Chagrin River Watershed Partners, Inc. strives to preserve and enhance the scenic and environmental quality of the ecosystem of the Chagrin River and its watershed in a manner that assures a sustainable future for people, plants and animals.
It’s hard to believe that we are completing our thirteenth year of operation at the Watershed Partners. Those who met in the Gates Mills Community Hall in February of 1996 had high hopes, but couldn’t have imagined the positive changes that would occur in support for watershed protection. Member communities should be proud as they read this report and reflect on the tremendous progress that we have made.

Even as we celebrate our accomplishments, it is imperative that we look ahead and plan for the future. The world doesn’t stand still, and now more pressure for change is upon us. No one needs to be told of the current difficult economic situation. However, behind the headlines loom two big issues that will drive our national and local economies in the future, and will have profound implications for our work in resource conservation. These two issues are growing shortages in the supply in oil, known as “peak oil,” and global climate change. Already these issues are appearing regularly in the headlines. They will grow in importance and will put increasing economic pressure on local communities.

To meet the challenge, every local government, as well as businesses and individuals, will have to adopt the highest standards of efficiency and resource conservation in everything that we do. Growth will have to be “smart” and “balanced,” two terms that we are just beginning to give meaning to and put into practice. The Watershed Partners’ own Balanced Growth pilot program is a good example of a process that helps you to look carefully at the natural resource values in your community, and to make decisions that will encourage cost-effective and sustainable development. We hope to build on this process, and to make resource conservation and working with nature core values in the future of our watershed.

We want to work with you to continue and refine the process of creating a sustainable Chagrin Valley watershed. Our programs, from Balanced Growth to Low Impact Development to EPA Phase II compliance, are designed to help you to make sustainable development a core value in your community. Our staff is working long and hard to bring you the tools, and to secure the financing, to meet these ambitious goals. We look forward to a continued productive and successful partnership.

Greg Studen, President, Chagrin River Watershed Partners, Inc.
CRWP’s 2008 accomplishments were made possible through partnerships with CRWP Members; the Cuyahoga, Geauga, Lake and Portage County Soil and Water Conservation Districts, Planning Commissions, and Health Departments; the Geauga and Lake County Engineers; the Lake County Stormwater Management Department; and the Geauga and Portage County Departments of Water Resources; the Ohio Environmental Protection Agency; the Ohio Department of Natural Resources; the Northeast Ohio Regional Sewer District; the US Environmental Protection Agency; and the US Geological Survey.

CRWP Members

Auburn Township
Aurora
Bainbridge Township
Bentleville
City of Chardon
Chagrin Falls
Chagrin Falls Township
Chester Township
Claridon Township
Cleveland Metroparks
Eastlake
Gates Mills
Geauga County
Geauga Park District
Hunting Valley
Kirtland
Kirtland Hills
Lake County
Lake Metroparks
Mantua Township
Mayfield Heights
Mayfield Village
Mentor
Moreland Hills
Munson Township
Newbury Township
Orange Village
Pepper Pike
Russell Township
Solon
South Russell
Waite Hill
Wickliffe
Willoughby
Willoughby Hills
Woodmere

2008 CRWP Sponsoring Members

CDM, Inc.
Chagrin Valley Engineering, Ltd.
CT Consultants, Inc.
EMH&T, Inc.
EnviroScience, Inc.
The Holden Arboretum
Hull & Associates
Partners Environmental Consulting, Inc.
Stantec
TranSystems Corporation
Trout Unlimited-Emerald Necklace Chapter
URS Corporation
Western Reserve Land Conservancy

Other 2008 Donors

Behnke Associates, Inc.
Biohabitats, Inc.
Ohio Central Basin Steelheaders
Western Reserve Federation of Conservationists
North Coast Fly Fishers
Hull & Associates
Contech Stormwater Solutions

2008 In Kind Services Provided by

Cuyahoga County Board of Health
Northeast Ohio Regional Sewer District
US Environmental Protection Agency, (US EPA) Region 5, Cleveland Office
US EPA, National Risk Management Research Laboratory
US Geological Survey Ohio Water Science Center

2008 Grant Funders

Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET)
Ohio Department of Natural Resources Office of Coastal Management
Ohio Department of Natural Resources Division of Soil and Water Conservation
Ohio Lake Erie Commission’s (OLEC) Lake Erie Protection Fund
Ohio Water Development Authority through OLEC’s Balanced Growth Pilot Project
US EPA - National Community Decentralized Demonstration Project
CRWP is a collaboration of 36 cities, villages, townships, counties, and park districts working on innovative solutions to flooding, erosion, and water quality problems to minimize the impacts of development and limit local infrastructure costs. CRWP’s founding principles are:

Natural systems provide flood control, erosion control, and water quality protection services that should be maintained as land is developed.

