to appeal was based. This transmission shall occur no less than fourteen (14) days prior to a regularly scheduled meeting of the *Planning and Zoning Commission* in order to be placed on the agenda for that meeting.
  2. When applying for a variance, the applicant shall file a variance request with the *Planning and Zoning Commission*.
  3. Applications for appeals or variances made under this regulation shall contain the following information:
    - a. The name, address, and telephone number of the applicant;
    - b. Proof of ownership or authorization to represent the property owner.
    - c. The location of the property, including street address and permanent parcel number.
    - d. The current zoning of the property.
    - e. A description of the project for which the appeal or variance is sought.
    - f. A description of the administrative decision being appealed or the conditions of the regulation from which a variance is sought.



- g. Names and addresses of each property owner within 500 feet as shown in the current records of the *[county]* Auditor typed on gummed labels.
- 4. Applications for variances or appeals of administrative decisions shall not be resubmitted to the *Planning and Zoning Commission* within one (1) year of the date of a final decision by the *Planning and Zoning Commission* on the original application, unless the applicant shows the *Planning and Zoning Commission* either of the following:
  - a. Newly discovered evidence that could not have been presented with the original submission, or
  - b. Evidence of a substantial change in circumstances since the time of the original submission.
- B. A decision by the *Planning and Zoning Commission* in response to an application for a variance request or an appeal of an administrative decision filed pursuant to *Section XXXX.10 (A)* of this regulation shall be final.

**XXXX.12 INSPECTION OF WETLAND SETBACKS**

The identification of wetland setbacks shall be inspected by the *[community]*:

- A. Prior to soil disturbing activities authorized under this regulation. The applicant shall provide the *[community]* with at least two (2) working days written notice prior to starting such soil disturbing activities.
- B. When evidence is brought to the attention of the *[community]* that uses or structures are occurring that may reasonably be expected to violate the provisions of this regulation.

**XXXX.99 PENALTY**

- A. Any person who shall violate any section of this regulation shall be guilty of a misdemeanor of first degree and, upon conviction thereof, shall be subject to punishment as provided in *Chapter XXXX* and shall be required to restore the wetland setback through a restoration plan approved by the *Planning and Zoning Commission*.
- B. The imposition of any other penalties provided herein shall not preclude the *[community]* from instituting an appropriate action or proceeding in a Court of proper jurisdiction to prevent an unlawful development, or to restrain, correct, or abate a violation, or to require compliance with the provisions of this regulation or other applicable laws, ordinances, rules, or regulations, or the orders of the *[community]*.



We inspire people to plant,  
nurture, and celebrate trees.



“He who plants a tree  
plants hope.”—Lucy Larcom

You are here: [Home](#) → [Programs](#) → [Tree City USA](#) → Benefits of Being a Tree City

## Tree City Benefits



Every community, regardless of size, benefits in different ways from being a Tree City USA. Reports of these benefits have reached The Arbor Day Foundation through the years and are summarized below in six general categories:

Request an  
Application

### Framework for Action

Meeting the four standards for becoming a Tree City USA provides initial direction for an urban or community forestry program. Like the first rungs on a ladder, the standards help get a community started toward annual, systematic management of its tree resources.

### Education

Education begins with discussion of the standards and getting organized to apply for Tree City USA status. It continues as the desire for Tree City USA recognition leads to contacts with the state forester's staff. In turn, this can set in motion aid from a variety of professionals in the form of technical advice, literature, films, and other assistance.

### Public Image

A community's public image is a very real phenomenon and important in many ways. Being a Tree City USA helps present the kind of image that most citizens want to have for the place they live or conduct business. The Tree City USA signs at community entrances tell visitors that here is a community that cares about its environment. It is also an indication to prospective businesses that the quality of life may be better here. It has even been known to be a factor in where meetings or conferences have been held. This reason alone caused a motel owner to start action for his community to join the network!

## Citizen Pride

Pride is sometimes a less tangible benefit. Gaining and retaining Tree City USA recognition is an award to the tree workers, managers, volunteers, tree board members and others who work on behalf of better care of a community's trees. Non-involved citizens, too, often share a sense of pride that theirs is a Tree City USA. This may translate to better care of trees on private property or a willingness to volunteer in the future.

