EcoCity Cleveland

IDEAS AND TOOLS FOR A SUSTAINABLE BIOREGION $4

Double Issue
Vol. 8, Numbers 6/7 July/August 2001
Editor: David Beach

Inside

Good words

We are coming to the conclusion
that land use, urban design,
and the built environment are much larger
factors in public health than people
have really appreciated.
When we were kids,
most kids walked or biked to school.
Now it's 10 percent.
How do we deal with the obesity epidemic
when our kids don't get even that
fundamental level of exercise?
— Richard J. Jackson,
director of the Centers for Disease Control's
National Center for Environmental Health

Every time I see
an adult on a bicycle,
I no longer despair
for the future of mankind
— H.G. Wells

RECLAIMING THE STREETS

Photo by Laura Previll

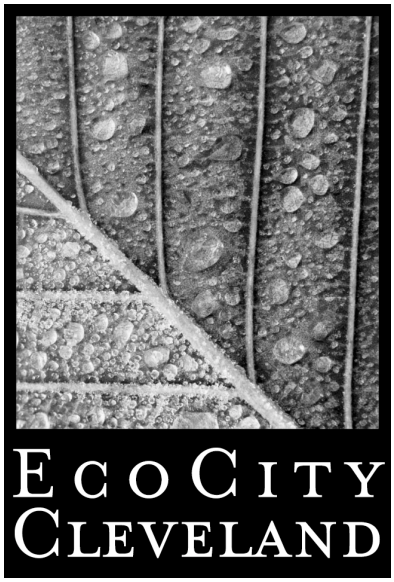
The American landscape
has been given over to the automobile.
While this mass "automobility" has made life more convenient
in some ways, it's also degraded our quality of life.
We have spent billions of dollars to make our public spaces
hostile and often dangerous for anyone
not inside an automobile. And we have allowed the car
to displace walking, bicycling, and transit.
But after years of neglect, street design is re-emerging
as an important issue in neighborhood and city planning.
Civic leaders are rediscovering streets as public spaces
that should serve the needs of *all* citizens –
including pedestrians, bicyclists and those
who are simply out enjoying the public right of way.

See pages 6-17

Our new look

EcoCity Cleveland's original logo — a spreading tree over the city skyline — has served us well since we were founded in 1992. But it's beginning to look a little dated. So in recent months we've been experimenting with new logos, trying to find a graphic look that will be more contemporary, polished, and visually striking.

As part of this process of creating a new graphic identity, we did a lot of thinking about who we are and what we are doing as an organization. We asked people what came to mind when they thought of EcoCity Cleveland. One phrase kept popping up in the discussions: "balancing cities and nature."



We also realized that much of our work is focused broadly on issues of *design* — designing better streets, neighborhoods, cities, and metropolitan regions. We are a source of new ideas and visions for the future.

This led us to seek a graphic image that would help us say, "designing cities in balance with nature." The result is printed here. It's an image that evokes the underlying patterns in nature, the structure of nature. In nature, everything fits, nothing is wasted, and everything is powered off of current solar energy. Our task as ecological designers is to transform human civilization so that it integrates harmoniously into the patterns of nature.

The structure of the leaf can also be a metaphor for other things — a road network, a river and tributaries, the skeleton of a building. The water drops can remind us that water permeates all life, or the drops can symbolize freshness and the search for new ideas.

Anyway, we hope you like this new logo. We'll be phasing it into our publications over the next few months. It will work especially well displayed in color on our Web site, which is also being redesigned.

We give special thanks to graphic designer Ann Pisanelli for her volunteer help with the logo. It will be an important part of our identity.

Funding thanks

In September, EcoCity Cleveland is sponsoring "The Art of Leadership," a nationally recognized leadership training retreat for emerging leaders in the Midwest. We are grateful to the following funders for supporting this event: The Rockwood Fund, The George Gund Foundation, The George W. Codrington Charitable Foundation, and The Lampl Family Foundation. We especially appreciate the contribution of the Walden Country Inn in Aurora, which will provide the retreat facilities.

— David Beach
Editor

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EcoCity Cleveland honors "Bioregional Heroes"

Nearly 200 friends and supporters packed the Steamship *William G. Mather* on August 2 for EcoCity Cleveland's annual Member Party and Bioregional Hero Awards Celebration.

Phil Star, president of the board of trustees, thanked everyone for another successful year.

"We have been fostering an on-going community conversation about sustainability," Star said. "There are now numerous occasions where community issues are viewed in a regional context, which is a tribute to the work of EcoCity Cleveland."

EcoCity director David Beach provided updates on a number of the organization's programs and projects, including the Cleveland EcoVillage, regional open space planning, and transportation planning. He also described the prospects for moving EcoCity's offices into a new Cleveland Environmental Center, a planned redevelopment project in the Ohio City neighborhood. And he explained the group's new logo (see page 2).

The highlight of the evening was the presentation of Bioregional Hero Awards to outstanding individuals and organizations who have improved the long-term quality of life in Northeast Ohio by balancing environmental integrity, social justice and economic prosperity.

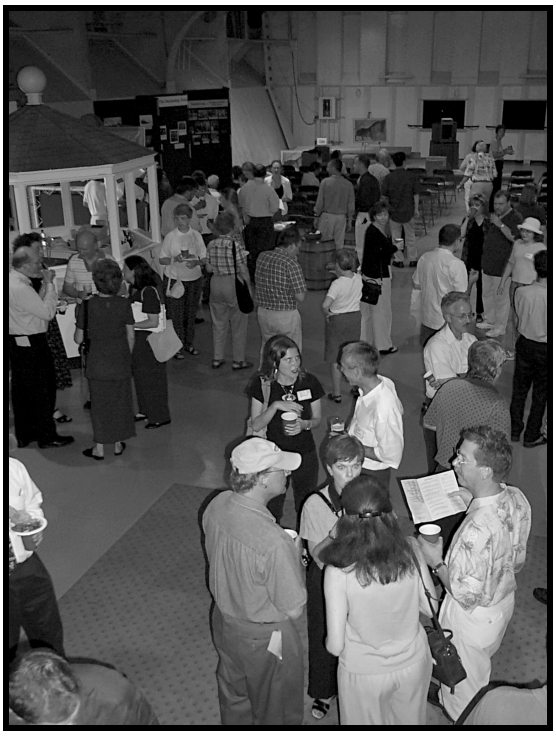
The 2001 winners are:

- **Conservationist – Greg Studen**, for effective leadership of the Chagrin River Watershed Partners, Cuyahoga Countryside Conservancy, Cuyahoga River Remedial Action Plan, and other conservation organizations.
- **Conservation deal of the year – Edison Woods**, one of the largest forests remaining in Northeast Ohio protected in a deal brokered by the Trust for Public Land.
- **Green building – Jim LaRue**, for many years of inspirational work to promote green building and healthy housing in Greater Cleveland.
- **Smart Growth development – Shaker Square**, the renovation of a classic, mixed-use district connected to transit by CenterPoint Properties.
- **Public official – Cleveland economic development director Chris Warren**, for more than 20 years of passionate advocacy for city neighborhoods.
- **Messenger – Karen Schaefer of WCPN Cleveland Public Radio**, for intelligent reporting on the environment and ecological design.
- **Best new organization or program – Urban Design Collaborative of Kent State University**, for bringing fresh design ideas to Cleveland and involving citizens in designing the public realm.
- **Organizational breakthrough – Western Reserve Resource Conservation and Development Council**, for securing federal designation and funding that will make the nine-county council a more effective force for conservation in Northeast Ohio.
- **Visionary – Church in the City Land Use Task Force of the Cleveland Catholic Diocese**, for creating ethical principles for land use and advancing principles of smart growth.

Each award recipient received a framed copy of our Bioregional Map Poster created by local artist Mary Kelsey.

Thanks to the following for supporting this year's Member Party: the Steamship *Mather*, ShoreBank, Western Reserve Brewery, and My Personal Chef. The *Mather* staff deserves special thanks for opening up the ore boat to us. It's a great place for a party.

We are already collecting nominations for next year's Bioregional Hero Awards. Please send us your suggestions!



Top photo: WCPN Public Radio's Karen Schaefer accepts the "Messenger" award from Phil Star (left), Manda Gillespie, and David Beach of EcoCity Cleveland. Bottom photo: EcoCity members and friends gather in the hold of the *Mather*.

Thanks to our interns and volunteers

EcoCity Cleveland has greatly benefited this last year from the efforts of some inspired volunteers and interns. Of particular note: Ann Pisanelli and Jamie Owen, designers who are helping with our logo and our website; Michel Dedeo, who added past issues of our journal to our Web site; Emily Johnson, winter term volunteer responsible for organizing the EcoCity library; Wanda Ballentine, who is updating the Bioregional Calendar; Carolyn Bentley, who worked miracles with our database throughout the spring; and Laura Previll, current intern, who is bringing her expertise to many on-going projects.

What's your e-mail?

Over the next year, EcoCity Cleveland would like to develop more effective ways of communicating to members via e-mail. If you would like to receive occasional messages and alerts, please send a message to ecomail@ecocleveland.org.

Design for new town homes on W. 58th Street in the Cleveland EcoVillage. Building Science Corporation

EcoVillage town homes fly through city's design review

By Manda M. Gillespie

In early August, the 20-unit W. 58th Street Town Home development in the Cleveland EcoVillage was approved "with gusto" by the city's design review committee and planning commission. The committees showed a good deal of insight into green building concepts by asking questions that revealed some of the design team's internal deliberations.

For example, Lillian Kuri of the design review committee inquired about the decision to use steep roofs rather than flat roofs, suggesting flat "green" roofs would be a visible indicator of the ecological nature of the project. For years to come, people could walk by and see their neighbors inhabiting the roofs and witness the growth of the vegetation that is used to keep the roofs cool and insulated.

The answer was that on commercial buildings or in homes with limited yards flat roofs can indeed be a good design option. In such cases, it can often make sense to spend extra money to make green or *living roofs* with plants that can filter stormwater run-off and increase the insulating capacity of the roofs. In the case of the EcoVillage town homes, however, a more traditional roof design fits nicely into the architectural pattern of the existing neighborhood and is more cost effective.

Site for ecological town homes on W. 58th just north of Lorain Avenue.

Planted green roofs can be quite expensive, particularly in residential applications where there are a lot of tight corners and edges. This expense can be supported in many cases by the extra savings associated with increased energy efficiency. But in the case of the town homes, the walls, ceilings and roof are so well insulated that there would be no significant net gain.

Another good argument for flat roofs—especially green flat roofs—is the additional useable outdoor space. The EcoVillage town homes already offer substantial yard space, though. Thus, the decision was made to go with the aesthetics of the steep roofs and to make the garage roofs flat, thereby providing space for solar panels.

The final decision on the roofing material has not been made, though a couple of recycled options—including a re-used slate—are being considered.

During the landscape review, a recommendation was made for changing the Cleveland Select Pear trees chosen to line the street to disease-resistant American Elms, since the elms would offer more shade and cooling. This comment, along with a suggestion by Councilman Joe Cimperman to incorporate organic landscaping, were also in tune with the existing plans for the outdoor space. The design team has looked for ways to incorporate both permaculture techniques and green building ideas into the landscaping. Consideration has been given to plants and trees that are native to the region and require little watering, mowing, or tending. The plans also include using recycled brick for walking paths and a resin-based asphalt-type product for the parking pads.

The positive responses of the design review committee and the planning commission suggest that green building is a welcome new resident in the city of Cleveland. Even more important, the intelligent discussion offered by the committee participants suggests they are well along the learning curve toward becoming well-versed advocates for better building design.

The W. 58th Street Town Homes are being developed by the Detroit Shoreway Community Development Organization. EcoCity Cleveland is assisting the project by providing funding and information to assure that the town homes meet high standards of ecological design. For more information, call 216-961-4242.

Recycling houses

Greater Cleveland Habitat for Humanity is salvaging windows, doors, fixtures and trim from houses slated for demolition. It will sell the materials at a new ReStore thrift store at 6920 Union Ave. in Cleveland. The store will raise funds for new Habitat homes, provide affordable building supplies and reduce the amount of building materials going to landfills. Habitat crews recently stripped materials from five houses in Cleveland Heights before they were demolished to make room for a new Zagara's supermarket.

Personal payback

"The investment is paid back in full the very first day you see your meter run backwards, and you know that you are part of the solution and not part of the problem." — response of CWRU physicist Philip Taylor when asked about the payback time for the photovoltaic cells on the roof of his house in Cleveland Heights (quoted in the newsletter of the Earth Day Coalition).

West Nile virus cure worse than disease?

As the threat of the mosquito-borne West Nile virus moves into Ohio, so does the threat that pick-up trucks will drive through your neighborhood at night to spray clouds of pesticides. More than a dozen local communities have already been fogged, including Solon, Moreland Hills, and North Olmsted.

In response, local concerned citizens have been trying to convince the Cuyahoga County Board of Health that the risks of pesticides are greater than the low risk of dying from West Nile.

"Cuyahoga County's "cure" is worse than the "disease," and the "cure" is ineffective," says Joyce Roper of the Ohio Coalition Against the Misuse of Pesticides.

In meetings, press conferences, and op-ed pieces, local citizens have pointed out the following:

- **There's currently no public health emergency:** The chance of being bitten by an infected mosquito is extremely rare, and the chance of developing any symptoms from an infected bite is even rarer. Most people who do develop symptoms experience a mild flu-like condition and recover completely without medical care.
- **More people get sick from the pesticides:** Last year in New York state, more people reported getting sick from pesticides used to combat West Nile virus than came down with the illness. The active ingredient of the pesticide being used in Cuyahoga County is a pyrethroid. Exposure to pyrethroids has been reported to cause serious breathing difficulties in children with pre-existing respiratory problems. Long-term effects can include delayed neurological effects, endocrine disruption, and liver and kidney damage. In addition, the inert ingredients of pesticides (often 99 percent of the contents) may contain chemicals as toxic as the active ingredient.
- **Pesticide spraying doesn't work well:** Broadcast spraying for adult mosquitoes only kills a few mosquitoes in the immediate area at the time of the spraying. Most of the spray goes off into the environment, where it can kill the mosquitoes' natural predators, such as birds and other insects.

