



Chagrin River Watershed Partners, Inc.

P.O. Box 229 Willoughby, Ohio 44096-0229

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cc: Mayor
Council
Dept. Heads

SERVING MEMBERS IN THE WATERSHED

Auburn Township
Aurora
Bainbridge Township
Bentleyville
Chagrin Falls Township
Chagrin Falls Village
Chardon
Chardon Township
Claridon Township
Cleveland Metroparks
Eastlake
Gates Mills
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

IN THE COUNTIES OF

Cuyahoga
Geauga
Lake
Portage

STAFF

Heather Elmer
Director

Christina Znidarsic
Watershed Coordinator

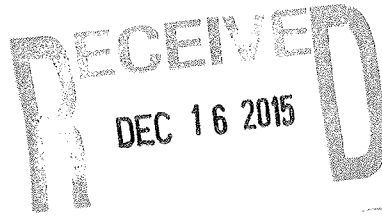
Keely Davidson-Bennett
Project Manager

Kristen Buccier
Project Manager

Linda Moran
Administrative Assistant

December 15, 2015

Mayor Bruce G. Rinker
Mayfield Village
6622 Wilson Mills Road
Mayfield Village OH 4414



**Re: 2015 Service Report and 2016 Proposed Services
2016 Member Dues Invoice**

Dear Mayor Rinker,

I am writing to express my appreciation for your support and am pleased to send you a summary of services Chagrin River Watershed Partners, Inc. (CRWP) provided to Mayfield Village in 2015 and our proposed services for 2016. Also enclosed is Mayfield Village's 2016 member dues invoice. Our Board of Trustees approved a 1% dues increase on September 15, 2015. We have also prepared a 2015 annual report that will be sent to you in January. It highlights our activities that benefit the Chagrin River watershed and the region.

We look forward to providing continuing technical assistance and solutions to help you address natural resource management challenges as your community grows. Your past support has kept the Chagrin River healthy and helped solve flooding, erosion and water quality problems affecting Mayfield Village and communities downstream.

Your membership benefits include:

- **Site visits, plan reviews and technical recommendations** to address resident, business and community concerns regarding flooding and erosion.
- **Code review and model code adoption assistance** for effective watershed management
- **Grant application assistance** for stream and wetland restorations, park improvements and stormwater management projects.
- **Training** to assist your staff in compliance with environmental regulations and effective stormwater management.
- **Resident and professional education and engagement** to support watershed stewardship.

2016 marks the twentieth anniversary of the Chagrin River Watershed Partners, Inc. It is shaping up to be a very exciting year with additional projects that will help keep the Chagrin River watershed a great place to live. Please let me know if you would like to discuss our services to Mayfield Village. I look forward to working with you in 2016.

Sincerely,

Heather Elmer
Director

cc: Ronald Wynne, Finance Director

2015 service report sent via e-mail to Douglas Metzger - CRWP Trustee, John Marrelli - CRWP Alternate Trustee, Thomas Cappello, and Ted Esborn



**CHAGRIN RIVER WATERSHED PARTNERS, INC.
2015 SERVICE REPORT AND 2016 PROPOSED SERVICES
MAYFIELD VILLAGE**

Below is a summary of services Chagrin River Watershed Partners, Inc. (CRWP) provided to Mayfield Village in 2015 and suggested services for 2016. Please feel free to contact CRWP regarding any needs for which you would like our assistance.

Grant application assistance and project management: CRWP assists Members with grant applications and implementation of both grant-funded and other projects to address flooding, erosion, water quality and other natural resource management concerns. Since 2004, CRWP has helped Members secure over \$20 million in grant funding.

- **2015 Services**

1. *Mayfield Village Civic Center Stormwater Retrofit Demonstration Project:*

CRWP completed the management and administration of the Village's \$125,500 grant from the Ohio Environmental Protection Agency (EPA)'s Surface Water Improvement Fund for the installation of 6,700 square feet of permeable pavement at the Mayfield Village Civic Center. CRWP also assisted with RFP development, an operation and maintenance plan, and education and outreach deliverables including the project sign and project websites.