## Financial Assistance

Preference is sometimes given to Tree City USA communities over other communities when allocations of grant money are made for trees or forestry programs. The reason is that there are invariably more requests than available funds when grants are available through state or federal agencies. If requests are equally worthy, some officials tend to have more confidence in communities that have demonstrated the foresight of becoming a Tree City USA.

## Publicity

Presentation of the Tree City USA award and the celebration of Arbor Day offer excellent publicity opportunities. This results not only in satisfaction for the individuals involved and their families, but also provides one more way to reach large numbers of people with information about tree care. As one forester put it, "This is advertising that money can't buy—and it is free!"

## More Information

To receive a free Tree City USA booklet:

**Call:** (402) 474-5655

Monday–Friday

8:00 A.M. to 5:00 P.M. CST

**E-mail:** [treecity@arborday.org](mailto:treecity@arborday.org)

## Help Support Tree City USA where you live.

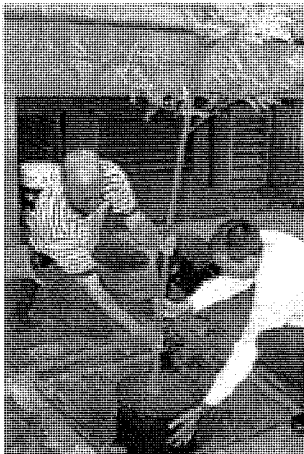
Tree City USA is supported by the USDA Forest Service Urban and Community Forestry Program.



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## Youngstown Marks First Tree Day



**Dave Sturtz, city forester, and Anthony Kobak, city planner, plant a tree.**

June 25, 2007

By George Nelson

YOUNGSTOWN, Ohio – City officials took the first step last week to be designated a Tree City USA community, planting a tree in front of the West Boardman Street entrance to City Hall as part of the first annual celebration of Youngstown Tree Day.

Designated by a proclamation from Youngstown Mayor Jay Williams, Thursday's Youngstown Tree Day "not only celebrates our beautiful landscape" but also adds more "green relief" to the city, "as we strive to become the next and most aggressive Tree City," said Dominic Gatti, an intern in the city planning department who spearheaded the event.

Ohio leads the nation in the number of Tree City USA-certified communities, said Lola Lewis, regional urban forester for the Ohio Department of Natural Resources, with 249 communities.

"It's keeping with the Youngstown 2010 principles of a cleaner, greener, and better-planned and organized city," remarked Anthony Kobak, Youngstown chief planner. "This is just another component that adds to that plan."

The National Arbor Day Foundation awards the designation to communities, he explained. First, a community must establish its own Arbor Day-type observance – rather than using the nationally designated Arbor Day, the city decided to go with the first day of summer, Kobak said. Other steps include establishing a tree ordinance, setting an annual budget for forestry of \$2 per capita, and creating a separate tree board or department.

The city has a tree ordinance in place "that isn't necessarily as tree-friendly as it could be," Kobak said. The existing ordinance talks about the removal of trees, damaged trees and power lines. "We want to beef up our tree ordinance to be the most progressive in the country," he said.

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## PROTECTING LAKE ERIE ONE YARD AT A TIME



### What is a Rain Garden?

Rain gardens are attractive landscaped areas planted with perennial native plants which don't mind getting "wet feet". Built in a bowl shape, rain gardens are designed to increase infiltration allowing rain and snowmelt to seep naturally into the ground. Benefits of rain gardens are multiple: they recharge groundwater supply, prevent water quality problems, provide habitat for birds and butterflies, and are great looking landscapes features!

Recent studies have shown that up to 70% of the pollution in our streams, rivers and lakes is carried there by run-off from practices we carry out in our own yards and gardens! Some of the common "non-point source pollutants" from our yards that end up in our local waterways include soil, fertilizers, pesticides, pet wastes, grass clippings and other yard debris.