It is more cost effective for local governments to take planning and development steps to maintain these services than to pay for costly, and generally less effective, remedial solutions.

CRWP responds directly to the needs of Member communities, elected officials, engineers, planners, law directors, and other professional advisors by helping them update comprehensive plans, zoning regulations, and other programs guiding land use. CRWP has assisted communities by introducing innovative practices that maintain natural resource functions and prevent or minimize flooding, erosion, and water quality problems. These practices include CRWP’s recommended watershed management tools for riparian and wetland setbacks, conservation development, improved erosion and sediment control, and comprehensive storm water management.

CRWP also conducts watershed studies and planning efforts that support local decision makers by providing technical background. These studies have included an analysis of riparian setbacks on property values, technical support for riparian and wetland setbacks, analysis of alternative home sewage treatment systems in conservation development, and alternative parking arrangements and codes.

In 2008 CRWP’s work included:

• Implementing the Chagrin River Watershed Action Plan.
• Constructing & monitoring demonstration projects for distributed storm water management.
• Developing the Chagrin River Balanced Growth Plan designating Priority Conservation Areas and Priority Development Areas for the watershed.
• Providing riparian setback implementation assistance for communities.
• Working with CRWP Members on Comprehensive Land Use Plan Updates.
• Completing a study on Riparian Corridor and Sewersheds.
• Providing tools to communities to fund and use storm water Best Management Practices.
• Review of local floodplain management codes.

For more information about CRWP programs, visit www.crwp.org.
2008 Program Highlights

As we close on 2008 and look towards 2009, we reviewed our Members’ progress on the following CRWP recommendations:

Land Use Planning: Most of our Member communities have adopted comprehensive plans within the past decade. The ages of the local land use plans range from 2008 to the late 1960’s.

Open Space Acquisition: Nearly 60 square miles, approximately 14%, of land in CRWP Member communities has been set aside as open space. The amount of open space for each community ranges from zero to 38% of the community, with an average of 15%.

Riparian and Wetland Setbacks: 14 Members representing 44% of the watershed have adopted regulations to maintain the function of riparian areas and wetlands.

Erosion and Sediment Control: 24 Members representing 75% of the watershed have adopted regulations to control erosion and sedimentation.

Comprehensive Stormwater Management: 23 Members representing 72% of the watershed have adopted these regulations that comply with Ohio EPA’s Phase II Stormwater program.

Conservation Development: 7 Members representing 22% of the watershed have adopted regulations allowing alternative site design with a minimum of 40% open space.

Solving Member Concerns

In 2008, CRWP provided a wide array of services to our Members, including:

- Completed over 30 site visits to private properties in 13 separate Member communities.
- Assisted with the implementation, planning, support, and application of 7 grants to promote Member priorities.
- Presented at 10 conferences and seminars across the State of Ohio.
- Provided technical assistance and design review of over 25 development projects.
- Assisted 13 Members with adoption, implementation, and review of local zoning regulations.
- Completed special presentations on rain garden installation, Low Impact Development, good housekeeping, Great Lakes, and more!

How do you get CRWP to provide these services to your community?

Just call CRWP staff to discuss potential services and projects.
Phase II Stormwater Management Update

In December 1999, US Environmental Protection Agency’s Phase II Stormwater Final Rule was published, and in response, the Ohio EPA established a stormwater management program that requires permits for:

- Construction sites disturbing one or more acres.
- Municipal Separate Storm Sewer Systems (MS4): Communities that operate their own storm sewer system and are included in an urbanized area.

Twenty-two CRWP Members are regulated communities under the Phase II program and have been implementing their Stormwater Management Programs since March 2003. Ohio EPA anticipates renewal of this permit in early 2009.

Assisting Members with Phase II Compliance in 2008:

- Partnered with the Geauga Soil and Water Conservation District to provide 8 evening programs for Geauga County residents in Bainbridge, Chester, and Russell Townships on rain gardens, stream management, and the Great Lakes.

- Updated Members on Phase II through email updates on upcoming training opportunities, available public education materials, general information on stormwater management, better site development practices, Transfer of Development Rights, and updates to the State of Ohio’s Rainwater and Land Development Manual.

- Provided Good Housekeeping Program to the Service Department in Willoughby.