- **2016 Proposed Services**

1. CRWP is available to assist Mayfield Village with planning and scoping potential projects and can assist with preparation of grant applications as requested.

Plan review: CRWP reviews site plans for development proposals, stormwater control measures and natural resource restoration.

- **2016 Proposed Services**

1. CRWP will provide plan reviews for Mayfield Village as requested.
2. CRWP is available to review and comment on plans to assist the community in determining compliance with local codes and some state and federal regulations. This review will serve as a supplement to the Village's standard review process.

Model regulation adoption and implementation: CRWP has developed model regulations for riparian and wetland setbacks, erosion and sediment control, comprehensive stormwater management, conservation development, illicit discharge detection, flood damage reduction (ODNR) and off street parking. CRWP is available to assist Mayfield Village with code adoption and implementation including participating in meetings and discussions with community staff and officials.

- **2015 Services**

1. CRWP updated its model codes for construction site erosion and sediment control and post-construction stormwater management.

- **Proposed 2016 Services**

1. Mayfield Village must update its erosion and sediment control and comprehensive stormwater management codes within two years of the renewal of the Village's coverage under the MS4 NPDES permit (no later than December 2016) to



- maintain compliance with Ohio EPA permit requirements. CRWP can assist the Village in updating and implementing these codes.
2. CRWP can assist the Village with implementation of its riparian setback code.
 3. CRWP is available to work with communities to review current parking codes and standards, and provide updates that can minimize impervious cover and improve stormwater management.
 4. CRWP is working with the Lake County Office of Planning and Community Development to update a model conservation development code for community review in 2016 and is available to assist communities with the adoption and implementation of this code.

Landowner assistance: CRWP performs site visits for property owners to discuss concerns and provide technical recommendations for addressing streambank erosion, drainage concerns, zoning codes, and stormwater control measures.

- **2015 Services**

1. CRWP conducted one site visit at the request of Mr. Tom Cappello, Village Engineer, at 648 Meadowood Drive to investigate hillside erosion and CRWP provided follow-up technical assistance to Mr. Cappello and Cuyahoga County Soil and Water Conservation District including riparian setback implementation assistance, erosion and drainage control recommendations, and lists of plants suitable for shaded slopes.
2. CRWP presented to Mayfield Village residents at the Eco Fair at Mayfield Library on October 3, 2015. CRWP provided information on streamside management and watershed stewardship.
3. CRWP completed inspections of stormwater retrofit sites, including the *Mayfield Village Civic Center Stormwater Retrofit Demonstration Project*, *Mayfield Village Parking Lot Demonstration Project at Wiley Park*, and the Cuyahoga County Public Library stormwater control measures, and can provide the Village with inspection checklist results from monitoring visits on October 12, 2015.

- **Proposed 2016 Services**

1. CRWP will provide site visits and technical assistance to Mayfield Village residents, businesses and officials upon request.
2. CRWP is available to present to Village residents on topics such as rain gardens, rain barrels, native landscaping, streamside management, and stormwater pond maintenance. For a comprehensive list of topics and suggestions for presentations, visit our website at <http://www.crowp.org/index.php/member-services>. We can also work with the Village on tailoring a presentation more specific to their needs.
3. CRWP can provide articles related to watershed and natural resource management topics to Mayfield Village staff via email for inclusion into community newsletters or websites. CRWP can also provide quick tips for stormwater management that can be included in utility bills, newsletters, websites, or e-mail blasts.



Large Scale Projects: CRWP leads multiple planning, research and program initiatives that benefit members throughout the watershed.