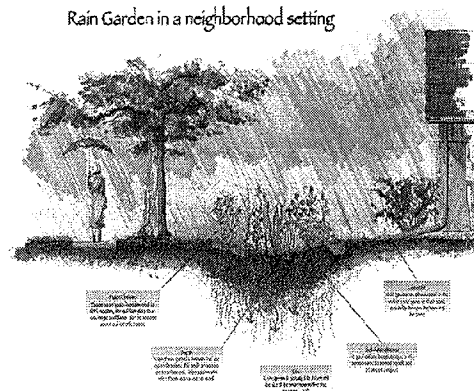
**Planting rain gardens is a great way to help our communities "bloom", as we work to protect the health of our watersheds.**

## How to be a good citizen in our watershed community:

Everyone lives in a watershed. You, as well as, everyone in your watershed are part of the watershed community. Animals, birds, and fish are part of it, too. You influence the health of your watershed, good or bad, by how you treat its natural resources—the soil, water, air, plants, and animals. You can help maintain the health of our watershed by installing a rain garden on your own personal property.

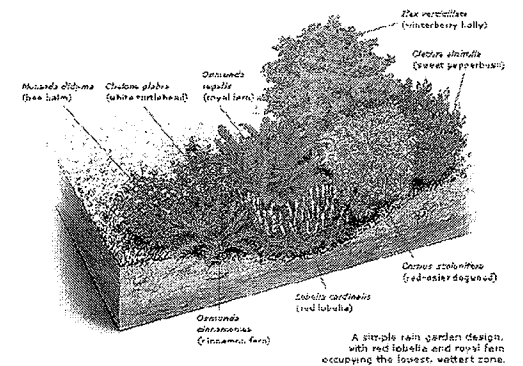
Planting a rain garden may seem like a small thing, but if you calculate the amount of rain that runs off your property, you might be surprised. Every drop counts! Rain gardens capture rain that usually runs off your property and allows it time to soak into the ground. This helps minimize run-off and helps reduce the amount of non-point source pollution that enters our waterways.

Keeping rain where it falls, by directing it to a rain garden, is a natural solution to water pollution. You not only get a lovely garden, but **you** have also helped protect our rivers, streams and lakes from pollution.



## RAIN GARDEN MANUAL for HOMEOWNERS

The Manual is a technical guide for those who are really interested in taking the steps to implement a rain garden. Headings of the manual chapters include: Planning and Sizing Your Rain Garden, Determining the Depth and Drainage Area of Your Garden, and Suggested Plant List for Your Rain Garden. Other technical topics explained include soil type, slope consideration and garden shape. After planning the rain garden, the manual also outlines instructions for site preparation, digging, and planting native species. Short and long term maintenance suggestions are also provided.



A simple rain garden design, with red lobelia and royal ferns occupying the lowest wettest zone.

**Color your landscape and  
Capture the rain**

You can help your community meet their clean water goals by creating a rain garden on your property.

If you are interested in capturing and treating storm water on your property in a creative fashion, using your own personal flair, contact:

**Berea Storm Water Office at  
440-826-5814 for more information.**

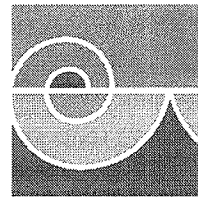


**Copies of the Rain  
Garden Manual for  
Homeowners can  
be downloaded  
from**

**[www.cuyahogawcd.org](http://www.cuyahogawcd.org)**

The Rain Garden Manual is a cooperative effort of the Northeast Ohio Public Involvement Public Education Committee (NEO PIPE). The manual was edited by staff from several organizations with technical support from the Natural Resource Conservation Service (NRCS-USDA). It was printed with funding from the U.S. EPA Great Lakes National Program Office.

**Looking for someone to speak about  
conservation, watershed issues, storm  
water or rain gardens?  
Call Cuyahoga SWCD for your next  
meeting!**



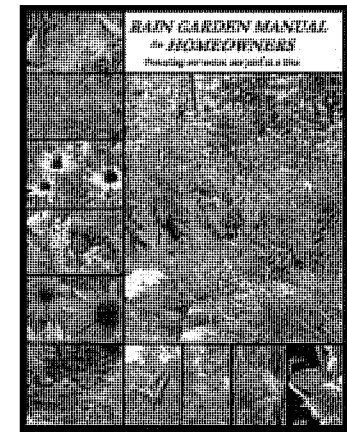
**Cuyahoga  
Soil and Water  
Conservation  
District**

**6100 West Canal Road  
Valley View, Oh 44125**

**Phone: 216-524-6580  
Fax: 216-524-6584**

**[www.cuyahogawcd.org](http://www.cuyahogawcd.org)**

The mission of the Cuyahoga SWCD is to promote conservation of land and aquatic resources in a developed environment through stewardship initiatives, education programs and technical assistance for all residents of Cuyahoga County.