Rather than spraying, the citizens are urging health authorities to place more emphasis on prevention and sensible precautions — programs to eliminate mosquito breeding grounds and safe ways people can avoid being bitten by mosquitoes.

Stuart Greenberg, director of Environmental Health Watch, points out that the county health board is generally following the West Nile Virus control guidelines established by the U.S. Centers for Disease Control and Prevention (CDC), an authoritative source for public health guidance.

"However, as with many complex public health questions, competent experts disagree on how to manage the relative risks of disease associated with West Nile Virus and the adverse affects of pesticide exposure from spraying to control the mosquitoes that spread it, particularly because the expected occurrence of either outcome is low," Greenberg says.

He points out that the New York State Department of Health, which has had direct experience with West Nile outbreaks, in their guidelines, has a higher threshold for spraying to kill adult mosquitoes and provide for more public information on actions to reduce exposure to the pesticide spray than do the CDC guidelines.

Greenberg says that the County is spraying a product called Biomist (active ingredients Permethrin and Piperonyl Butoxide), that has a very low mammalian acute toxicity and usually rapid degradation in the outdoor environment. It is being applied at a very low concentration, so the risks of human exposure and adverse reaction for most people are low.

"However," Greenberg hastens to add, "the potential hazards should not be trivialized. There are circumstances when the exposure potential is greater, such as when the spray gets indoors, where degradation is slower, by being tracked in or drifting in through an open window. And there are people who are more susceptible to adverse reactions because of allergies, respiratory illness or other vulnerability."

Therefore, he says that it is prudent public health policy that, if spraying is done, the public be given advice on how they can reduce their exposure (e.g., close windows), which entails, of course, pre-notification of spraying.

In general, the West Nile case points out the need for much better public information on the complete health impacts and efficacy of pesticide spraying. In the coming years we are likely to be confronted with many more insect pests, as international travel increases and as global warming allows more exotic insects to migrate into Ohio.

What is the West Nile Virus?

According to public health authorities, the West Nile Virus (WNV) is a viral disease previously only seen in Africa, Asia, and Eastern Europe. The virus can cause encephalitis, an infection of the brain and spinal cord.

In 1999, an unexpected outbreak of WNV ocurred in New York City. At least 62 people became seriously ill and seven of those died. During the year 2000, WNV spread throughout the state of New York and into nine other northeastern states, the District of Columbia, and south into North Carolina. During the year 2000, there were 21 human cases of WNV encephalitis in the United States with 2 deaths.

The West Nile virus is spread to people by the bite of an infected mosquito. Mosquitoes first become infected when they feed on birds that are infected with the WNV.

What you can do

According to the Northeast Ohio Sierra Club and the Ohio Coalition Against the Misuse of Pesticides, it's not worth the risk to spray communities with synthetic pesticides to deal with West Nile Virus. There's no good research or proof of the efficacy of a spray-based strategy against mosquitoes, and it's ironic to broadcast pyrethroid insecticides, since they can also kill birds, bees, butterflies, and fish — all of which help to control harmful insects and keep the ecosystem in balance.

Instead of spraying, here are some of the groups' recommended actions:

- Eliminate mosquito breeding areas by not allowing standing water to collect on your property.
- Repair holes in window screens.
- Wear a nontoxic insect repellent when outdoors.
- Create habitat for mosquito predators by installing bat houses.
- Tell the county health board (216-443-7500) that you are concerned about pesticide spraying in neighborhoods. If spraying does occur, demand pre-notification with signs posted on street corners.

For a Sierra Club fact sheet on the West Nile Virus, send email to lhopwood@earthlink.net. For more information on plans by the Cuyahoga County Board of Health, see www.ccbh.net. For more in-depth information on pesticide hazards, see www.beyondpesticides.org, the Web site of the National Coalition Against the Misuse of Pesticides.

Reclaiming the streets

The art and practice of "traffic calming" is growing around the world, along with literature on how to do it. For the following articles, we borrowed heavily from Streets and Sidewalks, People and Cars *by the California-based Local Government Commission,* Take Back Your Streets *by the New England-based Conservation Law Foundation, and* Traffic Calming *by the Australia-based Citizens Advocating Responsible Transportation.*

■

By Ryan McKenzie

Most of us would like to live our lives, work and play along streets that have low traffic volume, slow speeds and minimal noise. And yet the streets, neighborhoods and urban centers we've built over the last 50 years have often created just the opposite conditions — wide, fast, noisy, dirty streets.

Indeed, the American landscape has been given over to the automobile. While this mass "automobility" has made life more convenient in some ways, it's degraded our quality of life in many others. We have spent billions of dollars to make our public spaces hostile and often dangerous for anyone not inside an automobile. And we have allowed the car to displace walking, bicycling, and transit.

It's not surprising that we have done this. In America, mobility is equated with power and freedom. Even our language values *travelers* over those who are simply enjoying the public realm. We have words for "motorist," "cyclist," and "pedestrian," but how should we refer to the elderly couple sitting on a park bench, the student waiting at a bus stop, or the kids playing ball in a neighborhood front yard? *Bystanders? Non-motorists?* Without a term that distinguishes them from people in motion, our fellow citizens-at-rest in the public realm have routinely been undervalued and ignored.

> Traffic calming is a holistic, integrated traffic planning approach based on common sense which seeks to maximize mobility while creating a more livable city by reducing the undesirable side effects of mobility.
> — *Citizens Advocating Responsible Transportation (CART)*

Places for people: Americans tourists love European cities with streets that are social gathering places (in this case, Nafplio, Greece). One key design principle for great places is to prevent domination by the automobile.

The rise of traffic calming

But after years of neglect, street design is re-emerging as an important issue in neighborhood and city planning. Civic leaders are rediscovering streets as public spaces that should serve the needs of *all* citizens – including pedestrians, bicyclists and those who are simply out enjoying the public right of way. In many parts of the country, this movement to retrofit streets has resulted in efforts to implement "traffic calming."

Consisting of mostly physical changes to roadways that reduce speeding and traffic volumes, traffic calming helps create livable communities where it is easy to travel by bicycle, car, transit or on foot, and to transfer from one mode of transportation to another.

In general, traffic calming serves two purposes:

- Increasing the safety and comfort of all travelers, especially slower-speed users of the public right of way like pedestrians and bicyclists.
- Increasing the quality of life for those near public rights of way, including residents, children at play, and anyone else who simply enjoys being outdoors in cities and towns.

Traffic calming acknowledges that accommodating motor vehicles is important, but it is only one of many functions that should be served by our public rights of way. In *Taking Back Your Streets*, the Conservation Law Foundation reminds us, "A street is the landscape outside someone's living room or bedroom window, or at the edge of a park. It's what people see and hear as they eat in a restaurant or leave a church or synagogue." Thus, more than commonly recognized, the design of our streets shapes the livability of our communities.

Organized traffic calming began as a grassroots movement in Europe in the late 1960s. Angry residents of the Dutch city of Delft fought cut-through traffic by turning their streets into *woonerven*, or "living yards" where cars are allowed as "guests" at walking speeds, and non-motorists always have the right of way.

This was followed in the late 1970s by the development of European slow streets (designed for speed limits of 20 mph) in commercial and city center areas; the application of traffic calming principles to intercity highways through small Danish and German towns in the 1980s; and the areawide treatment of urban main roads in Germany and France. By the early 1990s

traffic calming principles had spread to parts of Florida and the Pacific Northwest, and interest continues to grow around the U.S.

Getting out of the car

With friendlier streets, more Americans might be motivated to get out of their cars. After all, more than one-quarter of the trips Americans take are less than one mile long — a walkable distance. And almost one-half of trips are less than three miles long — appropriate for bicycling.

Shifting our transportation habits to walking and biking would bring tremendous benefits. Advocates for nonmotorized travel note that pedestrians and cyclists do not consume imported oil, cause smog or acid rain, pollute waterways, add to the risk of global climate change, create noise, or create demand to pave more of our landscape for parking.

In addition, walking and biking are good ways to get the additional exercise that many of us want and need. Today, more than half of American adults are overweight or obese — an epidemic in the eyes of the American Medical Association. In an editorial in its journal, the AMA noted that car trips have replaced trips that used to be made on foot or by bicycle and that helping people get back to walking or bicycling should be a first target in combating the obesity epidemic. But it also noted: "Reliance on physical activity as an alternative to car use is less likely to occur in many cities and towns unless they are designed or retrofitted to permit walking or bicycling."

National and local health organizations have begun promoting more walkable communities as a fundamental way to improve public health. The U.S. Centers for Disease Control is working to promote "Active Community Environments," places where people can easily walk and bicycle. The California Department of Health Services states, "Our vision is a state where doctors prescribe walking and bicycling to their patients, employers subsidize bike facilities and community trails, and transit services accommodate cyclists by making intermodal travel safe and seamless."

Dangerous designs

Yet our transportation system continues to make it difficult for us to walk or bike for even some of our daily needs. Highway departments take it for granted that high levels of service *must* be provided to more and more motorists, with little consideration of the effect this might have on those not driving — pedestrians, bicyclists, neighbors, children and others.

In pursuit of these goals, lanes are widened, curves are straightened, and traffic signals are re-timed, all to accommodate the journey by car. Even the most fundamental pedestrian safety tool, the walk signal, usually allows cars to make right and left-hand turns across the crosswalk during the walk sequence. What's worse, many of those signals are timed for use by young adults in good health, and don't give elderly or disabled people enough time to cross in safety.

Principles for traffic calming

- **Roads are not just for cars** — The function of roads is not solely to act as a corridor for traffic. They are also for social interaction, walking, cycling, and playing. Different roads will have these ingredients in differing proportions — but no one function must dominate to the exclusion of all others.
- **Residents have rights** — Residents have a right to the best quality of life a city can provide. This includes the least noise possible, the least pollution possible, the safest environment possible, and an environment which fosters a rich community life in which each individual is free to reach their fullest potential.

All residents regardless of age, financial status, or social standing, have rights to an equal share of the mobility that a city can responsibly provide for its residents. No person or group has the right to increase their mobility at the expense of another person's mobility. This means recognizing that an over-emphasis on car transport discriminates against a large section of society.

- **Maximize mobility while decreasing costs** — Trips are usually only a means to achieving a desirable end. Therefore a trip is a "cost" we must pay to enjoy a "benefit" at journey's end. That "cost" involves time, money, energy, and social and environmental ill effects. It therefore makes sense to minimize the "costs" a city and its residents must pay to enjoy access to a wide range of destinations.

This principle involves managing the already existing road and public transport resources of a city with maximum efficiency. It means maximizing the efficiency of a grossly inefficient road and public transport network before new infrastructure is built.

— *Traffic Calming*, CART

Fields of vision: These two stretches of Mayfield Road have very different effects on motorists. On the left, Mayfield Road passes through the Little Italy neighborhood of Cleveland, where the driver's field of vision is narrowed by constricted traffic lanes, parked cars, and buildings close to the street. The visual cues all say: slow down! On the right, Mayfield passes through the eastern suburbs, where the view is wide and open. The message here is: go faster!

Photos by Laura Previll

Traffic-calming humps on Scarborough Road.

Speed humps bumped

Residents on Scarborough Road in Cleveland Heights have narrowly failed to approve the installation of six speed humps designed to slow cut-through traffic between Lee and Coventry roads. The city required 71 of the 119 households on the street (60 percent) to approve the plan, but only 56 voted yes. Approval would have meant an assessment of $20 per year for each household for 10 years to pay two-thirds of the cost of the humps.

In the past year the city has experimented with two temporary humps, and a few residents believed that they created noise and hurt property values. Many others, however, welcomed the humps because they made the street safer. Indeed, traffic monitoring by the city showed the number of cars going faster than 25 miles per hour (the posted speed limit) declined by 57 percent, and the number of cars speeding between 40 and 60 miles per hour declined 46 percent. Total traffic also decreased.

The city is now reassessing where to go with traffic calming. There's an understanding that physically modifying streets is a more effective way to slow traffic than roving police enforcement. But the city may have to experiment with traffic calming devices other than speed humps. One alternative being studied is a mini-circle at intersections (see below).

"We're not giving up," says assistant city manager Kathleen Ruane. "Other streets are calling for traffic calming, too. The issue is not going away."

Working well: Lyndhurst uses a mini-circle to slow traffic on Meadow Wood Blvd., a cut-through street between Richmond and Brainard roads.

Photos by Laura Prevlll

These policies have taken a very real human toll on low-speed travelers. According to a recent national study, walking is 36 times more dangerous than driving. (*Mean Streets 2000* by the Surface Transportation Policy Project). In 1999, a whopping 481 pedestrians and 208 bicycles were involved in motor vehicle accidents in the City of Cleveland alone. This could be an emerging social and environmental justice issue, as researchers are documenting a disproportionate number of pedestrian injuries and deaths among Latinos and African-Americans.

Street Design 101

Although one might think that posting additional speed limit or stop signs should address traffic problems, experience has shown that these are not effective traffic calming measures. The *physical design* of streets themselves influences a driver's behavior more than any other factor.

Under standard guidelines, road design is determined by municipal, county and state engineers, primarily on the basis of (1) its proposed "design speed," (2) its "functional classification," and (3) the traffic volumes to be accommodated in a specific future year.

Design speed: The "design speed" is the highest speed at which a motorist can drive safely under ideal road and weather conditions, regardless of the posted speed limit. When engineers modify a road in our region, they generally work with a design speed at least ten miles per hour higher than its posted speed limit. This signals to motorists that speeding is safe and encouraged, which intensifies the hazards faced by cyclists and pedestrians.

According to the Conservation Law Foundation, "Regardless of posted speed limits, motorists will drive faster when given the 'safety cushion' of a wider road and greater sight distances. Higher design-speed roads have an insidious psychological effect on most motorists, prompting them to increase their speed unwittingly."