1. **Chagrin River Watershed Action Plan:** CRWP continually updates the Plan to include information on completed projects and water quality improvements, new water quality data, updates to the Chagrin River Watershed Balanced Growth Plan, Chagrin River Watershed Total Maximum Daily Load (TMDL) report, detailed subwatershed plans for non-attaining streams and protection and restoration strategies for high quality waters. Over 100 projects and action items are noted in this Plan, many of which are currently underway. CRWP continues to work with our Members to obtain funding to complete additional projects.
2. **Chagrin River Watershed Balanced Growth Plan:** CRWP assisted local communities with designating Priority Conservation Areas and Priority Development Areas and works with them on implementing these designations, using tools like best local land use practices, open space preservation, comprehensive planning, and economic development. The Plan was endorsed by the State of Ohio on September 28, 2009. 28 communities have endorsed this plan, and CRWP continues to work with member communities on endorsement and implementation.
3. **Researching Low Impact Development (LID) to Support More Effective Stormwater Design and Policy:** In 2015, CRWP completed a research project intended to improve state and local stormwater policies by investigating the effectiveness of bioretention and permeable pavement on poorly draining soils, which are common in Ohio. This project resulted in updates to the bioretention design specification in Ohio's stormwater design guidance, *Rainwater and Land Development*, and laid the technical foundation for a runoff reduction crediting mechanism to be added to state guidance. The guidance will provide a pathway to meet the state's National Pollutant Discharge Elimination System (NPDES) water quality volume requirement through runoff reduction, as well as a mechanism for crediting the runoff reduction benefits of LID stormwater control measures (SCMs) toward meeting local peak discharge requirements. This project informed updates to CRWP's model comprehensive stormwater management code. Results are available on CRWP's website:
<http://www.crwp.org/index.php/projects/research-projects/nerrs-science-collaborative>
4. **Stormwater Control Measure Operation and Maintenance:** CRWP worked with Northeast Ohio Stormwater Training Council (NEOSWTC) to develop an Ohio-focused guide, *Maintaining Stormwater Control Measures*, to assist homeowner's associations and other private owners and operators to identify stormwater control measures and associated maintenance needs. The guide is available online at
http://epa.ohio.gov/Portals/35/documents/SCM_OM_Manual_Final_7-30-15.pdf
5. **Researching the Benefits of Green Infrastructure for Resilience to Storms and Flooding:** CRWP is investigating the roles of innovative stormwater and floodplain management in providing resiliency for coastal Ohio communities. With funding from the National Oceanic and Atmospheric Administration Coastal Storms Program we are reviewing literature to determine whether updates to CRWP's model stormwater, flood damage reduction, and riparian setback codes are needed to promote resiliency to extreme precipitation events. Additionally, we are partnering with North Carolina State University to determine how bioretention and permeable pavement are expected to



perform under projected future climate conditions and what design parameters influence their performance under those conditions.

Technical Workshops and Presentations for Community Staff and Professionals: CRWP offers presentations, trainings and workshops tailored to community needs on topics such as pond and lake management, dam safety, operation and maintenance of SCMs, rain gardens, roadside ditch sediment control, LID and green infrastructure.

- **2015 Services**

1. CRWP participates in the NEOSWTC, a consortium of 28 agencies and organizations that coordinate stormwater training for NPDES Phase 2 regulated communities. In 2015 CRWP helped organize three workshops available to Mayfield Village staff and officials:

- a. April 7: *How to Update Your Stormwater Management Program to Incorporate TMDL Recommendations*
- b. June 10: *Low Impact Development Performance & Policy Implications*
- c. June 24: *Utilizing Planning, Zoning, and Building Codes to Improve Stormwater Management*

Training materials are available at www.neohiostormwater.com and CRWP's website.

2. CRWP provides educational presentations for member community staff and officials at its quarterly board meetings.
 - a. CRWP's February 19, 2015 Board of Trustees meeting topics included a summary of national research on the economics of green infrastructure approaches to stormwater management, inspection and maintenance of stormwater control measures, bioretention and permeable pavement performance in Northeast Ohio, compliance with the new MS4 permit and Phase II annual reporting services and requirements, and stormwater retrofit projects in member communities.
 - b. Mr. Doug Metzger, Village Service Director, attended CRWP's May 21, 2015 Board of Trustees meeting. Topics included stormwater retrofits, bioretention and permeable pavement performance in Northeast Ohio, comprehensive stormwater management code recommendations, streambank stabilization and riparian plantings to reduce erosion and sedimentation in the Lower Main and East Branch of the Chagrin River, dam removal and stream restoration on a tributary to the Lower Grand River.
 - c. CRWP's September 15, 2015 Board of Trustees meeting topics included LID stormwater retrofits, inspection and maintenance of stormwater control measures, streambank stabilization, member needs and CRWP services related to the impacts of flooding and extreme storms.
 - d. CRWP's December 10, 2015 Board of Trustees meeting topics included stream restoration, stormwater retrofit projects and NPDES stormwater permit compliance.
3. CRWP staff and partners led a pre-conference tour and seven presentations at the 2015 Ohio Stormwater Conference. All sessions focused on CRWP's research on the



performance of bioretention and permeable pavements systems in Northeast Ohio.