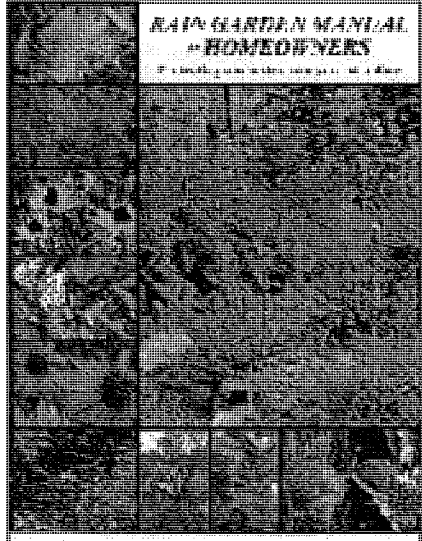


A collaborative effort of Cuyahoga Soil and Water Conservation District and the NEO PIPE Work Group.

## AREA 2 NEWS

### Rain Gardens Shower Northeast Ohio

By Medina, Summit and Cuyahoga SWCDs  
Apr 26, 2006, 11:11



Developed by the Northeast Ohio PIPE committee, the rain garden manual should be released by mid-May. Copies will be available from the Cuyahoga, Summit, Geauga, Lake and Medina SWCDs.

A rain garden is an attractive landscaping feature planted with perennial native plants. They are generally shallow, bowl-shaped depressions, containing a porous soil mixture designed to absorb and treat storm water run-off from impervious surfaces such as roofs and parking lots. Rain gardens can be small, formal, landscape features for the urban or suburban lot, or large, complex bio-retention gardens or cells constructed along highways or in parking lot medians.

In addition to their natural beauty, rain gardens serve several other important functions. They provide natural habitat for birds and other wildlife and help to remove pollutants from storm water run off.

Government studies have shown that up to 70% of the pollution in our streams, rivers and lakes is delivered by storm water. Much of that pollution stems from things we do in our yards and gardens!

Current Ohio EPA NPDES regulations require that storm water quality (treatment) practices such as rain gardens be constructed or installed on all construction projects that disturb more than one acre. Rain gardens and other bio-retention systems are a great way to help remove pollutants from storm water while adding beauty and value to the landscape.



Participants observe planting of a rain garden at Medina SWCD's Rain Garden Workshop held April 1 at the SWCD office in Medina.

Ohio Federation of Water & Conservation Districts

## MINIMIZING LAND DISTURBANCE AND IMPERVIOUS COVER

Minimizing land disturbance and impervious cover is critical to maintaining watershed health. The amount of land that is converted, or “disturbed,” from undeveloped uses, such as forests and meadows, to developed uses, such as lawns and playing fields, significantly affects watershed health. Research now shows that the volume of runoff from highly compacted lawns is almost as high as from paved surfaces (Schueler, 1995, 2000; USDA, 2001). This research indicates that lawns and other residential landscape features do not function, with regard to water, in the same way as nondegraded natural areas. In part, the difference arises because developing land in greenfield areas involves wholesale grading of the site and removal of topsoil, which can lead to severe erosion during construction, and soil compaction by heavy equipment. However, most communities focus not on total land disturbed, but on the amount of impervious cover created.

Research has revealed a strong relationship between impervious cover and water quality (Arnold, 1996; Schueler, 1994; EPA, 1997). Impervious surfaces collect and accumulate pollutants deposited from the atmosphere, leaked from vehicles, or derived from other sources. During storms, accumulated pollutants are quickly washed off and rapidly delivered to aquatic systems. Studies have demonstrated that at 10 percent imperviousness,<sup>2</sup> a watershed is likely to become impaired (Schueler, 1996; Caraco, 1998; Montgomery County, 2000), the stream channel becomes unstable due to increased water volumes and stream bank erosion, and water quality and stream biodiversity decrease. At 25 percent imperviousness, a watershed becomes severely impaired, the stream channel can become highly unstable, and water quality and stream biodiversity are poor<sup>3</sup> (Schueler, 2000). The amount of impervious cover is an important indicator of watershed health, and managing the degree to which a watershed is developed is critical to maintaining watershed function.