There is no question that conditions for bicycling and walking need to be improved in every community in the United States; it is no longer acceptable that 6,000 bicyclists and pedestrians are killed in traffic ever year, that people with disabilities cannot travel without encountering barriers, and that two desirable and efficient modes of travel have been made difficult and uncomfortable.

– Federal Highway Administration, *Accommodating Bicycle and Pedestrian Travel: A Recommended Approach*

More than one quarter of all trips today are one mile or less, yet trips taken on foot have dropped by 42 percent in the last 20 years.

— *Mean Streets 2000*, Surface Transportation Policy Project

Functional classification: Every street and road in Ohio has been put in a category according to the function it is supposed to play in moving traffic through the roadway system. These functional classifications are determined by state and regional planning agencies, using Federal Highway Administration guidelines. Roads are assigned to the following classifications:

- Local streets and roads.
- Collector streets and roads, which collect traffic from local streets and roads, connect them to arterial routes, and serve through traffic within the locality.
- Arterials, which in urbanized areas connect major centers of activity. The highest type of arterial is called a freeway. (See table on the next page for a description of typical street classifications.)

The classification of a road is critical. The higher a road's functional classification, the higher its design speed is likely to be and the more motorists will respond by using it heavily.

Traffic volumes and level of service: The design of most road projects assumes that a community must accept forecasted growth in traffic at prevailing speeds, even if those speeds are above the posted speed limit. Typically, a project is designed to accommodate the traffic predicted to occur on a road 20 years in the future. It is not designed merely to accommodate traffic at that point in time, but to provide a very high "level of service" (LOS) to motorists.

The result of all these standard design factors is a road that is wider and faster that it needs to be today. The design process is biased against the needs of everyone not driving a car.

What can local communities do?

While it is true that federal and state engineering standards govern the design of roadways, local elected officials and citizens can request design modifications where a one-size-fits-all approach doesn't fit local circumstances. The standards actually allow for far more flexibility than many road designers realize.

Communities can start with traffic-calming techniques that begin to change the physical design of streets — moderating the flow of traffic and making streets less hazardous. A sampling of these techniques is provided on pages 10-14.

Beyond these techniques, local decision makers influence the character and livability of their streetscapes in other ways. Local land use laws determine the placement, use and design of buildings that shape the surrounding street environment. Neighborhood design features — trees, medians, sidewalks, on-street parking — also change the feel of streets, and therefore influence motorist behavior.

At the municipal planning level, the development of walking-sized districts with a variety of housing, shopping, work and recreational opportunities can reduce the need for car travel, decrease traffic volumes, and reduce the cost-per-citizen to provide first-class transit, walking, and bicycling infrastructure. Known by names such as "New Urbanism" and "Transit-Oriented Development," these traditional neighborhood planning principles are regaining esteem around the country. Their popularity is also encouraging older cities like Cleveland to reconsider their attitudes toward "outdated" street networks, and to find new value in the potential walkability and livability of once-forgotten urban neighborhoods.

And there's one more important thing for everyone to do — be more active and assertive about claiming the right to be in the streets. Walk. Bike. Organize block parties. Use the street like a neighborhood living room.

If we don't get out in the streets, our public spaces will continue to be dominated by the automobile.

❑

Narrowing lanes to slow traffic: Burlington, VT, uses paint and brick-patterned asphalt to create the appearance of narrower lanes near a school.

European Charter of Pedestrians Rights

The pedestrian has the right to live in a healthy environment and freely to enjoy the amenities offered by public areas under conditions that adequately safeguard his physical and psychological well-being.

The pedestrian has the right to live in urban or village centers tailored to the needs of human beings and not to the needs of the motor car and to have amenities within walking and bicycling distance.

Children, the elderly, and the disabled have the right to expect towns to be places of easy social contact and not places that aggravate their inherent weakness.

The pedestrian has the right to urban areas which are intended exclusively for his use, are as extensive as possible and are not mere "pedestrian precincts" but are in harmony with the overall organization of the town.

The pedestrian has the right to complete and unimpeded mobility which can be achieved through the integrated use of the means of transport. In particular, he has the right to expect: (a) an ecologically sound, extensive and well-equipped public transport service which will meet the needs of all citizens, from the physically fit to the disabled; (b) the provision of facilities for bicycles throughout the urban areas; (c) parking lots which are sited in such a way that they affect neither the mobility of pedestrians nor their ability to enjoy areas of architectural distinction.

Typical street classifications

Classification	Local Access	# Of Lanes	Average Daily Traffic	Typical Speed Limit	Signal or Block Length
Regional Freeway	Restricted	4-12	30,000+	55-65 mph	No standard
Principal Arterial	Limited	2-6	5,000-40,000	30-45 mph	1 mile
Minor Arterial	Somewhat Limited	2-4	3,000-15,000	30 mph	½ mile intervals
Collector	Unlimited	2	1,000-5,000	30 mph	¼ mile intervals
Commercial street	Unlimited	2-4	Low	25 mph	1 block intervals
Residential street	Unlimited	2	Under 1,500	25 mph	500 feet intervals

Source: *Streets and Sidewalks, People and Cars* produced by the Local Government Commission

Traffic-calming tools

Beginning

To begin creating better public spaces for people, communities can start with traffic-calming techniques that begin to change the physical design of streets — moderating the flow of traffic and making streets less hazardous. Following on pages 10-16 are a selection of traffic-calming techniques that can be applied in communities in Northeast Ohio.

The descriptions and diagrams of the techniques are excerpted from *Streets and Sidewalks, People and Cars: The Citizens' Guide to Traffic Calming* by Dan Burden and published by the Local Government Commission Center for Livable Communities. For a more complete discussion on how to implement traffic calming, order a copy of this guide from the center at 1414 K St., Suite 250, Sacramento, CA 95814, tel. 916-448-1198, Web: www.lgc.org.

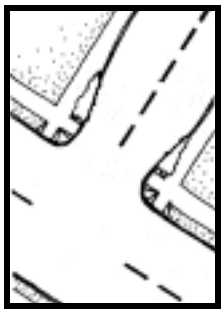
■

What traffic calming is NOT

While traffic-calming techniques aim to moderate the flow of traffic, they do not include stop signs or speed limit signs.

Installing speed limit signs may seem like a logical way to remind drivers not to speed. But speed is dictated by environmental and human factors. Speed limit signs and the threat of enforcement do little to set the speed of most vehicles.

Stop signs are often not a good traffic calming device because, after stopping, drivers tend to accelerate faster – and then slow down more quickly as they approach the next stop sign. Engineers call this phenomenon "speed spiking."



Bulbout or curb extension

Bulbouts or curb extensions extend the sidewalk or curb line into the street, reducing the street pavement width. Bulbouts calm traffic speeds and improve pedestrian crossings. They shorten crossing distances and reduce the time pedestrians are exposed to traffic. They also improve visibility for pedestrians and motorists.

Bulbouts placed at an intersection discourage motorists from parking in a crosswalk or from blocking a curb ramp. Motorists may travel more slowly at intersections or midblock locations with bulbouts depending upon how narrow the roadway becomes. Used in sequence, especially with landscaping, bulbouts tighten overly wide streets. The more restricted the street width becomes, the slower motorists tend to travel. Bulbouts also reduce turning speeds at intersections.

Estimated cost: $5,000-$20,000 each. But they can be built for little or no additional cost during a street reconstruction.

Used for

Improving safety for pedestrians and motorists at intersections and midblock locations.

Increasing visibility and reducing speed of turning motor vehicles at intersections (if designed correctly).

Improving midblock visibility of pedestrians by bringing them to the edge of parked vehicles.

Encouraging pedestrians to cross at designated locations.

Preventing motorists from parking at corners.

Improving access for emergency responders and large vehicles to narrow streets that might be blocked by on-street parking.

Providing opportunity for high quality ramps for people with disabilities.

Providing location for landscaping and public amenities.

Bulbouts help moderate traffic along Lee Road in Cleveland Heights.

Chicanes

Chicanes usually consist of a series of bulbouts or curb extensions that narrow the street to one lane at selected points and force motorists to slow down to maneuver between them. Such treatments are intended for use only on residential streets or quiet portions of a downtown with low traffic volumes (under 1,500 cars per day), where it is desirable to greatly restrict vehicle speeds and movements.

Estimated cost: For a set of three, $10,000 to $20,000.

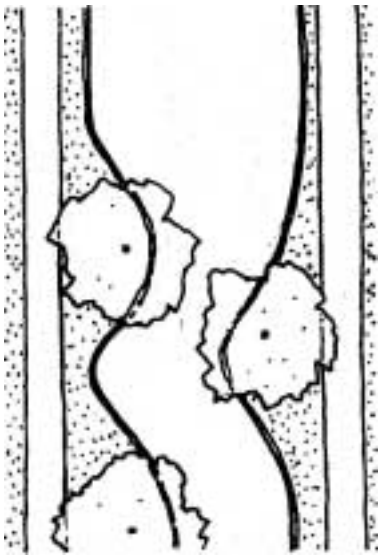
Used for

Reducing vehicle speeds on long blocks (over 500 feet).

Adding greenery and visually narrowing appearance of street.

Creating a park-like environment.

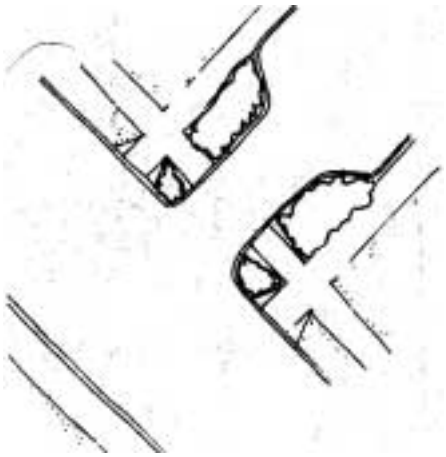
Assuring 20-foot opening for fire truck operations.



Choker or neckdown

Like a partial street closure, a choker narrows the mouth of an intersection. However, a choker does not just block one movement (either entering or exiting the intersection), but instead consists of a set of curb bulbouts which narrows the intersection to one lane, causing motorists to slow when entering or exiting.

Estimated cost: $5,000-$20,000 each depending on site conditions and desired landscaping.



Used for

Slowing vehicles at entry-point and mid-point along the street.

Improving safety for pedestrians and motorists at intersections; increases visibility and reduces speed of turning motor vehicles if designed correctly.

Encouraging pedestrians to cross at designated locations.

Preventing motorists from parking at corners.

Improving access for emergency responders and large vehicles to narrow streets that might be blocked by on-street parking.

Improving compliance with the Americans with Disabilities Act (ADA).

Improving public space.

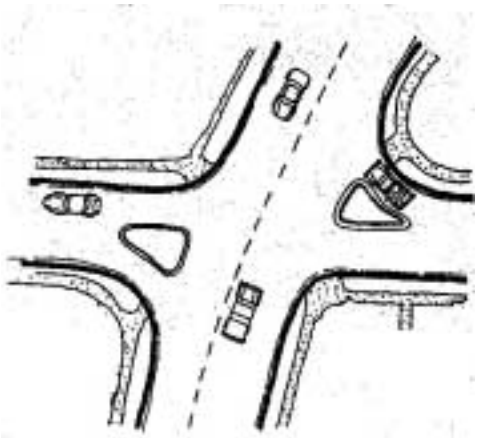
Diverter

A diverter consists of an island or curbed closure which prevents certain through and/or turning movements at intersections of residential streets.

A diagonal diverter breaks up cut through movements and forces right or left turns in certain directions. A star diverter consists of a star-shaped island placed at the intersection which forces right turns from each approach. A truncated diagonal diverter is a diverter with one end open to allow additional turning movements. Other types of island diverters can be placed on one or more approach legs to prevent through and left turn movements and force vehicles to turn right.

As with other traffic calming measures, diagonal diverters must be used in conjunction with other traffic calming devices within the neighborhood street network. Any of these diverters should be designed to allow pedestrian, bicycle and emergency access.

Estimated cost: $10,000-$20,000 per treatment.



Used for

Traffic volume control.

Discouraging commuter or other inappropriate traffic from entering or cutting through a neighborhood.

Creating part of a bicycle boulevard system.

Creating a small pocket park.

Median

A median may be considered to be a long pedestrian refuge island that is raised and located near the center portion of the street. Medians provide a refuge for pedestrians and bicyclists who cross a street mid-block or at intersections. Adding medians to existing streets may require reducing lane widths, the number of lanes, and/or removing on-street parking. Medians can be designed with turning pockets at intersections or at restricted locations. Typically, safety is enhanced due to a reduction in vehicle speed and an increase in separation between opposing directions of traffic and a reduction in points of conflict where turns are allowed.

Medians provide a signature landscape opportunity and can increase community pride and sense of place.

Estimated cost: $15,000-$30,000 or more per 100 feet (priced on lineal foot).

Crosswalk to median at Shaker Square.

Used for

Managing motor vehicle traffic and providing comfortable left-hand turning pockets with fewer lanes or more narrow lanes.

Improving access across streets in commercial, park and transit districts or corridors.

Providing a refuge for pedestrians and bicyclists crossing the street.

Increasing roadway efficiency by up to 30 percent.

Providing space for street trees and other landscaping while reducing water runoff.

Photos by Laura Previll

Landscaping treatments

The careful use of landscaping along a street provides separation between motorists and pedestrians, reduces the roadway's effective width (which in turn can reduce vehicle speeds), and provides a more pleasant street environment for both pedestrians and motorists. If an entire block of residents approves a landscaping plan, more landscaping options are available than would be available to a single individual. This can include a variety of trees, bushes, and large flower pots, which can be planted in the area between the sidewalk or walkway and the street. All proposed landscaping options should conform to parks and recreation department standards, and local government maintenance capabilities.