- Disseminated Rain Garden Manual for Homeowners to each CRWP Phase II community for their education program.

- Provided information session on rain gardens in Moreland Hills and Geauga County.

- Provided assistance and support to Members to adopt and implement zoning regulations.

- Supplied website information and assistance to Willoughby.

Assisting Members with Phase II Compliance in 2009:

- Summarize 2008 services for inclusion in Member Stormwater Management Program annual reports.

- Assist Members in implementing their Stormwater Management Program.

- Update Members on steps for compliance with new Phase II permit.

- Provide trainings on new Phase II permit requirements.

- Review development plans and stormwater BMPs at Member request.

- Provide stormwater management website content to Members. CRWP is seeking additional grant funding to provide additional web support & content.

- Provide updated regulations for erosion and sediment control and comprehensive stormwater management to meet the requirements in the new Ohio EPA General Construction Permit.
Funding for Member Priority Projects

319 Grant Funds for Stream Restoration

**IVEX Dam Modification**
Applicant: *Village of Chagrin Falls*
Project Partners: Spillway, LLC, Village of Chagrin Falls, CRWP.
Project will lower spillway to less than 10 feet to exempt dam from ODNR’s jurisdiction and restore 2,200 linear feet of State Scenic Chagrin River.
Project cost: $668,000
Grant funding: $400,800
Local match: $267,200

**Kenston Lake Dam Removal**
Applicant: *Bainbridge Township*
Project Partners: Bainbridge, *Geauga County* Engineer, Geauga SWCD, property owners, CRWP.
Project will remove dam through boring of new culvert and restore 1,200 linear feet of stream.
Project cost: $491,500
Grant funding: $294,900
Local match: $196,600

**ODNR Coastal Management Funds for Land Acquisition**
CRWP worked with *City of Eastlake* Port Authority and *Lake Metroparks* to secure a grant for $110,000 to protect Anchor Island at the mouth of the Chagrin River.
CRWP Recommended Codes Adopted in 2008

- Pepper Pike and Russell Township adopted riparian setbacks. Willoughby Hills adopted riparian and wetland setbacks as a modification of their existing hillside protection code.

- South Russell adopted conservation development code.

- Mayfield, Moreland Hills, Pepper Pike and Solon adopted comprehensive stormwater management.

- Mayfield, Pepper Pike, South Russell and Wickliffe adopted illicit discharge detection and elimination.

- Mayfield, Pepper Pike and Solon adopted erosion and sediment control.

Funding for Comprehensive Plan Updates

Through $50,000 in funding from Ohio Water Development Authority through the Ohio Lake Erie Commission and NOAA, CRWP worked with Members to update comprehensive plans to incorporate natural resource data and the concepts of the Balanced Growth Program including:

- Partial funding for the City of Aurora Master Plan update. CRWP provided funding to supplement the hiring of a planner to complete the plan update.

- In Newbury and Auburn Townships, CRWP worked with the Geauga County Planning Commission to update the comprehensive land use plans in these communities. In addition, CRWP funded work completed by the Kent State University’s Urban Design Center to create town center plans for these communities.

- CRWP is working with the City of Eastlake and the Lake County Planning Commission to complete an update of Eastlake’s Comprehensive Plan which will incorporate the Vine Street 20/20 Plan, updated comprehensive planning, and the Chagrin River Balanced Growth Plan.

CRWP recommends using the latest environmental information in updating local plans, zoning, and other development regulations.
Chagrin River Balanced Growth Plan

Balanced Growth is a strategy to protect and restore Lake Erie and its watersheds to assure long-term economic competitiveness, ecological health, and quality of life. The recommendations focus on reducing urban sprawl, protecting natural resources and encouraging redevelopment in urban areas.

In 2004 the Ohio Lake Erie Commission finalized the Balanced Growth Program, defined as a local planning framework to coordinate decisions about how growth and conservation should be promoted by State and local investments. CRWP was selected as one of the pilot projects to develop the Chagrin River Balanced Growth Plan and advance the implementation of best local land use practices.

**PDA:** Priority Development Areas are locally-designated areas where growth and/or redevelopment should be encouraged to maximize development potential. Land in a PDA may be eligible for state policy and funding initiatives to encourage and support its development.

**PCA:** Priority Conservation Areas are locally-designated areas for protection or restoration. PCAs may be important as ecological, recreational, heritage, agricultural, or public access areas. PCAs are locations where land use change is predicted to have a high impact on the watershed in terms of flooding, erosion, and water quality. PCAs may be preserved areas, such as parks and conservation easements, or areas that should be developed using conservation development, riparian setbacks and comprehensive stormwater management.