Photo courtesy of USDA NRCS

Current construction practices generally disturb the entire development site, as shown by this site in Des Moines, Iowa.

Although the 10 percent threshold refers to overall imperviousness within the watershed, municipalities have applied it to individual sites within the watershed, believing that lower densities better protect watershed functions. Indeed, as mentioned earlier, some localities have gone so far as to create strong incentives for, or even require, low densities—with water resource protection as an explicit goal. These communities are attempting to minimize hard

<sup>2</sup> The 10 percent figure is not an absolute threshold. Recent studies have indicated that in some watersheds, serious degradation may begin well below 10 percent. However, the level at which watershed degradation begins is not the focus of this study. For purposes of our analysis, EPA uses the 10 percent threshold as an indicator that water resources might be impacted.

<sup>3</sup> There are different levels of impairment. In general, when the term is used in EPA publications, it usually means that a waterbody is not meeting its designated water quality standard. However, the term can also imply a decline or absence of biological integrity; for example, the waterbody can no longer sustain critical indicator species, such as trout or salmon. Further, there is a wide breadth of levels of impairment, from waterbodies that are unable to support endangered species to waterbodies that cannot support any of the beneficial-use designations.

surfaces at the site level. They believe that limiting densities within particular development sites limits regional imperviousness and thus protects regional water quality. The next section examines this proposition and finds that low-density development can, in fact, harm water quality.

## → **Low-Density Development—Critiquing Conventional Wisdom**

As discussed, studies have demonstrated that watersheds can suffer impairment at 10 percent impervious cover and that at 25 percent imperviousness, the watershed is typically considered severely impaired. Communities have often translated these findings into the notion that low-density development at the site level results in better water quality. Such conclusions often come from analysis such as: a one-acre site has one or two homes with a driveway and a road passing by the property. The remainder of the site is lawn. Assuming an average housing footprint of 2,265 square feet<sup>4</sup> (National Association of Home Builders, 2001), the impervious cover for this one-acre site is approximately 35 percent (Soil Conservation Service, 1986). By contrast, a higher-density scenario might have eight to 10 homes per acre and upwards of 85 percent impervious cover (Soil Conservation Service, 1986). The houses' footprints account for most of the impervious cover. Thus, low-density zoning appears to create less impervious cover, which ought to protect water quality at the site and regional levels. However, this logic overlooks several key caveats.

1. *The "pervious" surface left in low-density development often acts like impervious surface.*  
In general, impervious surfaces, such as a structure's footprint, driveways, and roads, have higher amounts of runoff and associated pollutants than pervious surfaces. However, most lawns, though pervious, still contribute to runoff because they are compacted. Lawns are thought to provide "open space" for infiltration of water. However, because of construction practices, the soil becomes compacted by heavy equipment and filling of depressions (Schueler, 1995, 2000). The effects of this compaction can remain for years and even increase due to mowing and the presence of a dense mat of roots. Therefore, a one- or two-acre lawn does not offer the same infiltration or other water quality functions as a one- or two-acre undisturbed forest. Minimizing impervious surfaces by limiting the number of houses but allowing larger lawns does not compensate for the loss of watershed services that the area provided before development (USDA, 2001).  
**Lawns still contribute to runoff because they are compacted and disturbed.**
2. *Density and imperviousness are not equivalent.* Depending on the design, two houses may actually create as much imperviousness as four houses. The impervious area per home can vary widely due to road infrastructure, housing design (single story or multistory), or length and width of driveways. To illustrate, a three-story condominium building of 10 units on one acre can have less impervious surface than four single-family homes on the same acre. Furthermore, treatment of the remaining undeveloped land on that acre can

<sup>4</sup> The average house built in 2001 included three or more bedrooms, two and a half baths, and a two-car garage.

vary dramatically between housing types. For example, in some dispersed, low-density communities, such as Fairfax County, Virginia, some homeowners are paving their front lawns to create more parking for their cars (Rein, 2002).

