

PIPELINE

MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS

MANAGING MICHIGAN'S WATER RESOURCES SINCE 1899

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Summer Conference Recap

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PIPELINE is published four times a year. It is funded by the Michigan Association of County Drain Commissioners, and with advertising revenues. The Michigan Association of County Drain Commissioners is a nonprofit, statewide association.

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PRESIDENT'S MESSAGE

DAVID THOMPSON

Monroe County Drain Commissioner



Hello all,

As I write this message, we have just finished our 118th Annual Summer Drain Conference. What a great time of learning, networking, and fellowship. The conference featured many educational and informative sessions, and I would like to thank each of our presenters for the time and effort they dedicated to their excellent presentations. I would also like to thank and congratulate the efforts of our program committee—the event could not have happened without all of your hard work.

Of special note at this summer conference, we presented our first ever Legislator of the Year award to Representative Roger Victory. As most of you know, Representative Victory was instrumental in helping our association pass House Bill 4286, now 2017 PA 62, which amended the Drain Code by modifying an existing procedure and introducing a new procedure to add and remove parts of counties from intercounty drainage districts. It was a

pleasure spending time with Representative Victory at the summer conference. I hope you all had the chance to spend a few minutes with the man so dedicated to serving his State. I know we can count on “Farmer Rog” if we have additional legislative needs in the future.

On the lighter side, I would like to thank all of the associate members for their continued support. I would also like to extend a special thank you to those who sponsored the Tuesday night event. Your efforts made the conference more enjoyable for all. Although, I do think we could use a future session on the dangers of UV exposure during our networking time.

My plan for this fall is to attend as many district meetings as possible. I wish you all well as your construction projects wrap up in what, I hope, will be a beautiful autumn in Michigan.

All the very best,

David



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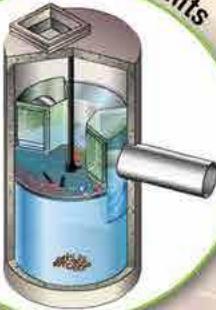


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SUMMER CONFERENCE RECAP

DEQ Update and Priority Initiatives

Director Heidi Grether, Michigan Department of Environmental Quality

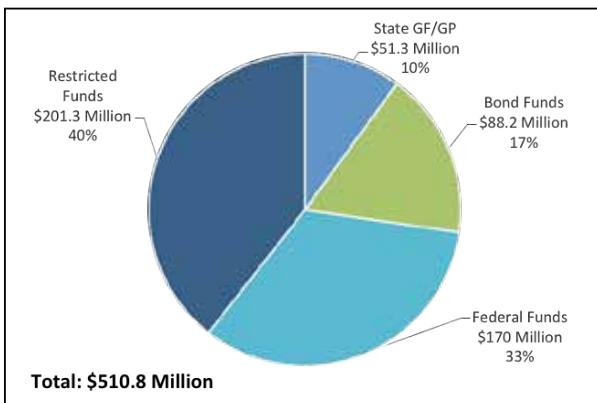
Kim Fish, Michigan Department of Environmental Quality

New MDEQ Director Heidi Grether discussed priorities for the year, which include:

- Protecting public health and environment
 - Secure funding for MDEQ's core programs
 - Implement Michigan's revised LCR rule
 - Update the Part 201 Cleanup Criteria
 - Modernize Michigan's Solid Waste Law
- Assisting Michigan communities with addressing infrastructure needs
- Building external partnerships to help address Michigan's environmental issues

FUNDING THE MDEQ

The total budget is \$510M (5% of state budget). Fees are becoming a smaller percentage, but they continue to look at how to fund some programs going forward.



BUDGET CHALLENGES

- **Depletion of bond dollars**
- **Uncertainty of federal dollars**
- **Lack of champions supporting DEQ's budget**
 - Without stakeholders telling the importance of the programs that the fees support, it becomes an uphill battle in this political climate
- **People think cutting fees will result in less oversight** - instead many times it just results in longer wait times for permits and less ability for staff to be problem solvers
- **No new fees pledges**
 - This is challenging when 40% of the budget relies on fees
 - Programs have taken on additional cost allocations. Other post employment

benefits, technology, rent etc., all cut into the amount the fees that can go towards program work

- **Less pollution = Less money**
 - Many of MDEQ's program fees are tied to the amount of product/pollution used or emitted.

WHAT ARE THEY WORKING ON?