In addition to assisting communities in design of PCAs and PDAs, CRWP:

- Identified local planning and zoning updates necessary to implement PCAs and PDAs.
- Provided funds for Members to update comprehensive plans to implement PCAs & PDAs.
- Reviewed transfer of development rights as a possible mechanism to implement Member priorities.

**Communities Endorsing PCAs and PDAs in 2008**

- Aurora
- Bentleyville
- Eastlake
- Hunting Valley
- Kirtland
- Kirtland Hills
- Mayfield Heights
- Mayfield Village
- Moreland Hills
- Newbury
- Orange Village
- South Russell
- Waite Hill
- Wickliffe
- Willoughby
- Willoughby Hills
- Woodmere
FAQ’s about Balanced Growth

1. What are Benefits of Participation in the Chagrin River Balanced Growth Plan?
   • Support for local planning and zoning.
   • State assistance for Member priority projects: State agencies focused on Member priorities for development and conservation.
   • State incentives: Points on applications to ODNR for trails and stream restoration, better interest rates for loans, and other state funding programs available to communities participating in a balanced growth planning process.

2. Must a PDA be Developed?
   No. PDAs identify areas that the community could, after further study, plan as a development opportunity with moderate impacts to flooding, erosion or water quality and take advantage of existing infrastructure such as roads, sewers, and waterlines.

3. Must a PCA be Preserved?
   No. PCAs are areas that may have unique ecologic or historic considerations or be difficult to develop. In addition, communities could save time and money working with property owners for preservation or interested developers for alternative site designs that enable development but limit impacts to natural resources.

4. Does Adoption of PCAs and PDAs Change the Zoning or the Rights of Individual Property Owners?
   No. The endorsement of PCAs or PDAs does not change the existing zoning or property rights, but it opens up the opportunity for incentives from the State for development or conservation activities. Communities may consider planning and zoning changes to implement the local designations. Such changes will be a benefit to communities because they will minimize long-term infrastructure and storm water management costs.

Implementation of the PCAs and PDAs will be through the tools currently available to local governments, including comprehensive planning, zoning, land purchases, and conservation easements. These actions will be at local government direction and no actions will be imposed on communities as the result of this planning effort.

Endorsement Goal is 75%.
2008 Progress:
35% of watershed communities’ land area
47% of watershed communities’ population
50% of watershed communities
Demonstrating Innovative Stormwater Management in Northeast Ohio

In 2006 CRWP was granted funding by the U.S. Environmental Protection Agency (US EPA) National Community Decentralized Demonstration Project to assist Members in implementing innovative stormwater management techniques or Low Impact Development (LID).

LID includes conservation development, riparian and wetland setbacks, and structural stormwater practices, such as bioretention cells, rain gardens and pervious pavements. LID practices can address existing flooding, erosion, or water quality problems and improve new development. This project includes technical support, education, and funding to design, construct, and monitor low impact development demonstration projects as detailed below. Information gathered from these demonstration projects will address concerns about the applicability of these practices in Northeast Ohio.

Design and construction of the demonstration projects were completed in 2008. Each project’s water quality and quantity is being monitored for the next 2 years through partnerships with the U.S. Geological Survey, the Northeast Ohio Regional Sewer District, the US EPA National Research and Monitoring Laboratory, with additional funding from the Lake Erie Protection Fund. CRWP will present results of the design, construction, and monitoring to Members and the larger planning and engineering community in Northeast Ohio through workshops and training events. CRWP is available to conduct site visits for Members to these sites upon request.

Munson Township Scenic River Retreat Rain Garden Project
Install three rain gardens to manage the roof runoff from two park pavilions and a parking lot at the Scenic River Retreat and promote their use in Munson Township.

City of Pepper Pike Bioretention Project, Chagrin Boulevard and Fox Hollow Drive
Showcase bioretention along Fox Hollow Drive and Chagrin Boulevard as an option to the standard open ditch or culvert system. The bioretention area is a depression that allows ponding of runoff, gradual percolation through a soil media, and uptake by plants, after which it either infiltrates through undisturbed soils or enters the storm sewer system through an underdrain. During larger storm events, surface runoff may pond around a catch basin and overflow directly to the storm sewer to prevent flooding.

Mitigate stormwater runoff from a new private office building and parking area using a combination of low impact development best management practices (permeable pavers, rain garden and vegetated swale) and a traditional stormwater pond.

Treatment Train System: The Cawrse site used a series of practices that work together to reduce the amount and increase the quality of runoff.