3. *Low-density developments often mean more off-site impervious infrastructure.* Development in the watershed is not simply the sum of the sites within it. Rather, total impervious area in a watershed is the sum of site developments plus the impervious surface associated with infrastructure supporting those sites, such as roads and parking lots. Lower-density development can require substantially higher amounts of this infrastructure per house and per acre than denser developments. Recent research has demonstrated that on sites with two homes per acre, impervious surfaces attributed to streets, driveways, and parking lots can represent upwards of 75 percent of the total site imperviousness (Cappiella, 2001). That number decreases to 56 percent on sites with eight homes per acre. This research indicates that low densities often require more off-site transportation-related impervious infrastructure, which is generally not included when calculating impervious cover.

Water quality suffers not only from the increase in impervious surface, but also from the associated activities: construction, increased travel to and from the development, and extension of infrastructure.

Furthermore, water quality suffers not only from the increase in impervious surface, but also from the associated activities: construction, increased travel to and from the development, extension of infrastructure, and chemical maintenance of the areas in and surrounding the development. Oil and other waste products, such as heavy metals, from motor vehicles, lawn fertilizers, and other common solvents, combined with the increased flow of runoff, contribute substantially to water pollution. As imperviousness increases, so do associated activities, thereby increasing the impact on water quality.

4. *If growth is coming to the region, limiting density on a given site does not eliminate that growth.* Density limits constrain the amount of development on a site but have little effect on the region's total growth (Pendall, 1999, 2000). The rest of the growth that was going to come to the region still comes, regardless of density limits in a particular place. Forecasting future population growth is a standard task for metropolitan planning organizations as they plan where and how to accommodate growth in their region. They project future population growth based on standard regional population modeling practices, where wage or amenity differentials, such as climate or culture (Mills, 1994)—and not zoning practices such as density limits—account for most of a metropolitan area's population gain or loss.<sup>5</sup> While estimates of future growth within a particular time frame are rarely precise, a region must use a fixed amount of growth to test the effects of adopting

Growth is still coming to a region, regardless of density limits in a particular place.

<sup>5</sup> The most widely-used such model—the REMI® Policy Insight™ model—uses an amenity variable. However, even this is implemented as an additional change in the wage rate. See Remi Model Structure. <[www.remi.com/Overview/Evaluation/Structure/structure.html](http://www.remi.com/Overview/Evaluation/Structure/structure.html)>. The in-house model used by the San Diego Association of Governments is an advanced example of the type used by councils of governments around the country. <[www.sandag.org.ca.us/resources/demographics\\_and\\_other\\_data/demographics/forecasts/index.asp](http://www.sandag.org.ca.us/resources/demographics_and_other_data/demographics/forecasts/index.asp)>.

different growth planning strategies because it still must understand the economic, social, and environmental impacts of accommodating a growing population. Absent regional coordination and planning, covering a large part of a region with density limits will likely drive growth to other parts of the region. Depending on local conditions, water quality may be more severely impaired than if the growth had been accommodated at higher densities on fewer sites.

## Testing the Alternative: Can Compact Development Minimize Regional Water Quality Impacts?

To more fully understand the potential water quality impacts of different density levels, this section compares three hypothetical communities, each accommodating development at different densities—one house per acre, four houses per acre, and eight houses per acre.<sup>6</sup> To assess regional water quality impacts, EPA modeled the stormwater impacts from different development densities. In general, the more stormwater runoff generated within a region, the more associated pollutants, such as total nitrogen, phosphorus, and suspended solids, will enter receiving waterbodies. The three density levels capture some of the wide range of zoning practices in use throughout the country. All of these densities are consistent with single-family, detached housing. EPA examined the stormwater impacts from each density scenario at various scales of residential development<sup>7</sup>—one-acre, lot, and watershed levels—and through a 40-year time series build-out analysis.