Estimated cost: Varies. From $1,000-$10,000 is typical. Often city or county will pay for initial installation and tree maintenance while the neighborhood will agree to maintain smaller plants. Some cities maintain greenhouses to assist neighborhoods with free plantings.

Used for

Enhancing the street environment and improving property values.

Projecting an image that the street is part of a place rather than a through route.

Creating an energy-saving, green environment, cooling and preserving asphalt life, and tempering motorist behavior. Tree canopies can reduce energy costs to residential and commercial properties by up to 10 percent.

Enhancing all other types of traffic calming measures.

Increasing neighborhood pride, ownership and commitment to work together.

Reducing water runoff.

Reducing the number of lanes

Reducing the number of lanes on an existing multi-lane roadway reduces crossing distances for pedestrians and can slow vehicles to appropriate speeds. For example, a four-lane, undivided road can be converted to one through lane in each direction with a center left-turn lane and bicycle lanes on both sides of the roadway.

Another option would be to reduce a four-lane, undivided road to one through lane in each direction with a center turn lane with short medians, left turn pockets, and bicycle lanes. This configuration eliminates the possibility of drivers using the center left-turn lane as a through lane, while providing a pedestrian refuge and a dedicated bicycle lane. If the roadway has no sidewalks, these may also be added.

If there are sidewalks with adequate room, a landscaped buffer may be installed to separate pedestrians from the travel lane. Roadway capacity is often unaffected, or improved, for volumes up to 15,000-20,000 vehicles per day.

Estimated cost: Minimal. Often only requires re-striping the lanes. When medians or refuge islands are used, costs of $15-$25 per lineal foot are common.

Used for

Converting four-lane roadways to two, plus medians and bike lanes.

Improving motorist compliance with the law, by allowing the prudent driver (not the imprudent driver) to set the speed.

Reducing top end speeders most hours of the day. May have less effect in off-peak hours.

Pedestrian refuge island

A pedestrian refuge island is a raised island placed in the center of the street at intersection or mid-block locations to help protect pedestrians from motor vehicles. As with medians, refuge islands allow pedestrians to be concerned with only one direction of traffic at a time. For example, a pedestrian can cross to the refuge island and wait for an adequate gap in traffic before crossing the second half of the street. Where mid-block or intersection crosswalks are to be installed at uncontrolled locations (i.e., where there are no traffic signals or stop signs), raised medians should be strongly considered as a supplement to the crosswalk. Pedestrian refuge islands can be as narrow as 4 feet, but 8 feet is preferred.

Estimated cost: $6,000-$10,000 for basic island, more for significant landscaping.

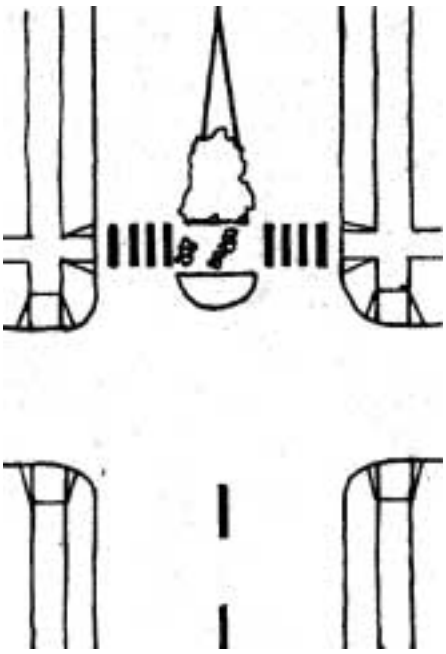
Used for

Enhancing pedestrian and bicyclist crossings, particularly at un-signalized crossing points.

Establishing "Safe Routes To School" crossings.

Reducing left turn crashes.

Simplifying pedestrian decision-making to one or two threats at a time.



Speed humps and speed tables

Speed humps are typically paved with asphalt, approximately 3-6 inches high at their center, and extend the full width of the street. The higher the vertical rise, the better the humps work to reduce vehicle speed. This popular traffic calming device has some negative aspects, however. They may delay emergency vehicle response times by 5-10 seconds each, create noise and often shift the speed problem to a parallel adjacent street. Often they have minimal impact on the worst drivers, while punishing the most responsible motorists.

If no other options are available, speed humps should be spaced 400 to 500 feet apart for maximum effect. They should also be part of neighborhood-wide traffic calming

A speed table is essentially a flat-topped speed hump. Speed tables can be a good solution at school crossings, trail crossings and in parking lots. Speed tables are often striped as crosswalks or constructed out of brick pavers. Speed humps and tables must be well-marked and well-lit so that they can be detected from 200-300 feet.

Estimated cost: $2,000 for humps, and $5,000-$15,000 for tables. Prices will vary.

Used for

Calming traffic on narrow streets where few other measures can be applied.

Reducing speeds where crosswalks and trails cross local and low-volume collector roadways.

Raised intersection

A raised intersection involves providing ramps on each of the intersection approaches and elevating the entire intersection by approximately 6 inches. The crosswalks on each approach are also elevated as a part of this treatment. Bollards are sometimes added to reduce the likelihood of drivers cutting through the intersection on the sidewalk. The intersection ramps are usually made of concrete, but may be constructed of paving stones, bricks, or other materials. As with other vertical treatments such as speed humps or speed tables, these devices are uncomfortable for bus and emergency vehicle passengers.

Estimated cost: $25,000 to $70,000 for compact intersections. Costs are less if drainage is minimized.

Used for

Reducing conflict speed at most critical location.

Improving pedestrian and bicycle access and safety at most critical location.

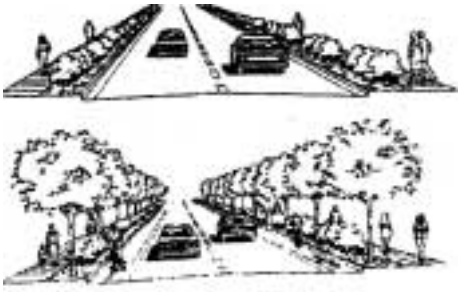
Creating a prime corner ("100% corner") and increasing public amenities.

Roadway narrowing

Roadway narrowing can be achieved in two different ways. The lane width can be reduced, with excess asphalt then striped with a bicycle lane or paved shoulders. These treatments make the driving area appear to be narrow without adding curbing to physically narrow the roadway.

The street can also be physically narrowed by extending sidewalks, providing landscaped areas, or adding on-street parking within the former curb lines. This often reduces vehicle speeds along a roadway section and enhances movement and safety for pedestrians.

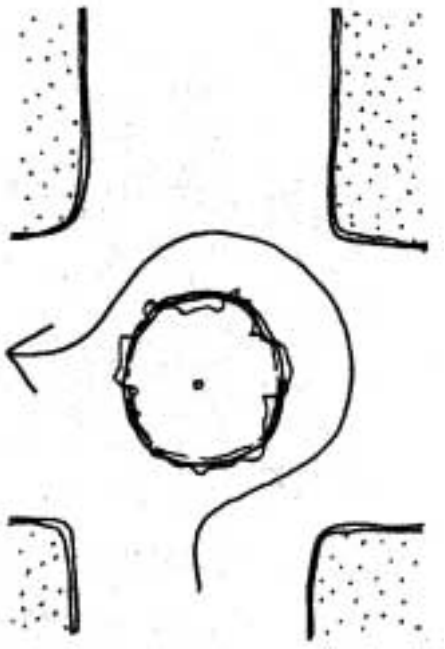
Adding bicycle lanes on higher-volume streets with speeds in excess of 20 mph enhances bicycle travel by increasing the predictability of both car and bicycle movements. Such treatments are particularly desirable for a neighborhood when several streets are treated in this way to create a connected system of bike lanes.



Used for

Reducing speeds, increasing safety and redistributing space to other users and uses.

Mini-circle



Mini-circles are raised circular islands constructed in the center of residential street intersections to reduce vehicle speeds. They force motorists to maneuver around them and have been found to reduce motor vehicle crashes by 90-93 percent. Drivers making left turns are directed to maneuver in a counter-clockwise direction, exiting the traffic circle by turning right onto the desired street. Signs are often installed within the circle to direct motorists to proceed to the right of the circle before passing through or making a left turn. They are commonly constructed with landscaping (bushes, flowers, or grass) at locations where the neighborhood has agreed to maintain the plants. Stop signs are removed. Mini-circles often improve emergency response times up to 30 percent when four-way stop controls are removed. Use yield control on all four approaches.

Estimate cost: $8,000-$15,000. Asphalt mini-circles are installed for as little as $6,000. Most residents prefer the quality and durability of concrete.

Used for

Managing traffic at an intersection where volumes do not warrant a signal.

Reducing crashes at intersections of two local streets.

Reducing vehicle speeding at the intersection.

Treating a series of intersections along a local street as part of a neighborhood traffic improvement program.

Woonerf

Woonerf (Dutch word which means "street for living") is common space shared by pedestrians, bicyclists, and low-speed motor vehicles. They are usually streets raised to the same grade as curbs and sidewalks. Vehicles are slowed by placing trees, planters, parking areas, and other obstacles in the street. Motorists are treated as the intruders and must travel at walking speed. This makes a street available for public use that is essentially only intended for local residents. A woonerf identification sign is placed at each street entrance.

Estimated cost: The cost to retrofit and create a woonerf may be quite high, but there would be no extra cost if part of original construction.

Used for

Residential or other local streets where volumes are low (under 1,000 ADT), limited use, and primarily local access streets.

Streets where there is a neighborhood desire to create a public space for social activities and play by local residents.

Traffic calming resources

General information

- Centers for Disease Control, http://www.cdc.gov/nccdphp/dnpa/kidswalk/index.htm.
- Federal Highway Administration's Design Guidance for Accommodating Bicycle and Pedestrian Travel, www.fhwa.dot.gov/environment/bikeped/design.htm.
- Institute of Transportation Engineers' Traffic Calming for Communities, www.ite.org/traffic.
- Pedestrian and Bicycle Information Center, www.walkinginfo.org.
- Walkable America Checklist, http://nsc.org/walk/wkcheck.htm.

Advocacy groups

- America WALKs, www.americawalks.org.
- Congress for the New Urbanism, www.cnu.org.
- Local Government Commission, http://www.lgc.org/transportation/street.html.
- National Center for Bicycling and Walking, www.bikefed.org.
- Street Reclaiming, www.lesstraffic.org.
- Surface Transportation Policy Project, www.transact.org.
- Walkable Communities, Inc., www.walkable.org.
- Walk-to-school programs, www.iwalktoschool.org.

Publications

- *City Comforts* by David Sucher, 1995.
- *Street Design Guidelines for Healthy Neighborhoods* by Dan Burden, Local Government Commission, www.lgc.org/clc
- *Streets and Sidewalks, People and Cars: The Citizens' Guide to Traffic Calming* by Dan Burden, Local Government Commission Center for Livable Communities, 2000.
- *Street Reclaiming* by David Engwicht, 1999.
- *Suburban Nation* by Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck, 2000.
- *Sustainability and Cities* by Peter Newman and Jeffrey Kenworthy, 1999.
- *Take Back Your Streets: How to Protect Communities from Asphalt and Traffic* by the Conservation Law Foundation, 1998.
- *Traffic Calming* by Citizens Advocating Responsible Transportation (CART), 1993.

More tools for great streets

What about bike lanes? What about crosswalks? Beyond the traffic calming tools reviewed on the previous few pages, another set of great street tools can be used to improve streets. This page and the next describe other techniques that can be used to make your community more walkable and more livable. These tools can be used with the traffic calming techniques — or on their own.

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ADA-compliant design

People with disabilities who experience higher than normal levels of risk include the visually impaired, wheelchair users, developmentally restricted persons, and people who walk with special aids. Under the federal Americans with Disabilities Act, improvements were mandated to ensure access and mobility for people with physical limitations. Most of these improvements — including adequate time to cross streets, well-designed curb ramps, limited number of driveways, and wide sidewalks that are clear of obstructions — benefit all walkers.

Bicycle lanes

Bicycle lanes indicate a preferential or exclusive space for bicycle travel on a street, and are typically striped — although colored pavement is sometimes used. They create more consistent separation between bicyclists and passing motorists, and can also provide a buffer zone between motor vehicles and pedestrians on a sidewalk.

Marked/striped crosswalks

To make pedestrians' actions more predictable for motorists, marked crosswalks indicate the proper locations to cross. In many cities, crosswalks are commonly installed at all legs of all signalized intersections and also at other selected locations.

Using crosswalks is a shared responsibility between drivers and pedestrians. Drivers must yield to pedestrians and pedestrians must not assume that all motorists see them in a crosswalk. Care on behalf of both parties can prevent pedestrian injuries.

While marked crosswalks are generally desirable at signalized locations, they may also be appropriate for selected, low speed, two- or three-lane, narrow streets, particularly in conjunction with speed tables, medians, refuge islands, bulbouts, and other traffic calming measures. Various striping patterns and textures can be used. It may be useful to supplement crosswalk markings with pedestrian warning signs.

Curb radius reduction

One common type of crash involving pedestrians occurs when a pedestrian is struck by a vehicle turning right at an intersection. A curb radius of 25 feet or more typically results in high-speed turns by motorists.

Shortening the radius — making the turn "tighter" for the driver — by extending the curb reduces the vehicle's speed, shortens the crossing distance for pedestrians, and improves visibility between pedestrians and motorists. Tighter turning radii are especially important in areas with heavy foot traffic.

Curb ramps

Curb ramps provide access between the sidewalk and roadway for people using wheelchairs, strollers, walkers, and hand carts as well as for pedestrians who have trouble stepping up and down high curbs. Appropriate for use on all types of streets, curb ramps may be installed at intersections and mid-block locations with pedestrian crossings.

Driveway improvements

Driveways may cause safety problems for pedestrians if the sloped pavement ramp extends through the sidewalk area. This will require the pedestrian to navigate the sloped pavement at each driveway crossing.

Other driveway features to be avoided are wide turning radii, multiple adjacent driveways, or poorly defined driveways. Driveways that are wider than needed to enter and exit expose pedestrians to unnecessary risk by keeping them in the path of vehicles.