- **Proposed 2016 Services**

1. CRWP worked with the City of Cleveland and NEOSWTC to develop training for service department staff on inspection and maintenance of bioretention, permeable pavement, green roofs and other LID SCMs. Training will be available beginning in spring 2016.
2. CRWP will provide several trainings in partnership with NEOSWTC, Old Woman Creek National Estuarine Research Reserve and North Carolina State University. Potential topics include:
 - a. Incentivizing Green Infrastructure in Your Community
 - b. Permeable Pavement and Bioretention System Design
 - c. Constructing Effective Permeable Pavement or Bioretention Systems
 - d. Tools to Promote Community Resilience to Storms and Flooding
3. Please contact CRWP if your community has a particular training need. We are available to develop and offer tailored trainings and will work with NEOSWTC and other regional partners to ensure your needs are met.

Phase II Stormwater Technical Assistance: CRWP assists Mayfield Village in complying with the requirements of the Ohio EPA NPDES Phase II Municipal Separate Storm Sewer System (MS4) Permit. CRWP advises Members in the preparation of annual reports and on meeting Storm Water Management Program requirements, suggests changes to improve programs, and provides assistance and support related to Phase II Minimum Control Measures (MCMs). The following is a summary of CRWP's services to help meet your stormwater program goals for 2015. This report also includes suggestions for 2016 services.

To maintain permit compliance with Ohio EPA NPDES Permits, MS4s are required to:

1. Review and update their Stormwater Management Programs (SWMPs) and erosion and sediment control and comprehensive stormwater management codes to reflect progress in their stormwater management and alignment with the most recent MS4 and General Construction permits. **Mayfield Village's SWMP must be updated and submitted to the Ohio EPA District Office no later than December 22, 2016. CRWP is available to advise the Village on the required SWMP and code updates.**
2. When updating its SWMP, Mayfield Village must consider the recommendations found within Ohio EPA's approved Total Maximum Daily Load (TMDL) reports for individual watersheds. The recommendations in the TMDL reports will help the Village better tailor the mix of best management practices (BMPs) to address local water quality issues in their updated SWMPs. A TMDL is a written, quantitative assessment of water quality problems in a waterbody and contributing sources of pollution. It specifies the amount a pollutant needs to be reduced to meet water quality standards, allocates pollutant load reductions, and provides the basis for taking actions needed to restore a waterbody. Mayfield Village is located in the Chagrin River and the Euclid Creek watershed, which have TMDL reports that address nutrients, habitat, bacteria, and sediment. In 2015 CRWP worked with the Northeast Ohio Areawide Coordinating Agency and other partners to create pollutant factsheets and standard language that MS4 communities can



use to update their SWMPs to maintain compliance with permit requirements. The fact sheets, a community identifier table and a SWMP update checklist are available at <http://www.neohiostormwater.com/>.

3. A Memorandum of Understanding (MOU) between CRWP and Mayfield Village needs to be attached with your 2015 Annual Report. CRWP has provided the Village a revised MOU for the permit cycle covering January 1, 2015 to December 31, 2019. If you do not have a recent MOU in your files, please let us know so we can provide a copy for you to sign and attach to your 2015 Annual Report. CRWP is available to help review and prepare your 2015 Phase II annual report, discuss your permitting requirements, and assist with review and update of your SWMP and stormwater codes. Please contact Christina Znidarsic at (440) 975-3870 or cznidarsic@crwp.org if you have any questions about the annual reporting process or to schedule a review. The 2015 Phase II Annual Report is due to Ohio EPA by April 1, 2016.