Nestle permit - A public hearing was held in April, and they have received well over 60,000 comments and hundreds of thousands of signatures. Staff members are currently reviewing all of the public comments and the information that Nestle submitted, and they have weekly meetings to discuss progress. The overall goal is to make sure the department gets this one right, as it sets the precedent for future large scale water use.

Enbridge pipeline - Public feedback sessions were held earlier this summer, while they work on being transparent in the decision making process through the PSAB and the new website. Any decisions they make on the future of the pipeline will be with agreement amongst DEQ, DNR, Michigan Agency for Energy and the Attorney General.

Continuing the commitment to Flint's Recovery -

The department is moving into the recovery phase in Flint, while working with the Mayor's office to stay on the GLWA. They believe the best interest of public health is for the community to remain on GLWA as their water source which is why they took legal action earlier this month to ensure an appropriate water source is in place. Over \$240 million in state taxpayer money has been invested toward recovery effort.

Environmental Justice (EJ) work group - Governor Snyder put together an EJ work group to develop a statewide plan that will provide a framework for ensuring all residents have the opportunity for awareness and engagement on policies.

21st Century Infrastructure Report - Along with budget challenges, the State is also facing a \$4 billion infrastructure investment shortfall. Not only do roads have immediate needs, but sewers, drinking water, broadband and energy do as well.

LEGISLATIVE AND REGULATORY PRIORITIES

Michigan Lead and Copper rule - The department is putting together a work group to develop a new Michigan rule to address testing, sampling protocols and infrastructure inventories of community water supply systems.

Cleanup criteria – Criteria hasn't been updated in over 15 years and hasn't kept pace with changes in science and our knowledge of what is harmful, and at what levels.

Waste Management statute – Current law is 40 years old. It's time to modernize how we view waste management; we no longer manage it as something that needs to be put in a landfill, but as a commodity.

Michigan's 404 program - Better known as the Wetland program. We continue to work with stakeholders to address EPA's review of our wetlands, lakes and streams program.

State and Federal relationship - The EPA would like to put more responsibility, authority, and autonomy on the states. The additional flexibility would be nice, but can't be done for free. The EPA's budget was cut 31% in Trump's 2018 budget proposal; the MDEQ is actively working to determine what impact these reductions in federal funding could have on the state's environmental programs.

MACDC/DEQ relationship - Partnerships are key to moving forward. These collaborative efforts are destined to not only shape the environmental policy of today, but will also help to achieve the ultimate goal of ensuring our environmental heritage well into the future.

WATER RESOURCE DIVISION UPDATE

Wetland Program Status

- Michigan is 1 of 2 states that has the authority to run the wetland program
- In 2010, the Wetland Advisory Council was created
- In August, 2012, the Wetland Advisory Council issued final report
- In July, 2013, Public Act 98 was signed into law
- In December, 2016, the EPA completed review of Public Act 98
- The DEQ is working with stakeholders to develop fixes for EPA's concerns
- Also waiting on new EPA rule to replace Waters of the U.S.

Why it's important to maintain Michigan's 404 Program

- Provides clear, consistent regulation
- Provides faster permit decisions
- Reduces regulatory burden for permit applicants
- Maintains state control while remaining

- consistent with federal regulations
- Provides regulated community better access to the permit decision makers
- Provides more public oversight of regulatory decisions
- Provides a fair, impartial appeal process

Drones: A New Legal Landscape

Kevin A. Fanning and Douglas R. Kelly, Clark Hill PLC

The FAA uses two terms: Unmanned Aerial Vehicle (UAV) and Unmanned Aerial System (UAS). They never use the term Drone.

The term UAS encompasses the UAV and the communications system, the operator, and all other components used for a UAV flight, regardless of how simple or complex.

THE CASE FOR COMMERCIAL UAS: ENDLESS POSSIBILITIES

- Scientific Research: Archaeological mapping, geological surveying, marine life monitoring, glacier surveillance, sea-level rise analysis
- Environmental: Forestry monitoring, tree disease monitoring, fire prevention
- Natural Disasters: Search and rescue, disaster response
- Government: Military applications, border control
- Agricultural: Aerial fertilizing, crop dusting, crop health analysis
- Real Estate: Building inspections, bridge inspections
- Energy: Wind turbines, land and ocean oil refinery inspections, pipeline inspections, underwater applications
- Entertainment: Cinematography, sporting events

PART 107

Part 107 of the FAA Modernization and Reform Act of 2012 (FMRA) became effective August 29, 2016. Part 107 integrates commercial use of UAS technology into the National Airspace System (NAS). A report released by The Association for Unmanned Vehicle Systems International estimates that, in the first decade following the effective date of Part 107, the expansion of UAS technology will create more than 100,000 jobs and have an economic impact of around \$82 billion.