Bikes and buses get special treatment in Copenhagen, Denmark. Photo by Ryan McKenzie

Driveway improvements can include narrowing or closing driveways, tightening turning radii, converting driveways to right-in/out median dividers on wide driveways.

Lighting improvements: Pedestrian-scale lighting

Pedestrians — especially if they are wearing light colors — often assume that motorists can see them at night. They are deceived by their own ability to see the oncoming headlights. Without sufficient overhead lighting, however, motorists may not be able to see pedestrians in time to stop.

In commercial areas with night-time pedestrian activity, special lighting placed over the sidewalks can enhance both the ambiance of the area and the visibility of pedestrians to motorists.

Neighborhood speed watch/Speed monitoring trailer

On some streets where traffic calming treatments have not yet been installed, temporary compliance with speed limit signs may be achieved by using a sign board which displays the speed of passing vehicles. Used in conjunction with intermittent police enforcement, this is an effective short-term strategy.

Pedestrian signals

The use of walk/don't walk signals at signal locations is often valuable. Pedestrian signals are necessary when: (1) vehicle signals are not visible to pedestrians; (2) signal timing is complex — such as a left turn signal for motorists; (3) there is an established school zone crossing; and (4) an exclusive pedestrian interval is provided. Pedestrian signal heads may either be symbols of a walking person, an upheld hand, or they may be the words "walk" and "don't walk."

Pedestrian signal timing: Upgrade/modify

Pedestrian push buttons (with timing based on a walking speed of 3-3 1/2 feet per second) may be installed at locations where pedestrians are expected at intermittent intervals. Push buttons should not be used in downtowns or where pedestrians are routinely present. Quick response to the button should be programmed into the system.

Since push-button devices are activated by only one-half of pedestrians, new "intelligent" microwave or infrared pedestrian detectors which automatically activate the red light and walk signal when pedestrians approach — are now being installed in some cities.

Other detectors can extend the crossing time for slower moving pedestrians in the crosswalk. In addition to "standard" pedestrian signal timing (where motorists may turn left or right across a

pedestrian's path), exclusive pedestrian intervals stop traffic in all directions. This timing has been shown to reduce pedestrian crashes by 50 percent. Use of larger pedestrian signal heads and/or audible pedestrian messages (such as chirps for the blind) can be used to enhance crossings for some pedestrians.

Right-turn slip lanes

At many arterial street intersections, pedestrians have difficulty crossing due to right-turn movements and wide crossing distances. Well-designed right-turn slip lanes place right-turning vehicles at a 60° angle from through traffic. This angle limits vehicle turning speeds and increases the visibility of pedestrians. Right-turn slip lanes should be accompanied by pedestrian refuge islands within the intersection. Pedestrians can cross the right-turn lane and wait on the island for their walk signal.

School zone improvements

A variety of roadway improvements may be used to enhance safety or mobility for children in school zones. The use of well-trained adult crossing guards has been found to be one of the most effective measures for assisting children to cross streets safely, while sidewalks or separated walkways and paths are essential for a safe trip from home to school — on foot or by bike.

Police enforcement in school zones may be needed in situations where drivers are speeding or not yielding to children in crosswalks or when making turns.

Other helpful measures include parking prohibitions at intersections near schools, increased child supervision, and the use of signs, such as SLOW SPEED LIMIT 25 MPH WHEN FLASHING. Pedestrian safety education programs are also an essential part of child pedestrian safety, which can carry over for a lifetime.

Add or modify signage

At some crossing locations and complex intersections, signs can effectively alert drivers or pedestrians to use extra caution, and thus improve pedestrian safety. Signs can, however, be used too frequently, which fosters noncompliance and disrespect for signs in general.

Speed limit signs, pedestrian warning signs, and no-turn-on-red sign, for example, can affect pedestrians. A new, strong yellow-green color is now approved by *The Manual on Uniform Traffic Control Devices*, an industry standard for use on signs which warn motorists that pedestrians and bicyclists may be in the vicinity. Because of its unique bright color, drivers pay more attention to the sign.

Street furniture/walking environment

Tripping and falling are primary causes of pedestrian injuries, particularly for older walkers. Carefully planned and designed sidewalks and pedestrian areas are important, as is providing safety and mobility for users.

Sidewalks should be continuous and be part of a system which provides access to goods, services, and homes. Sidewalks and walkways should be kept clear of poles, sign posts, newspaper racks, and other obstacles which could block or trip people.

Benches, water fountains, and other street furniture should be carefully placed to allow for unobstructed paths for pedestrians. Paths must be properly maintained and kept clear of debris and puddles that can cause problems for pedestrians. Places to sit, chat, and people watch enhance pedestrian livability.

Sidewalks, walkways and buffer zones

Sidewalks and walkways separate pedestrians from the roadway and provide off-street places for children to play. Sidewalks have been associated with significant reductions in pedestrian-vehicle collisions. Such facilities also improve pedestrian mobility and should be provided for walking from residential areas to parks, schools, stores, and transit stops.

While sidewalks are typically made of concrete with curb and gutter, less expensive walkways for low-density residential areas may be constructed of asphalt, crushed stone, or other materials if they are properly maintained.

A minimum width that allows two people to pass safely is 5 feet of sidewalk or walkway, free of obstructions. An additional buffer zone (grass, trees, or other vegetation) of 4 to 6 feet is desirable as a separation from the street. Careful planning of sidewalks and walkways is important for a neighborhood or area to provide adequate safety and mobility.

Traffic signals

Traffic signals can create gaps in traffic flow to allow pedestrians to cross the street while motorists are stopped. Such signals should allow adequate crossing time for pedestrians (a walking speed of 3-3 1/2 feet per second). Signals are especially important for pedestrians crossing at mid-block crossing points on high-speed roads, high-speed or congested intersections, and in areas where seniors and young children want to cross streets. National standards based on the numbers of pedestrians and vehicles should be used in selecting these sites.

Traffic signal enhancements

A variety of traffic signal enhancements can benefit pedestrians, bicyclists and motorists. They include: providing left-turn phasing separate from pedestrian walk intervals; timing signals in sequence to encourage desired vehicle speeds; installing larger, more visible traffic signals (including back plates for bright background faces); and giving transit vehicles priority over other vehicles.

— from *Streets and Sidewalks, People and Cars* produced by the Local Government Commission

Not merely equal rights

Other things being equal, one should presumably start with the principle that all travelers have equal rights, regardless of the means by which they choose to travel. But since travelers by motor vehicle are better armed and better protected than pedestrians and cyclists they tend to take priority whenever any conflict arises. One aim of policy should be to correct this bias. Moreover, from the general social point of view, other things are not at all equal. Pedestrians and cyclists are much cheaper to accommodate than motor vehicles and do no environmental harm. This is a strong reason for giving them not merely equal, but preferential treatment.

— Citizens Advocating Responsible Transportation (CART)

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More and more, citizens are rejecting the notion that streets are the exclusive domain of the automobile. Instead, they are redefining their streets as important public spaces and reclaiming them for a multitude of community functions, such as artistic expression, commerce, recreation, communication and social interaction. As a result, planners and citizens alike are beginning to understand that streets provide the unique visual, cultural, and spatial characteristics of a community, that they define each community's unique sense of place.

— Anton Nelessen, Rutgers University

Public right of way?

In a pending Cleveland Heights court case, a middle-aged doctor who was caught roller-blading to a dinner date has been accused by police of "operating a toy vehicle in the street." On downtown Cleveland streets, drivers of pedal-powered "pedicabs" have been arrested for disrupting the flow of traffic. After the deaths-by-motor-vehicle of several pedestrians in downtown last year, the city responded with a barrage of tickets for those on foot who were caught jaywalking.

These government actions against people using non-motorized transportation are focusing attention on the lack of respect for lower-speed mobility choices in car-dominated Greater Cleveland. Are these non-polluting, pedestrian-friendly modes of travel nothing more than a nuisance to be discouraged by our public servants?

In *Reclaiming Our Cities and Towns*, David Engwicht writes, "For over 10,000 years, streets in cities belonged to the people for social interaction, recreation and to provide access to people, goods and places. Beasts of burden were allowed on the streets provided they did not bite or constitute a danger to life or limb of other road users." He goes on to say that today we grant freedom to beasts of burden – motor vehicles – that not only kill and maim millions, but that have eroded or eliminated the community-building functions of our public right of way.

Second-class bikes

Bicycle commuters are especially vulnerable. They share stories of close calls from careless motorists and even intentional intimidation. Far from protecting the well-being of these responsible citizens, many municipalities actually discourage and harass cyclists. From outright bicycle bans to mandatory use of dangerous sidewalks, many local ordinances are completely at odds with federal and state laws that ensure cyclists equal rights to the public way. Local cycling advocates have already nominated policies in Broadview Heights, North Olmsted, Bay Village, Strongsville and Brook Park for their bicycling "Hall of Shame."

Even when communities have not enacted laws to discriminate against slower-speed transportation, city officials around the region have done little to provide for safe and comfortable non-motorized travel choices. Fearing legal liability, they're unwilling to create policies favoring walking and bicycling, or to even endorse them as legitimate transportation choices.

Bike taxis: The Shaker Square Express is a new bicycle taxi service serving Shaker Square and surrounding neighborhoods. The human-powered pedicabs seat two passengers and are a convenient way to go to a movie, restaurant or shopping. The service will even pick up neighborhood residents and their luggage and drop them at the Shaker Rapid stop for a transit ride to the airport. For reservations, call 216-509-4733.

The road ahead

New technologies are arriving, however, that will challenge our thinking about the public way. Low-speed vehicles (LSV) have been legal on Ohio roads with speed limits of 35 mph or less since 1998. These clean, quiet, battery-powered electric cars, motorcycles, scooters and bicycles operate at a maximum speed of 25 mph. They're ideal for running errands on local streets. But if these lower-speed technologies are to be safely welcomed into our existing transportation system, we must aggressively pursue traffic calming and other innovative road designs.

Other encouraging developments for lower-speed travel include:

- RTA is welcoming passengers with bicycles on selected buses and trains this summer, creating new possibilities for practical, car-free transportation.
- The Northeast Ohio Areawide Coordinating Agency (NOACA) has a bicycle advisory subcommittee that is pushing local transportation project coordinators to consider the needs of bicyclists.
- The Cuyahoga County Planning Commission and Ohio Canal Corridor are developing a concept plan for a comprehensive regional trail network for walking and bicycling.
- Facilitated by the volunteer Committee for Transit-Oriented Development (and with staff assistance from EcoCity Cleveland), RTA and the City of Cleveland are discussing ways to improve walking and bicycling conditions in neighborhoods around bus and train stops.
- There's increasing interest in traffic calming, especially in central city neighborhoods that will be affected by the reconstruction of the Innerbelt.

With continued work, our future streets could be populated with a far greater diversity of vehicles than today.

— Ryan McKenzie

Progress (and persistent problems) on the Cuyahoga River

A lot of water has gone under the bridge since the infamous Cuyahoga River fire in 1969. Hundreds of millions of dollars have been invested to reduce the gross pollution from industrial pipes and public sewage plants.

But while the Cuyahoga River is noticeably cleaner, many challenges remain. Lingering sources of toxic chemicals still seep into the river from waste dumps and contaminated sediments. Countless sources of urban runoff flush pollutants and sediment into the river every time it rains. Combined sewers in older cities discharge sewage during heavier rainstorms. And development threatens more and more of the wetlands and natural areas left in the watershed.

The Cuyahoga River Remedial Action Plan (RAP), a community planning effort working on the restoration of the lower 45 miles of the river and nearshore areas of Lake Erie, has been monitoring progress on the river. The RAP has organized restoration work around six key issues:

Human health: problems resulting from the consumption of contaminated fish, wildlife, or drinking water, or direct bodily contact with contaminated water.

Fish and aquatic organisms: reduced populations; increased incidences of tumors or external deformities; loss of aquatic habitat.

Wildlife: reduced populations; increased incidences of birth defects or deformities; loss of wildlife habitat.

Recreation: elevated bacteria levels lead to contact advisories and periodic beach closings.

Socio-economic uses: lack of public access and recreation opportunities; degraded aesthetics; contaminated sediments; undesirable algae; potential added costs to industry and agriculture to use river water.

Public awareness: need for building a greater awareness among the general public, local officials and stakeholders about watershed and pollution issues and what actions can make a difference in water quality.

In a recent progress report, the RAP summarized progress in these six areas — what has improved since 1989 and what still needs improvement (see summary on pages 19-20). For more information, call 216-241-2414, ext. 610.

No fire danger: The Cuyahoga River flows through the Flats district of Cleveland.

What is a RAP?

RAPs, or Remedial Action Plans, are part of U.S.-Candian efforts to clean up the Great Lakes. In 1972, the two nations adopted the Great Lakes Water Quality Agreement, which recognized the serious pollution problems affecting the lakes. In 1987, the agreement was amended to require intensive planning to clean up the 43 "areas of concern," the worst pollution areas around the Great Lakes Basin. These Remedial Action Plans were supposed to identify pollution sources and other environmental problems, and then develop strategies for correcting the problems.

Ohio has four RAPs – planning and restoration efforts focused on the Cuyahoga, Black, Ashtabula, and Maumee rivers. Local committees are appointed by Ohio EPA to coordinate the work. For the Cuyahoga River and Black River RAPs, staffing is provided by the Northeast Ohio Areawide Coordinating Agency.

The RAPs have had a mixed record of success. Some have mobilized community resources and cooperation to solve complex pollution problems. But others have been mired in bureaucratic processes — focused more on turning out reports than direct actions to restore their areas of concern.

Cuyahoga River Symposium, October 25

The Cuyahoga River Remedial Action Plan is sponsoring a Cuyahoga River Symposium on October 25 from 8:30 a.m. to 3 p.m. at the Happy Days Visitor's Center on SR 303 in the Cuyahoga Valley National Park.