MCMs #1 & 2: Public Education & Outreach and Public Involvement & Participation

1. **CRWP Phase II e-mail updates to Community Staff.** Four e-mails were sent in 2015 to Mr. Bruce G. Rinker, Mayor, Mr. Tom Cappello, Village Engineer, Mr. Doug Metzung, Service Director, and Mr. John Marrelli, Building Commissioner, covering a range of Phase II related topics including upcoming training opportunities, public education materials on residential stormwater management, updates to State permits and regulations, and available stormwater management funding sources. If the Village would like to add or remove any names on this mailing list, please contact Christina Znidarsic at (440) 975-3870 or cznidarsic@crwp.org.
2. **Stormwater article.** CRWP provided an article on *Living in Harmony with Your Yard – More Life with Less Lawn in June 2015* to educate watershed residents about how to make changes to their yard so it can absorb more stormwater. *Note: Only include this in the annual report if your community used these articles. Please state how the article was used, such as posted on your website or included in resident e-mail or newsletter. Indicate approximately how many residents received the article through these means.*
3. **Stormwater website updates.** CRWP updated our website (<http://www.crwp.org>) in 2015 to provide information to Mayfield Village residents and the general public on stormwater best management practices around the home and Village stormwater project updates. CRWP's website received 8,000 unique visitors and had 327,500 hits in 2015. CRWP maintained a webpage for the *Mayfield Village Civic Center Stormwater Retrofit Demonstration Project*. CRWP also maintains a Facebook page to highlight watershed stormwater projects and actively engage residents through social media, which received 141 likes in 2015 for a total of 243 likes and reached 3,927 unique users.
4. **Presentations to the Public.** CRWP presented to residents on streamside management and watershed management on October 3, 2015 at the Mayfield Village Eco Fair.
5. **NEOPIPE workshop.** CRWP assisted with hosting a residential workshop on March 31, 2015 titled *New Year, New Yard* through the Northeast Ohio Public Involvement Public Education (NEOPIPE) workgroup.
6. **Mayfield Village Civic Center Stormwater Retrofit Demonstration Project Educational Sign:** CRWP coordinated with the Village and Cuyahoga Soil and Water Conservation



District on an educational sign to provide information on the permeable pavement project installed at the Civic Center.

Suggested MCM 1&2 Services for 2016

1. **Website Updates.** CRWP is available to recommend updates to Member websites. Updates to the webpage or website can build on existing community programs about trash, recycling, leaf collection, or specific water quality and stormwater issues that relate to various Mayfield Village departments or activities. CRWP can also update our website and Facebook page to showcase water quality and stormwater projects we are collaborating on with the Village as part of public education for residents.
2. **Presentations for Residents.** CRWP is available to present to Mayfield Village residents on backyard stormwater topics such as rain gardens, rain barrels, native landscaping, streamside management, and stormwater pond maintenance. For a comprehensive list of topics and suggestions for presentations, you can visit our website at <http://www.crwp.org/index.php/member-services>.
3. **Educational Materials at Community/Resident Functions.** CRWP recommends that when Mayfield Village staff meets with residents, they distribute stormwater management information. The amount of materials distributed can be included in Annual Reports for Phase II compliance. CRWP can provide additional materials for the Village as needed.
4. **Stormwater articles.** CRWP will provide two stormwater related articles to Mayfield Village via email for print, digital or social media. Additional article topics can be requested by the Village to meet its chosen stormwater theme for the year. CRWP can also provide quick tips for stormwater management that can be included in utility bills, newsletters, websites, or e-mail blasts.
5. **Direct Landowner Assistance.** CRWP will conduct direct outreach to landowners at the Village's request. This landowner assistance provides education and involvement opportunities to discuss flooding, erosion, water quality, and other stormwater management issues directly with interested residents.
6. **NEOPIPE Workshops.** CRWP is a member of the Northeast Ohio Public Involvement Public Education (NEOPIPE) workgroup. If NEOPIPE hosts a residential workshop centered on a stormwater theme, Mayfield Village can promote this workshop to its residents as a way to fulfill their MCM 1 & 2 requirements, and CRWP will track the number of residents that attend the workshop.