### The Model and Data Inputs

The model used to compare the stormwater impact from the scenarios is the Smart Growth Water Assessment Tool for Estimating Runoff (SG WATER), which is a peer-reviewed sketch model that was developed specifically to compare water quantity and quality differences among different development patterns (EPA, 2002). SG WATER's methodology is based on the Natural Resources Conservation Service (NRCS) curve numbers (Soil Conservation Service, 1986), event mean concentrations, and daily rainfall data.<sup>8</sup> The model requires the total number of acres developed at a certain development density. If density is unknown, total percent imperviousness can be used. The model was run using overall percent imperviousness.

EPA believes that the results presented here are conservative. SG WATER uses a general and simple methodology based on curve numbers. One limitation of curve numbers is that they tend to underestimate stormwater runoff for smaller storms (less than one inch). This underestimate

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<sup>6</sup> Densities at one, four, and eight residential units per acre are used here for illustrative purposes only. Many communities now are zoning for one unit per two acres at the low-density end of the spectrum. Low-density residential zoning exists in places as diverse as Franklin County, Ohio, which requires no less than two acres per unit (<[www.co.franklin.oh.us/development/franklin\\_co/LDR.html#304.041](http://www.co.franklin.oh.us/development/franklin_co/LDR.html#304.041)>) to Cobb County, Georgia, outside of Atlanta, which requires between one and two units per acre in its low-density residential districts (<[www.cobb-county.org/community/plan\\_bza\\_commission.htm](http://www.cobb-county.org/community/plan_bza_commission.htm)>). By comparison, some communities are beginning to allow higher densities, upwards of 20 units per acre. For example, the high-density residential district in Sonoma County, California permits between 12 and 20 units per acre (<[www.sonoma-county.org/prmd/Zoning/article\\_24.htm](http://www.sonoma-county.org/prmd/Zoning/article_24.htm)>), and the city of Raleigh, North Carolina, allows up to 40 units per acre in planned development districts.

<sup>7</sup> This example and others throughout this study compare residential units, but a similar comparison including commercial development could also be done.

<sup>8</sup> Daily time-step rainfall data for a 10-year period (1992-2001, inclusive) were used.



**The following 19 policy findings from the American Planning Association’s DRAFT policy guide on climate change and planning outlines the numerous ways that proper comprehensive, community planning can make a difference on a global scale.**

### **Climate Change Policy Findings**

**Finding 1:** Land use patterns play a significant role in reducing Vehicle Miles Traveled (VMT) and thus in reducing energy consumption and its associated greenhouse gas emissions. VMT can be reduced by promoting strategies such as compact development in close proximity to existing development, high density land uses arranged to encourage pedestrians, bicycle use and transit use by promoting higher densities, transit oriented and development of mixed use and clustering of uses.

“When viewed in total, the evidence on land use and driving shows that compact development will reduce the need to drive between 20 and 40 percent, as compared with development on the outer suburban edge with isolated homes, workplaces, and other destinations. It is realistic to assume a 30 percent cut in VMT with compact development. Making reasonable assumptions about growth rates, the market share of compact development and the relationship between CO<sub>2</sub> reduction and VMT reduction, smart growth could, by itself, reduce total transportation related CO<sub>2</sub> emissions from current trends by 7 to 10 percent as of 2050.”

**Finding 2:** Parking and transportation policies can be employed to discourage private auto use and therefore reduce VMT and its associated CO<sub>2</sub> emissions.

Current policies encourage auto use, and particularly individual auto use, through indirect subsidies. The cost to drivers is virtually the same whether they occupy road space at peak traffic hours or at off hours. The road use fees charged to truckers are far below the actual cost of their wear and tear on the road system. Parking fees are paid, at least in part, by employers, merchants and public agencies. Congestion-based pricing for road use has been shown to reduce traffic and related CO<sub>2</sub> emissions. Eliminating free/subsidized parking has been shown to result in an increase in carpooling and use of public transportation .

**Finding 3:** Local programs that encourage the preservation of historic buildings and their adaptive reuse result in energy conservation. These buildings are typically closer to population centers and adaptive reuse generally involves lower impacts on natural resources(e.g. tree cutting for lumber), than new construction. In addition the maintenance, restoration and adaptive reuse of existing urban areas (including their buildings, infrastructure and other assets) also reduces energy use and VMT.

**Finding 4:** Use of “ green” building standards such as the LEED Rating System and similar systems result in energy conservation compared to conventional codes.