- **Permeable Pavers**: Allows stormwater from the parking area to infiltrate into the ground and reduce runoff. Any runoff that does not infiltrate into the ground is carried through an underdrain to the vegetated swale.
- **Rain Garden**: Receives runoff from half of the roof and reduces runoff through infiltration and uptake by plants. A small catch basin carries excess runoff to the stormwater pond during larger storm events.
- **Vegetated Swale**: Receives runoff from the parking area underdrain and a portion of the roof, slowing runoff and allowing for uptake by plants and infiltration. Flow from the swale drains into the stormwater pond.
- **Stormwater Pond**: Final destination of stormwater runoff from the vegetated swale and rain garden.

Orange Village Drainage Improvement Project, Sterncrest Road

Use a linear bioretention swale system within the right-of-way of a residential street to reduce and treat stormwater runoff before connecting to a storm sewer system. An open swale system was built in the late 1950’s to drain road runoff to channels that run through private property, however no access easements were established and over time the channels filled with sediment and debris, resulting in little to no gradient in the channels, standing water, and chronic street and yard flooding. The new bioretention swale system was constructed within the existing road right of way and connected to the Lander Road storm sewer via an underdrain system and designed to reduce 80% of the flow to the storm sewer as the runoff is used by the plants or infiltrates into the soil. The open grass swale system is interspersed with nine landscaped rain gardens around catch basins that allow heavier storm flows to overflow directly to the storm sewer to prevent flooding.
Look for these 2009 services

Stream and Wetland Mitigation

CRWP will begin a project funded by a $129,600 grant from the Ohio Water Development Authority in cooperation with the Ohio Lake Erie Commission to provide in-watershed mitigation to reach the goal of no export of wetland and stream functions from CRWP Member communities. As a part of this project, CRWP will establish a mitigation bank or an in-lieu fee program. Please contact CRWP if you know of any potential stream or wetland restoration projects in your community.

Comprehensive Plan in Need of Update?

CRWP recommends using the latest environmental information in updating local plans, zoning, and other development regulations. Recent case law has shown that including environmental information in a local comprehensive plan strengthens the legal position of communities in administration and enforcement of reasonable land use regulations.

Comprehensive plans should be updated when your community experiences a significant population growth, issues a significant number of zoning variances, or changes are made to state or federal regulations impacting land use. A plan update may involve a new plan document or simply address current issues with adjustments such as a new chapter, a new map, or an appendix of new information.

CRWP has funding available to assist a community with updating their comprehensive plan including appropriate natural resource data and Balanced Growth planning concepts. Call CRWP for more information.

Upcoming CRWP Events and Meetings

February 2009
Floodplain Restoration Training

2009 CRWP
Board of Trustees meetings
February 19  May 7 (Annual Meeting)
September 15  December 10

2009 CRWP
Executive Committee meetings
January 26  March 23
April 20  June 15
August 17  October 19
November 16
In 2009, CRWP will work to increase our role in regional discussions about sustainability while continuing our work in the following program areas:

- Continue Phase II stormwater management assistance to local governments.
- Obtain 100% Member participation in the Chagrin River Balanced Growth Plan.
- Implement the Chagrin River Watershed Action Plan and TMDL and continue working towards Ohio EPA’s goal of having 80% of streams in attainment by 2012.
- Work with Members to preserve additional open space.
- Implement the Chagrin River Balanced Growth Plan through comprehensive planning, and adoption and implementation of the best local land use practices.
- Demonstrate floodplain restoration during development.
- Assist Members in adopting and implementing local zoning regulations, focusing on:
  - Updated Comprehensive Stormwater Management and Erosion and Sediment Control
  - Riparian and Wetlands Setbacks
  - Conservation Development with a minimum of 40% open space
  - Illicit Discharge Detection and Elimination
  - Floodplain Management
Serving Members in the Chagrin Watershed

Auburn Township
Aurora
Bainbridge Township
Bentleyville
Chagrin Falls Township
Chagrin Falls Village
Chardon
Chester Township
Claridon Township
Cleveland Metroparks
Eastlake
Gates Mills
Geauga County
Geauga Park District
Hunting Valley
Kirtland
Kirtland Hills
Lake County
Lake Metroparks
Mantua Township
Mayfield Heights
Mayfield Village
Mentor
Moreland Hills
Munson Township
Newbury Township
Orange Village
Pepper Pike
Russell Township
Solon
South Russell
Waite Hill
Wickliffe
Willoughby
Willoughby Hills
Woodmere

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