MCM#3 Illicit Discharge Detection & Elimination (IDDE)

1. CRWP is available to assist with IDDE training in conjunction with Mayfield Village's MCM 6 Good Housekeeping program.

MCM #4 Construction Site Runoff Control

1. **Erosion and Sediment Control Updates.** CRWP revised their model erosion and sediment control code to reflect the latest changes in the updated General Construction and MS4 permits and can assist the Village with reviewing and updating their code to maintain Phase II compliance.



MCM #5 Post Construction Stormwater Control

1. **Code Implementation Assistance.** CRWP assisted the Village with implementation of its riparian setback code for the 648 Meadowood Drive site visit.
2. **Post Construction Inspection.** In 2015, CRWP completed inspections of stormwater retrofit sites, including the Mayfield Village Civic Center Stormwater Retrofit Demonstration Project, Mayfield Village Parking Lot Demonstration Project at Wiley Park, and the Cuyahoga County Public Library stormwater control measures, and can provide the Village with inspection checklist results from monitoring visits on October 12, 2015.

Suggested MCM 5 Services for 2016:

1. **Comprehensive Stormwater Management Code Updates.** CRWP has revised its model Comprehensive Stormwater Management code to reflect the latest changes in the General Construction and MS4 permits and can assist Mayfield Village with reviewing and updating their code to maintain Phase II compliance.
2. **Plan Review.** CRWP can review and comment on development projects using innovative site design and stormwater best management practices. Recommendations will address function, maintenance costs, and Ohio EPA/Phase II requirements. This review will serve as a supplement to the Village's standard review process.
3. **Parking Code Updates.** CRWP is available to work with communities to review current parking codes and standards, and provide updates that can minimize impervious cover and improve stormwater management.
4. **Conservation Development.** CRWP is working with the Lake County Office of Planning and Community Development to update a model Conservation Development code for community review in 2016 and is available to assist communities with the adoption and implementation of this code.
5. **O&M Plans/Agreements:** CRWP is available to assist communities in developing standards for inspection and maintenance agreements. A sample Inspection and Maintenance Agreement that can be used with the Comprehensive Stormwater Management code is accessible through the CRWP website at: <http://www.crowp.org/index.php/member-services/storm-water-npdes-phase-ii/mcm-5-post-construction>.
6. **Onsite Training for SCM Maintenance:** CRWP can provide onsite training of public and private personnel for the maintenance of post construction BMPs, including bioretention and pervious pavement, to ensure practices continue to treat and reduce stormwater runoff.

MCM #6: Pollution Prevention/Good Housekeeping for Municipal Operations

1. **Board Meetings, Workshops, and Trainings.**
 - a. CRWP's February 19, 2015 Board of Trustees meeting topics included SWMP and Stormwater Pollution Prevention Plan (SWP3) updates for municipal facilities to maintain compliance with the MS4 permit and Phase II annual reporting requirements.
 - b. CRWP's December 10, 2015 Board of Trustees meeting topics included SWMP and SWP3 updates for municipal facilities to maintain compliance with the MS4 permit, stormwater code updates, and Phase II annual reporting requirements.



Suggested MCM 6 Services for 2016:

1. **Staff Training.** *Note: One annual staff training for MCM 6 is required by your MS4 permit.*
 - a. CRWP can provide presentations to community staff on good housekeeping issues. These presentations provide training on BMPs for municipal operations that are covered under this measure, such as service and maintenance departments and recreational facilities.
 - b. CRWP can provide a DVD, *Municipal Storm Water: Pollution Prevention- Storm Watch*, which covers general good housekeeping BMPs for municipal facilities and is about 20 minutes long.
 - c. **Stormwater Pollution Prevention Plan for Municipal Facilities.** These plans are required to be updated no later than December 22, 2016 to maintain compliance with the renewed MS4 permit. CRWP has a SWP3 template and is available to assist with the revision and update of these plans, including any necessary mapping.
 - d. **Good Housekeeping Review.** CRWP is available to perform a walk-through of Mayfield Village's facilities and make recommendations to the Village to ensure compliance under this minimum control measure.

Additional information and resources about CRWP's Member Services is available at <http://www.crowp.org/index.php/member-services>