About 75% of the electricity used in the country goes toward heating, cooling, and lighting buildings. Since over 70% of electrical energy is generated by conventional electrical power sources such as coal- and gas-fired generation plants, reducing the amount of power consumed by buildings is as important to addressing climate change as reduction of auto emissions. Research indicates that sufficient energy falls on the roof and south face of buildings to satisfy the power demands of those buildings.

**Finding 5:** Providing a range of housing opportunities within a community decreases commuting and its associated greenhouse gas emissions. It also reduces the need for private vehicle trips associated with job commutes.

**Finding 6:** Communities can encourage the production and use of energy generated from renewable resources by changing land use, building and site design standards.

**Finding 7:** Changing the source of fuel used for electrical power generation from fossil fuels to renewable energy will significantly reduce greenhouse gas emissions. While renewables must be pursued and made economically available, technologies to cleanse emissions from traditional sources should be expanded. Coal generation of electricity produces the bulk of greenhouse gases. Steps should be taken

to reduce the generation of greenhouse gas emissions from coal fired power plants.

**Finding 8:** Communities can be made more resilient and defensible to the effects of climate change through land use policies that encourage development in areas away from hazards such as wildfires, land erosion and floods. This is also true in areas that have an appropriate level and mix of resources to allow sustainable lifestyles.

**Finding 9:** Protecting and enhancing green spaces in and near communities provides opportunities to protect and enhance carbon sinks in soils, vegetation, and streambeds to mitigate a warming climate. Greenspace protection programs should not only be sensitive to natural ecological processes and habitat needs, but should also include a fair calculation of fair greenhouse gas mitigation. For example, native old-growth forests outperform landscaped lawns, farms and gardens.

**Finding 10:** Promoting water conservation, and the use of nearby water sources reduces the amount of energy necessary to transport it, and therefore lowers greenhouse gas emissions.

**Finding 11:** Land use and urban design that retain natural areas and assets and incorporate indigenous plants or others that are appropriate to the community's climate reduce energy and water consumption.

**Finding 12:** Growing food for local consumption lowers transportation costs thereby lowering the use of fossil-based fuels.

**Finding 13:** Centralized facilities equipped with communications technologies such as videoconferencing allow community residents and businesses to conduct business and share information in ways that minimize travel thereby reducing VMT.

**Finding 14:** Planning and development policies to address climate change may have a different focus in major metropolitan areas, micropolitan areas and rural communities. Policies may also vary in response to the ecosystem in which a community is located (such as coastal areas, river floodplain, desert or hillside). While all of these places can play a role in addressing climate change, the specific role may vary

**Finding 15:** Planning is a tool that can assist decision-makers including regional agencies and collaborations; individual local governments; neighborhood or other small area organizations; individual property owners; and state and federal regulatory and funding agencies to make better decisions and positively impact climate change

**Finding 16:** Nationally, the transportation sector is responsible for 33 percent of CO<sub>2</sub> emissions, and if current trends continue, those emissions are projected to increase rapidly. The transportation sector's CO<sub>2</sub> emissions are a function of vehicle fuel efficiency, fuel carbon content, and vehicle miles traveled (VMT). Significantly reducing emissions in the future requires improvements in all three areas.

**Finding 17:** Federal and state laws and regulations addressing vehicle fuel efficiency and fuel carbon content are critically important in helping to meet national climate change goals in the transportation sector. However, these laws and regulations can only succeed if VMT is reduced significantly at the same time.

Current policy proposals to improve vehicle fuel efficiency and reduce fuel carbon content in the transportation sector would leave passenger vehicle CO<sub>2</sub> emissions well above 1990 levels in 2030, significantly off-course for meeting 2050 targets. This is due, in large part, to the fact that VMT is projected to continue growing over time. Therefore, it is important to develop planning strategies to reduce travel demand, and shift travel demand to transportation modes that have the lowest carbon output.

**Findings 18:** Economic strategies that reduce GHG emissions such as a nationwide and economy-wide cap and trade system for carbon emissions are needed to promote reduction in greenhouse gas emissions in an amount necessary to slow climate change.

**Finding 19:** Currently there are few communities regulating development in a way that accounts for or reduces greenhouse gas emissions.

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