Topics will include the status of fish populations, urban stream restoration, pollution control strategies, and recreation plans. The keynote speaker will be Steven Litt, art and architecture critic of *The Plain Dealer* who has written about the importance of the river and Cuyahoga Valley to the livability of the region.

Call 216-241-2414, ext. 275, for registration information.

Status report

The following assessment comes from a draft progress report by the Cuyahoga River Remedial Action Plan. It addresses conditions on the river downstream of Lake Rockwell, as well as Lake Erie shoreline areas of Cleveland.

+ signifies progress since 1989
- signifies needs improvement

Human health

+ Many sport fish can now be caught in the Cuyahoga River and Lake Erie nearshore areas.
- Consumption advisories still exist for *some* species of fish.
+ The amount of algae has decreased in response to a lake-wide phosphorus ban and other ecological changes in the lake (e.g., the dominance of Zebra Mussels). The result has been fewer taste and odor problems
- Research is needed to determine if problems exist with new pollutants and parasites in drinking water supplies.
+ No consumption advisories in place for drinking water.

Recreation

+ Sources of bacteria continue to be reduced by public expenditures for facilities to control combined and sanitary sewer discharges. Planning is under way or complete for most remaining sources. Beach monitoring programs generate information regarding water quality at major area beaches.
- Combined sewer overflows and non-point sources cause elevated bacteria levels during and after rainfall events, leading to contact advisories and periodic beach closings. At current expenditure levels, construction of overflow controls will take ten to twenty years. Separate storm sewer runoff, from urban and suburban areas, continues to be a major source of bacterial pollution. Much of the region lacks a coordinated stormwater management plan. More work is need to provide timely and accessible information to the public regarding beach water quality.

Wildlife

+ Breeding populations of Great Blue Heron and Bald Eagle sentinel species have returned to the Area Of Concern.
+ Beaver are back in much of the Area Of Concern
+ White tailed deer and Canada geese are back in much of the Area Of Concern.
- Pollution sensitive river otters have not yet been established.
+ Over 33,000 acres of the Area Of Concern are now protected in the Cuyahoga Valley National Park; 7,000 acres in MetroParks Serving Summit County; 15,000 acres in Cleveland Metroparks; and 290 acres in the Ohio and Erie Canal Reservation.
+ Cuyahoga and Summit Soil and Water Conservation District's conservation easement programs protect over 100 acres in the Area Of Concern.
- Thousands of acres of wetlands and riparian areas remain unprotected.

Socio-economic

+ Millions of people enjoy the Cuyahoga River and Lake Erie nearshore: the Flats, Stadiums, Rock & Roll Hall of Fame, Great Lakes Science Center and other North Coast Harbor attractions that have made Cleveland a top tourist destination.
- Direct access to the Cuyahoga River and Lake Erie is very limited in the Navigation Channel and Cleveland lakefront.
+ Bikers and hikers along the Towpath Trail have made the Cuyahoga Valley National Park one of the most visited in the nation.
- Boating and direct access to the river are discouraged by the Cuyahoga Valley National Park due to periodic bacterial contamination.
+ Cleveland Metroparks and Metroparks serving Summit County host thousands of visitors annually.
+ Volunteers have collected over 50 tons of garbage and litter to date from area streams.
- Woody debris, litter, oily runoff from industrial and urban areas, and storm sewer outfalls still contribute to aesthetic problems after rainfall events.
+ Combined sewer overflow nets remove several tons of floatable debris annually.
- Sediment from storm water runoff from construction sites also degrades water quality and aesthetics.

Continued on the next page

Unfinished business on the Cuyahoga

Back in the 1960s when the Cuyahoga River was a pollution pit beyond belief, those of us who wanted better things for our river thought, "If only our river didn't smell so bad. If only our river looked more like water. If only our river wouldn't burn!" At the time, it seemed like an impossible dream…

[Today,] we have a river that doesn't burn, and it looks pretty much like water most of the time. It smells better, except when it rains.

However, only 25 percent of its length and only two of its 37 named tributaries meet the standards for healthy fish populations. For up to three days after a rain, paddling the river through the Cuyahoga Valley National Park can make you sick.

We need to be on a new odyssey for our river, an odyssey that takes us beyond *not burning*. We need a new vision, a vision that draws the picture of a healthy river teeming with fish. We need to picture a river that has free access to its floodplain, where city parks, wetlands, and streamside forests abound. We need a new formula for apportioning the river's resources so that the future health of the river is as important a factor in economic calculations as parking lots in the floodplain. And we need to stop using our Cuyahoga as a sewer.

— Elaine Marsh, president of the Friends of the Crooked River, excerpted from the Friends recent newsletter

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Due to unpredictable health threats from bacteria and other pathogens from combined sewer overflows and secondary bypasses at the Akron Water Pollution Control Station, Friends of the Crooked River will no longer sponsor recreational paddling trips in the river downstream of the Little Cuyahoga River in Akron.

Water quality is NOT improving. In fact, new hookups in the Combined Sewer Areas are being approved every year. This guarantees that the bacteria problem is worsening. And there is no plan to improve water quality in our river as it winds through our national park.

In 1999, the City of Akron completed an engineering study of the problems of combined sewer overflows and secondary bypass at the wastewater plant. However, no public comment was taken, no implementation strategy was established, and no funding was sought.

— Friends of the Crooked River

+ The amount of algae in Lake Erie has decreased significantly in response to phosphorus bans and zebra mussels.
- Elevated nutrient levels in municipal wastewater and non point source discharges may contribute to some localized eutrophic (choked with algea) conditions along the river and lakefront.
+ The amount of contaminated river sediments that are dredged to maintain Navigation Channel shipping in the Flats has decreased.
- Most river sediments continue to contain high levels of pollutants that require placement in Confined Disposal Facilities (CDF) along the lakefront.
+ Bath, Aurora, Hudson, Twinsburg and other communities have enacted legislation to protect streamside lands from impacts of urbanization.
- Rapid wetland loss and urbanization contribute to future flooding, erosion problems and poor water quality.
- All communities in the Cuyahoga River watershed should enact legislation to protect streamside lands, wetlands and green space to benefit the river and future residents.

Fish and aquatic organisms

+ Fish populations have improved significantly with over 70 species now found in the river, including many pollution-sensitive species such as steelhead trout.
+ Preliminary results from Ohio EPA's 2000 Intensive Survey indicate that fish and aquatic insect communities in 6 out of 8 areas sampled in the Area of Concern meet some or all of the goals set by the federal Clean Water Act.
- Fish community indices still do not meet Ohio EPA criteria in most stream segments.
- Fish migration upstream is limited due to the presence of dams.
+ Aquatic insect populations have returned to the Cuyahoga, including pollution-sensitive species like mayflies, and now meet Ohio EPA criteria in most stream segments.
- Navigation Channel and Lake Erie nearshore areas still have poor benthic communities.
+ Toxic effluent and oxygen-demanding pollutant discharges have been reduced or eliminated, resulting in improved plankton communities.
+ Reductions to background tumor levels have been noted in most areas.
- Some sites still harbor bullheads with high tumor levels.
+ 12,391 linear feet of streambanks have been restored by plantings and soil bioengineering techniques to provide improved fish and aquatic habitat.
- Steel bulkheading and deep dredging in the navigation channel contribute to low dissolved oxygen levels, lack of adequate habitat and reduced fish communities.

Public awareness

+ Over 2500 school-aged youth have participated in watershed education events, storm drain stenciling and river clean up projects.
- Watershed education needs to be incorporated into school curriculums.
+ Eighty volunteers have implemented streambank restoration projects.
- Willing and able landowners are needed to implement streambank restoration.
+ Ten volunteers actively monitor aquatic organisms on 5 miles of streams to determine stream health.
- Stream monitors are needed to cover all tributary streams to the Cuyahoga River.
+ Over 4000 people from civic groups, schools, libraries, special interest groups and community organizations have attended presentations about watershed issues.
- Continuous education of all stakeholders, including the grassroots public and local officials, is needed to remind them of the importance and value of clean healthy streams and communities.
+ Local elected officials have participated in workshops on adoption of wetland and riparian protection mechanisms.
- Local legislation is needed to adequately address remaining beneficial use impairments of the Cuyahoga River.
+ Successful stream stewardship programs have been initiated in Big Creek and Yellow Creek sub watersheds.
- Sustainable technical assistance is needed from within the Big Creek and Yellow Creek watershed communities, and for furthering efforts in other watershed communities.
+ Cuyahoga River issues, projects and educational events have attracted substantial media coverage.
– More media coverage is needed to continue building awareness and encourage further improvements to the Cuyahoga River. ❑

Sewage at home

Homes not connected to public sewer systems are a major source of water pollution and public health risks in Northeast Ohio, according to a recent study by the Northeast Ohio Areawide Coordinating Agency (NOACA). Between 13 and 20 percent of homes with on-lot sewage disposal systems, such as those employing septic tanks and soil adsorption fields were found to have surfacing effluent (a polite way of saying that smelly, untreated sewage has saturated their yards).

Home sewage systems that are designed to filter sewage and discharge wastewater off site into local ditches or streams have an even worse performance record. Between 19 and 34 percent of systems surveyed were found to have poor effluent.

The study confirms previous findings by local health departments that thousands of home sewage systems in the seven-county region are not working properly. Poor maintenance and heavy, clay soils contribute to the problems.

Local water quality officials are calling for stricter regulation and inspection of home sewage systems, as well as tougher standards for design and siting. For more information, see the study at www.noaca.org.

Selling water

Around the world, water is the limiting factor in development. And corporations want to cash in by creating privatized markets for water, just as markets have been created for electricity and oil.

It will be interesting to see if water — the basis for life — will be bought and sold like any other commodity. Already companies such as Enron are pulling back from water ventures because of regulatory resistance. According to an Enron spokesperson quoted recently in *The New York Times*, Enron was "disappointed that the global market for water did not develop for us."

Governors of Great Lakes states have been in the forefront of resistance to water diversions and sales.

Stream stewards plan Euclid Creek Day

Natural corridor: A few segments of Euclid Creek (like this one in the Metroparks' Euclid Creek Reservation) still offer good stream habitat with riffles and pools and native trees shading the water.

A new citizens group has formed to encourage stewardship of Euclid Creek and its watershed. Friends of Euclid Creek hopes to become a focus for restoration, conservation and education throughout the eleven northeast Ohio communities whose waters flow into the creek and its tributaries (see map on back page).

"All throughout the watershed are ravines and streams in backyards and under major streets, and the people who live or work near them have no idea where the water goes," said a spokesperson for the group. "We want to help residents and businesses in the watershed understand how their activities impact the creek and its tributaries, and the water that flows into the lake."

The Friends' first awareness-building event will be Euclid Creek Day on September 29. The event will at 10 a.m. to 3 p.m. at the Metroparks Euclid Creek Reservation, with additional activities at various sites along the creek. Information about activities and schedules is available online at www.friendsofeuclidcreek.org.

The Friends group was organized in the wake of last year's controversy over development of retail and commercial space on property owned by TRW at the corner of Richmond and Cedar roads in Lyndhurst, part of the last undeveloped land surrounding the creek. The area is currently forest and wetland and is home to numerous wildlife species. Development of the land is likely to cause further degradation of the creek's water quality, as well as pose new problems in downstream communities that have already experienced decades of increased flooding.

Since the development of Beachwood Place Mall and its surrounding apartment, retail and commercial spaces on former wetlands near Euclid Creek's main branch, residents in South Euclid and Lyndhurst have seen more flooding and polluted runoff of surface water. At the same time, the riparian zones around the creek have seen a decrease in wildlife habitat and a resulting loss of diversity.

The watershed (see map) includes most of northeastern Cuyahoga County and part of Lake County. The main branch begins near I-271 in Pepper Pike and runs north through Beachwood, Lyndhurst, South Euclid, Richmond Heights, Euclid, and Cleveland. It is joined by major tributaries that start in Mayfield Village, Mayfield Heights and Highland Heights. The east branch begins in Willougby Hills and is joined by tributaries in Richmond Heights before it joins the main creek and empties into Lake Erie at Wildwood State Park.

Friends of Euclid Creek is looking for members and volunteers to help with events, recruitment and outreach, and especially people who can help develop and distribute educational materials for schools in the watershed. For more information, contact Jane Goodman at 216-291-4323 or send email to info@friendsofeuclidcreek.org. ❑

Stormwater impacts: Many sections of Euclid Creek have been eroded and damaged from flood waters tearing downstream during rainstorms. Here stone gabions have been installed to reinforce the stream bank.

Farmland preservation in action

By Jennifer Smyser

Across Northeast Ohio, communities and groups are coming together to discuss their futures - the lay of their land, their quality of life, and economic development. Farmland preservation is bringing farmers, conservationists, and our locally elected officials together. Many counties have preservation plans in place, now the work of putting those plans into action is underway.

In order for farmland preservation efforts to succeed, there must be three elements in place: interested landowners, the support of the citizens, and the political will to see these programs succeed. A recent meeting in Parkman Township on a crisp May evening demonstrates the kind of community action that will lead to success. Kevin O'Reilly, a farmer in Parkman and chairman of the Geauga County Task Force, invited his neighbors to hear a presentation on Geauga County's land use plan and the potential for land protection in their township.

The evening was a success. Twenty-two farms were represented within the group that showed up. After learning about agriculture easements and programs being developed at the state level, 19 farmers indicated they were interested in an agricultural easement purchase program. So far, 21 farmers in Parkman have expressed interest and together they own 1,875 acres. That could translate into a significant level of protection for the farmers within that community. Geauga County Commissioner Bill Repke was also at that meeting. He shared with everyone the support and interest the commissioners have in pursuing farmland protection, so long as that is what they want. Indeed, this community is meaningfully engaged in planning for its future.

Wayne County is also taking steps to implement its vision of farmland protection and sustainable land use. The county commissioners have approved placing a 0.25 percent sales tax increase on the November ballot. These funds will be used for a county agricultural easement purchase program. With local funds in place, the county can apply for state funds that will pay for up to 75 percent of the easement cost. The county will need to provide only 25 percent of the value of the easements to the farmers who voluntarily sell their development rights.

A recent survey by OSU Extension staff provides encouragement to the Wayne County farmers that would like to see farmland preservation become an option for them. A majority of those surveyed in Wayne County would support the creation of an agricultural easement program and would support a sales tax increase to fund it. An overwhelming percentage of respondents said that agriculture is an important industry in the county and should be protected. They also hope Wayne County would maintain its rural character. ❑

Smyser is the Farmland Preservation coordinator for the Western Reserve Resource Conservation and Development Council. For more information, call 330-657-2355 or send email to cfpinneo@earthlink.net.

Farmland preservation tour

The Ultimate Farmland Preservation Tour, September 6-10, will tour some of the best examples of farmland preservation in Pennsylvania, Maryland and New Jersey. For more information, call the Ohio Department of Agriculture at 614-728-2732.

Good ideas

- **Paying for pavement pollution:** Since the runoff from parking lots and roads is one of the biggest sources of water pollution, maybe there should be a fee on cars to help reduce impacts from pavement in urban areas. California is considering legislation to do just that. A "Transportation Fund for Clean Water" would collect a $4 per vehicle per year fee for all motorized vehicles in participating San Francisco Bay Area counties. It would be a big step toward dealing with the land use impacts on water quality.
- **Fresh food for the inner city:** St. Vincent's Quadrangle has started a Green Market for the Central neighborhood to provide fresh produce to city residents and support family farms in the region. The market is modeled on the successful North Union Farmers marker at Shaker Square. It will be open on Thursday mornings this summer. For more information, call 216-363-2690.
- **Pedestrian safety:** The Columbus Health Department has a Pedestrian Safety Committee, a multi-agency coalition committee working to improve safety for people walking along public roadways. The committee has focused its efforts toward children. There are over 200 child-car crash incidents each year in Franklin County. By improving safety for children, the committee improves the walkability of neighborhoods for everyone.

New York pushes renewables

President Bush's recent energy plan pushes greater energy consumption and burning of fossil fuels and neglects conservation and clean, renewable energy sources. But others are taking a different energy path.

In New York state, for instance, Governor George Pataki recently ordered state buildings to get 20 percent of their electricity from renewable energy sources like solar or wind power by 2010. He also appointed a task force of industry leaders, state officials and environmentalists to find ways to reduce carbon dioxide emissions and impacts on global warming.

Army fights urban sprawl

Even the U.S. Army is realizing that uncontrolled growth causes problems. Once remote bases are being surrounded by new suburbs, bringing citizen protests against noisy, polluting, and dangerous training exercises. Military readiness could suffer, according to officers testifying at a recent Congressional hearing.

Clean Ohio bond fund

Funds for open space and water conservation projects from the $400 million state bond issue authorized by voters last November will be distributed by a process similar to the state's existing public works funding program. Each of the state's 19 district public works committees will organize a Natural Resource Assistance Council to review project applications and forward them to the Ohio Public Works Commission for final approval.

Nominations for the councils are due September 7. For details, see www.pwc.state.oh.us.

Citizen planning for Lee Road

Lee Road, the major north-south arterial passing through Cleveland Heights, was the focus of a citizen planning workshop sponsored by FutureHeights in April. About 60 residents and planners generated ideas for improving the Lee Road corridor around the intersections of Mayfield, Superior and Cedar/Meadowbrook.

The strongest theme emerging from the discussions was the need to improve the pedestrian experience, both by adding amenities such as benches, tables and shade trees, and by slowing down traffic and enhancing the safety of people on foot.

For more information, send email to FutureHeights@aol.com.

Reducing waste

Realizing that waste costs money, the Cuyahoga County Solid Waste District and CAMP, Inc., have teamed up to help companies reduce the amount of solid wastes ending up in landfills. The free service offers an on-site assessment of solid waste management practices and recommendations for waste reduction and recycling.

Companies can also learn about the Virtual Landfill, a Web-based industrial waste exchange (www.virtuallandfill.com) that links generators of waste with potential users. For more information, call Don Weaver at CAMP, 216-432-5324.

Recycling is big business

Ohio's recycling industry generates $22 billion in direct annual sales and employs more than 100,000 people, according to a recent study by the Ohio Department of Natural Resources. Recycling supporters say that public support to develop new markets for recyclables, participation by local and state government, and consumer purchasing of products with recycled content are paying off for the state's economy.

'Broadening the conversation'

Nearly 200 people packed the Great Lakes Brewery Tasting Room on June 27 for a networking night sponsored by Sustainable Communities 2000. An open mike allowed participants to share projects and ideas.

Dennis Eckardt, head of the Greater Cleveland Growth Association, said that balancing economic needs and environmental quality was key to the future of Northeast Ohio. The fresh water of Lake Erie, for example, is our most important economic resource, he said. He also said that the Growth Association was becoming more committed to economic development strategies the would help build a more equitable society. "The rising tide may lift all boats, but not everyone in Northeast Ohio gets in the boats. That has to change...We want to reach out, broaden the conversation, and respect people and neighborhoods."

Winners

- **Norman Krumholz**, a professor of planning at the Cleveland State University Levin College of Urban Affairs and former Cleveland planning director, is this year's recipient of the Homer C. Wadsworth Award, given by The Cleveland Foundation to honor a person who has made a long-standing contribution to the Greater Cleveland region.
- The **Levin College of Urban Affairs** is also a recent winner. *U.S. News and World Report* ranked its city management and urban policy program second in the nation.
- **Father Michael Franz** of St. Stephen Catholic Church in Cleveland is the first recipient of the Foster Armstrong Award given by Cleveland Urban Design Collaborative. The award honors an individual or organization whose work has improved the pubic realm of the cities and towns of Northeast Ohio. Franz has helped to restore his historic church and revitalize the surrounding neighborhood.
- **Elaine Marsh**, president of the Friends of the Crooked River, received the 2001 John Seiberling Award from the Portage Trail Group of the Sierra Club.
- The **Lake County Soil and Water Conservation District** recently was recognized by other SWCDs in Ohio for its success in preserving land along streams to protect soil and water quality.
- The Cleveland Restoration Society gave its 2001 **Preservation Awards** to a number of projects in Cleveland, including the Colonial and Euclid arcades, The Arcade, Shaker Square, the Slovenian National Hall, Chishom Mausoleum, Terminal Tower, Cleveland City Blueprint, and the Fine Arts Garden Sculpture Conservation Project. Also receiving awards were the Superior Road Schoolhouse and Alcazar Hotel in Cleveland Heights, the Elyria Post Office, and Plymouth Church in Shaker Heights.

Transitions

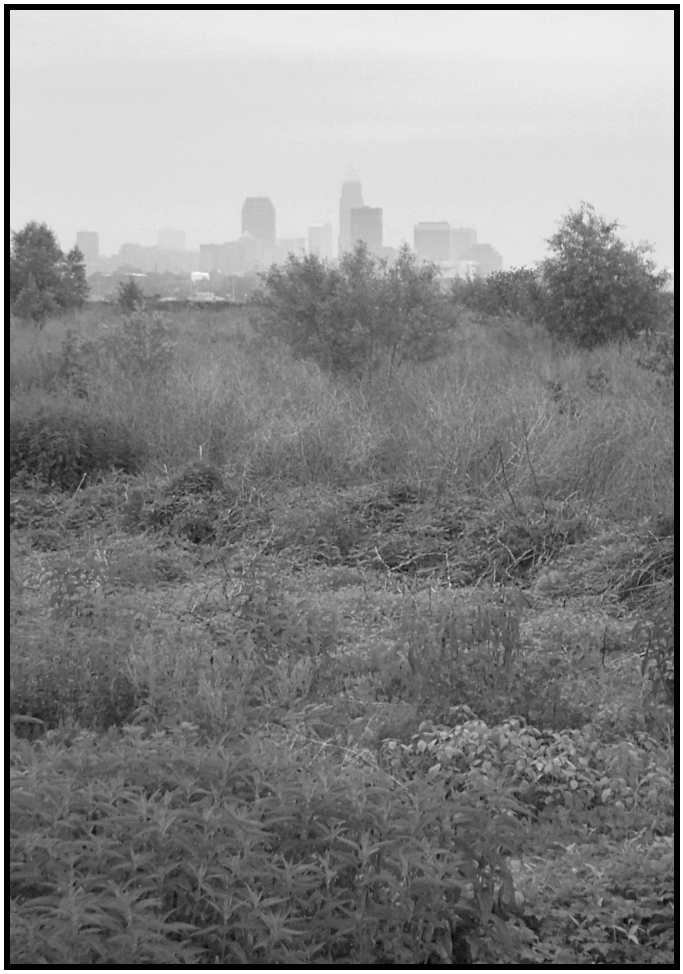
- The **Ohio League of Conservation Voters** office in Columbus is seeking an executive director. Applicants should send a cover letter, resume, writing sample, examples of fundraising plans, and three references to Michelle Park, President, Ohio League of Conservation Voters, 1069-A West Main Street, Westerville, OH 43081 or fax 614-895-3050 or email search.committee@ohiolcv.org.
- **John Niedzialek** is the new coordinator for the Western Reserve Resource Conservation and Development Council. For many years he was a soil conservationist for USDA's Natural Resource Conservation Service serving Ashtabula, Lake and Geauga counties.

Remaining wetlands on the shopping center site in Bainbridge Twp. — a picture of what was lost.

Outrage of the month

Wetland massacre: John McGill of Heritage Development Co. is confirming everyone's worst stereotype of an arrogant developer. When Ohio EPA recently refused to grant his permit to build a shopping center on protected wetlands in Bainbridge Twp., McGill ordered crews to clear trees from the site – trees that were an integral part of the wetland. His defiance of the state (and of the public's right to protect water quality and vital ecosystems) was clear. He told a *PD* reporter, "Wetland is wet *land*. L-A-N-D, not trees." State officials are investigating how to prosecute.

The photos here are by Paul Buescher. For more photos of the wetland destruction in Bainbridge, see his Web site at http://community.cleveland.com/cc/ec?display=gallery&ord=997841097.



Rare shoreline habitat: The view from Dike 14.

Bird habitat imperiled

Local birding enthusiasts and the Cleveland-Cuyahoga County Port Authority are embroiled in a battle over the future of Dike 14, the best lakefront bird habitat between Huron and Mentor.

Dike 14 is the 88-acre disposal facility for dredge material adjoining Gordon Park in Cleveland. The dike was built by the Army Corps of Engineers and is now controlled by the port authority, which wants to continue filling it to the top with dredgings.

However, additional fill will destroy some of the valuable habitat that has developed spontaneously on the site, including mudflats, wetlands, shrublands, and woods. A recent site survey by James Bissell, curator of botany at the Cleveland Museum of Natural History, found a great diversity of native plant species. The native plants help make the area a staging area for tens of thousands of migratory birds each year.

Local environmental groups are calling for a halt to the filling of Dike 14, transfer of the site to the Ohio Department of Natural Resources, and a public planning process that will determine future uses. An ideal use would be a nature preserve with environmental education programs and passive recreation.

"We need to work just as hard to provide habitat for migrating birds in Cleveland as we do for the birds in the rainforests of Central America," says Diana Steel of the Northeast Ohio Sierra Club. For more information, call 216-476-3220.

Grants for the environment

Following is a sample of some of the environmental grants awarded in the region over the last few months.

Lake Erie Protection Fund

During the last eight years, the Ohio Lake Erie Commission has raised more than $5.5 million for the Lake Erie Protection Fund through Lake Erie License Plate Program sales and donations. This money has been used to fund grants for research and implementation projects that focus on protecting and improving the quality of Lake Erie.

The latest recipients and their projects are:

Legal Institute of the Great Lakes—Research support for the Commission's Balanced Growth Blue Ribbon Task Force, $8,782.

Legal Institute of the Great Lakes—Water Resources Management Plan, $8,782.

Ohio State University Research Foundation—Western Lake Erie Waterfront Guide, $7,480.

Ohio State University Research Foundation—Fish Communities of Coastal Wetlands: Corroboration of a Vegetative Index of Biotic Integrity, $9,504.

Seneca County Soil & Water Conservation District—Geographic Information System (GIS) implementation, $6,946.

Cleveland State University—An Environmental Model to Improve Public Understanding of the Lake Erie Quality Index, $9,980.

Village of Put-in-Bay—Put-in-Bay fish cleaning station, $8,500.

Ohio Department of Agriculture—Pesticide Use Survey Program, $10,000.

For more information about the Ohio Lake Erie Commission and its programs, see www.epa.state.oh.us/oleo/ or call 419-245-2514.

■

Ohio & Erie Canal Association

With federal funds, the canal association recently has awarded grants to the following organizations to further the mission of establishing the national heritage corridor from Cleveland's lakefront to Dover/New Philadelphia, Ohio.

Corridor-wide

Downtown Ohio Inc.—Canal Corridor Main Street, $25,400.

Cuyahoga County

NOACA—Redevelopment plan for the lower Big Creek, $10,000.

Slavic Village Development Corporation—Neighborhood visitor center at Mill Creek Waterfall, $60,000.

Cleveland Metroparks—Phase II of the extension of the Towpath Trail to Harvard Avenue, $130,000.

West Creek Preservation Committee—Trail construction along West Creek in Parma, $50,000.

Summit County

West Hill Neighborhood Organization—West Hill nature region, $3,500.

City of Akron—Extending towpath in Akron, $80,000.

Metro Parks/Summit—Clinton Canal Corridor, $80,000.

Stark County

Jackson Township High School—Saving the school house, $10,000.

Ernie's Bike Shop—Lake Avenue trailhead, $25,000.

Stark County Parks—Navarre clearing, $80,000.

Tuscawaras County

Zoar Community Association—Zoar Town Hall exhibit, $70,000.

Ohio Lake Erie Conference

"Balanced Growth for Lake Erie's Future" will be the theme of the 10th annual Ohio Lake Erie Conference on September 6 in Mentor. Speakers will include Sam Speck, director of the Ohio Department of Natural Resources; David Beach, director of EcoCity Cleveland; John Frece, Governor's special assistant for smart growth in Maryland; and Ted Eubanks, a consultant evaluating heritage tourism potential along the Ohio shore of Lake Erie.

Other sessions will address the lake's ecosystem and watershed restoration efforts. The Commission will also present the annual Ohio Lake Erie Awards and announce the Year 2001 Lake Erie Protection Fund (LEPF) grant recipients.

For registration information, call the Ohio Lake Erie Commission at 419-245-2514.

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CoastWeeks 2001

Celebrate the state's greatest natural resource, Lake Erie, by participating in one of the many events during CoastWeeks 2001. Events include:

September 2 – Mentor Headlands Dunes discovery hike, 2 p.m.

September 7 – Night life at the Ottawa National Wildlife Refuge, 7 p.m.

September 8 – Sheldon Marsh beach cleanup, 10 a.m.

September 9 – Underwater/shore cleanup at Gordon Park in Cleveland, 10 a.m.

September 15 – Lakeview Beach cleanup in Lorain, 8 a.m.

September 15 – Lake Erie Day at the Great Lakes Science Center in Cleveland.

September 22 – Big Creek cleanup in Parma Heights, 9 a.m.

September 22 – Rare plant walk at Mentor Lagoons Nature Preserve, 10 a.m.

Coordinated by the Ohio Lake Erie Commission. For more information about events, call 419-245-2514 or see www.epa.state.oh.us/oleo.

September 4
Environmental Town Hall brown bag lunch series, featuring chemical engineer Ed Fritz on the unintended consequences of **recycling** and the complexity of our interconnected world. Noon at the Nature Center at Shaker Lakes, 2600 South Park Blvd. For more information, call 216-321-5935.

September 6
Cleveland **Innerbelt Study** Scoping Committee meeting, 9 a.m. at the Northeast Ohio Areawide Coordinating Agency, 1299 Superior Ave.

September 6-9
National meeting of **Jobs with Justice** at the Sheraton Cleveland City Centre Hotel. Workshops on workers' rights, economic justice, and building alliances with religious groups and students. For registration information, call 202-434-1106 or see www.jwj.org.

September 7
Public forum on the meaning of **Census 2000** for Northeast Ohio, 8 a.m. to noon at the CSU College of Urban Affairs, 1717 Euclid Ave. For more information, call 216-687-2209.

September 8
Tour the Risley Agricultural Center, a 200-acre **organic farm** in Medina County, 5220 Root Road in Spencer. Sponsored by Innovative Farmers of Ohio and the OSU Sustainable Ag Team. For more information call Gary Mennell at 330-648-2711.

September 8
Explore the waterways and watershed of **Holden Arboretum** in this strenuous five mile hike. 9 a.m. to 4 p.m. $18 for nonmembers. Call 440-946-4400.

September 8
Harvesting Your Bounty, a workshop on proper harvesting techniques, canning and freezing methods, and methods for season extension. Sponsored by Silver Creek Farm and the Small Farm Research and Education Center in Hiram. For registration information, call 330-569-7212.

September 8
Tom Paxton concert to benefit Ohio environmental groups, 8 p.m. at Kiva Auditorium at Kent State University. For ticket information, call the Earth Day Coalition at 216-281-6468.

September 9
Help experts to net, identify, tag, and release **butterflies**. Holden Arboretum in Kirtland, 2-4 p.m. Registration required. Call 440-946-4400.

September 10
Northeast Ohio Water Quality Conference, 6-9 p.m. at North Hampton Town Hall in Cuyahoga Falls. Sponsored by the Ohio Environmental Council in partnership with Citizens Opposed to Ruining the Environment (C.O.R.E.). For registration information, call 614-487-7506.

September 13-16
Rail~Volution 2001, the national conference on building livable communities with transit, in San Francisco. For details, see www.railvolution.com.

September 14
Luncheon with **solar homebuilder** Don Bradley of Solar Strategies Development Corp, noon in Worthington, OH. For details, call Green Energy Ohio at 1-866-GREENOH or see www.greenenergyohio.org.

September 14-16
Sierra Club Ohio Chapter Retreat in the Hocking Hills. For information, call 614-481-8872.

September 15-16
The 3rd Annual **Organize! Ohio** Statewide Gathering for organizers, community leaders and activists at Geneva Hills Center in the Hocking Hills area. For more information, call 877-674-6446 or email info@organizeohio.org.

September 16
Hike-A-Thon, a day of hiking for families and individuals of all ages and abilities to benefit the Nature Center at Shaker Lakes. Long hikes begin at 8:30 a.m. and short hikes begin at 1:30 p.m. Call 216-321-5935 for information, fees, or to register.

Do we have to grow?

Sierra Club program on "Imagining a sustainable U.S. economy" at 7:30 p.m., October 24 at the Nature Center at Shaker Lakes, 2600 South Park Blvd. in Shaker Heights. Free and open to the public. For more information, call 216-229-2413.

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"Sustainable development" is defined as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs." But what does living sustainably within a habitat imply?

At this meeting the Northeast Ohio Sierra Club's Population-Environment Committee asks the experts to imagine the transition in the United States from the endless growth of today to the inevitable sustainable economy of the future. Panelists will discuss the numbers and consumption that the U.S. habitat can support sustainably, the economic and political barriers to a smooth transition, and the values/ethics issues involved. Speakers include Paul Gottlieb, associate director of the Center for Regional Economic Issues at CWRU's Weatherhead School of Management, and John Bing, a professor of Political Science at Heidelberg College.

City Club series on redeveloping neighborhoods

Starting September 12, the City Club of Cleveland will present a "ReDeveloping Cleveland II: The Neighborhoods," a special series of programs on neighborhood development issues:

September 12 — Planning the mix: Political, planning and business strategies for developing neighborhood more efficiently. Moderator: Philip D. Star, Executive Director, Center for Neighborhood Development, Cleveland State University. Panelists: Mikelann Ward Rensel, Executive Director, Cleveland Neighborhood Development Corporation (CNDC); Ruth Durack, Director, Urban Design Center of Northeast Ohio; Linda Hudecek, Director, Dept. of Community Development, City of Cleveland; W. Dennis Keating, Associate Dean of Levin College, Chair of Dept. of Urban Affairs and Professor of Urban Planning and Law, Cleveland State University.

October 10 — Building "right": Strategies for supporting large neighborhood projects, updating and restoring existing housing and buildings, and responding to new forms of housing demands. Moderator: Eric Hoddersen, President, Neighborhood Progress, Inc. Panelists: Jim Williams, Executive Director, Famicos Foundation; Kathleen Crowther, Director, Cleveland Restoration Society; Kenneth S. Lurie, President, Rysar Properties; Thomas J. Yablonsky, Executive Director, Historic Gateway Neighborhood Corporation and Historic Warehouse District Development Corporation.

November 14 — Assuring livability: Ways to improve and assure neighborhood livability. Moderator: Steven Litt, Arts & Architecture Critic, *The Plain Dealer*. Panelists: Ann Zoller, Executive Director, ParkWorks; Don Slocum, Associate Director, Neighborhood Centers Association; Terry Hamilton-Brown, Executive Director, Cleveland Metropolitan Housing Authority; Joe Calabrese, CEO & Secretary/ Treasurer, Greater Cleveland Regional Transit Authority.

December 12 — Supporting economic vitality: How neighborhoods can compete for businesses and jobs. Moderator: City Councilman Jay Westbrook, Cleveland Ward 18. Panelists: James A. Haviland, Executive Director, Midtown Cleveland, Inc.; John Colm, Director, Westside Industrial Retention & Expansion Network; Eric Von Hendrix, CEO, Shorebank Cleveland; Christopher Warren, Director, Department of Economic Development, The City of Cleveland.

All programs will be noon luncheons at the City Club, 850 Euclid Ave. For reservations, call 216-621-0082.

September 16
Stebbins Gulch **geology hike** at the Holden Arboretum, 1 p.m. Physically demanding with creek crossings and potentially knee-high water. Nonmembers $8. Call 440-946-4400 to register. Also on October 6.

September 19-22
Historic Bridges Conference in Cleveland focusing on the maintenance and preservation of historic bridges. For registration information, see http://web.ulib.csuohio.edu/7hbc/.

September 20
The Friends of the Nature Center at Shaker Lakes will host a discussion with Joel Porath of the Ohio Division of Wildlife on the current situation in urban/ suburban areas with **deer, geese, coyotes** and even bears, 9:30 a.m. at the nature center, 2600 South Park Blvd. in Shaker Heights.

September 21-24
Seventh Annual **Buckeye Gathering**, sponsored by the Buckeye Forest Council. Non-timber forest products panel, medicinal plants hike, Contra dance, other workshop sessions on nature and personal development. Yellow Springs, Ohio. For more information contact Sabrina or Diano at 740-797-7200.

September 21
Fall equinox celebration, 7 p.m. at the Crown Point Ecology Center, 3220 Ira Rd. in Bath. For more information, call 330-668-8992 or see www.crownpt.org.

September 21
"The Great Train Robbery", a benefit for the **Cuyahoga Valley Scenic Railroad**. Reception, Dinner & Dancing, Silent & Live Auction. For more information call 800-468-4070 x 3022.

September 22
Autumnal **equinox** potluck celebration of fall harvest. Kids activities, canning demonstrations, music and food. Noon-3 p.m., Silver Creek Farm, Small Farm Research and Education Center, Hiram. (330) 569-7212.

September 23
One-day course on the **fish** of Holden Arboretum, 11 a.m. to 4 p.m. Two hour classroom presentation, followed by a fish sampling expedition using state-of-art equipment. Call 440-946-4400 to register.

September 26-29
International **Trails and Greenways** Conference in St. Louis, sponsored by the Rails-to-Trails Conservancy. For more information, call 202-331-9696 or see www.railtrails.org.

September 28
Conference on **public policy and advocacy** at the CSU Convocation Center sponsored by the Center for Families and Children. For registration information, call 216-241-6400 or see www.c4fc.org.

September 29
Join volunteers age 16 and over at Cuyahoga Valley National Park for the 8th Annual **National Public Lands Day**. One work crew will assist in the removal and replacement of a Lake Trail bridge. The other crew will clear a new section of the Valley Trail. 9 a.m. to 3 p.m. (lunch provided). To volunteer, contact Sharon Judson at 440-546-5996.

September 29
Euclid Creek Day, 10 a.m. to 3 p.m. at the Cleveland Metroparks Euclid Creek Reservation, with additional activities at various sites along the creek. For more information, see www.friendsofeuclidcreek.org.

September 29-October 2
Land Trust Rally in Baltimore sponsored by the Land Trust Alliance. For registration information, see www.lta.org.

October 2
Environmental Town Hall brown bag lunch series featuring Jim LaRue on building an **environmentally friendly house**. Noon at the Nature Center at Shaker Lakes, 2600 South Park Blvd. For more information, call 216-321-5935.

October 4-6
Society for **Ecological Restoration** Annual Conference in Niagara Falls, Ontario. For information, call 520-622-5485 or see www.SER.org.

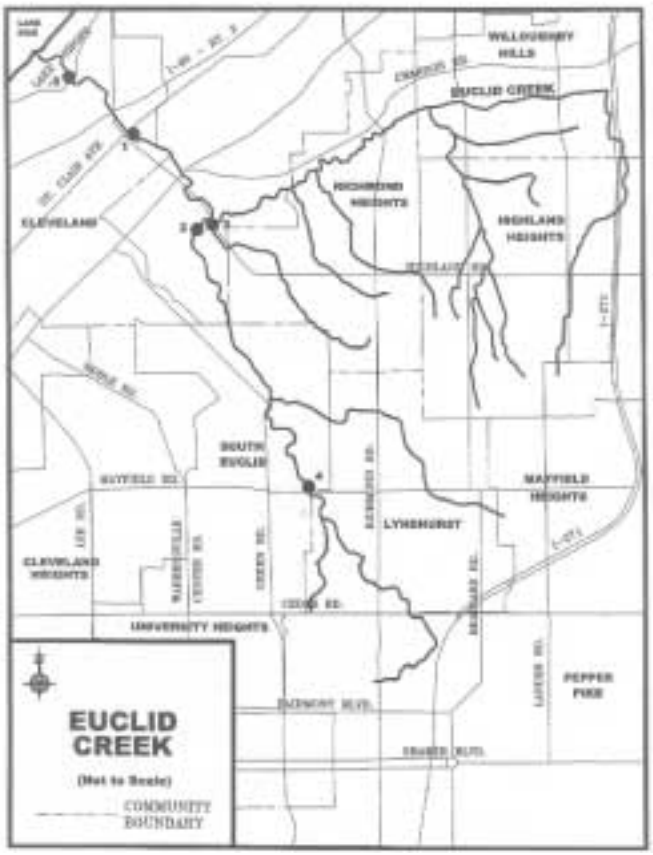
Regional open space

The Northeast Ohio Regional Parks Consortium (comprised of park districts in eight counties) is sponsoring a conference on regional open space opportunities on October 12, 9:30 a.m. to 4 p.m., at Lakeland Community College in Kirtland. It will be an important gathering of people interested in creating an expanded vision of open space preservation in Northeast Ohio.

Save the date!

Euclid Creek

Euclid Creek's drainage area includes the communities of Cleveland, Euclid, Highland Heights, Richmond Heights, Willoughby Hills, Lyndhurst, South Euclid and Beachwood. The total drainage area is approximately 15,500 acres, and the creek has a length of 9.5 miles. With the exception of a culverted section under I-90, the creek is predominantly open. The section between Lake Shore Boulevard and Nottingham Road has been channalized by the Army Corps of Engineers with concrete steambeds for flood control.



Source: *Greater Cleveland Area Water Quality Assessment, 1996-1998*, by the Northeast Ohio Regional Sewer District

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