Critical Rules

- The UAS must weigh less than 55 pounds (including payload).
- Maximum allowable altitude is 400 feet AGL, or 400 feet above a structure.
- Maximum speed is 100 mph (87 knots).

- Must keep UAS within visual line of sight (VLOS) of the operator. Must be unaided sight (i.e., no binoculars).
- May be aided by Visual Observer during flight (not a substitute for VLOS).
- Neither operator nor visual observer can be responsible for more than one unmanned aircraft operation at a time.
- May not fly over anyone who is not directly participating in the operation, not under a covered structure, and not inside a covered stationary vehicle.
- Flying only allowable during daylight hours (30 minutes before official sunrise to 30 minutes after official sunset).
- If UAS is greater than 55 lbs follow Part 333 of FMRA (Certificate of Authority), or better yet: call counsel.

Additional Rules

- Operator must avoid manned aircraft and never operate in a careless or reckless manner.
- Minimum weather visibility is three miles from closest control station.
- No operations from a moving vehicle are allowed unless flying over a sparsely populated area.
- Operations in Class G airspace are allowed.
- No operations are allowed in Class B, C, D and E airspace.

Pilot Certification Process

- To operate small UAS under Part 107, need a remote pilot airman certificate with a small UAS rating, or be under the direct supervision of a person who holds such a certificate (a “remote pilot in command”).
- To obtain a remote airman certificate, a person must:
 - Be at least 16 years old; AND
 - Pass an initial aeronautical knowledge test at an FAA-approved knowledge testing center, OR
 - If a person already has a Part 61 pilot certificate (other than a student pilot certificate), must have completed a flight review in the previous 24 months and take a small UAS online training course provided by the FAA.
- A security background check must be completed
- A temporary certificate is issued by FAA within 10 business days after receiving a completed application.

PRIVACY UNDER PART 107

Part 107 acknowledges that certain legal aspects concerning UAS are best addressed at state and local levels. Part 107 yields to all local statutes that apply to a UAS operation and strongly encourages

all UAS pilots to check local and state laws before flying. This includes state privacy laws.

Although various states (CA, LA, OR, NV) have a drone privacy law to protect property owners, Michigan has not yet joined these states. Michigan does have certain laws that regulate drones, including the prohibition of drone use while hunting or fishing, or to disturb those who are hunting or fishing.

Construction Administration – Open Drains

Ronald B. Hansen, P.E. P.S., Spicer Group, Inc.

During his presentation, Ron Hansen described the steps involved for construction administration on open drains.

The first step is to complete a tabulation of bids. To tabulate, you must verify there are no math errors, evaluate alternative bid items and project scope, and review bidders qualification, financials, references, equipment, and ability to meet schedule. Then, you must seek the recommendation of subcontractors, send any notice of awards and prepare the contracts and agreements.

After you review the insurance and bonds that were submitted by your contractor and compute all of the costs, you should set a preconstruction meeting. You would typically invite your contractor, subcontractor, utility owners, road commission, municipalities, suppliers and MDOT to this meeting where you would go over the project schedule, payment plan and utility relocations, among several other issues.

After you receive the “green light” on financing, you should prepare a notice to proceed. Then, you should clarify the project schedule and mail a notice to property owners that work will be completed on their property a minimum of 10 days in advance. You will need landowner agreements for work outside of drain right of way.

Throughout the project you should have progress meetings to review the project scope with the contractor in the field, to clarify schedule, means and methods, to clarify staking needs and to coordinate with landowners and utility relocations.

There will be construction observation, including daily inspection reports, with full-time onsite inspection for underground work (culverts, utility lowerings and road restoration), and periodic inspection for open drains and soil erosion. In addition to the observations, you will have to do material testing and erosion control staking.

Act No. 524 of Public Acts of 1980 provides for three different types of progress payments:

- Payment Plan 1
 - Monthly payment plan
- Payment Plan 2
 - 3 payment plan
- Retainage
 - 10% of first 50%

Next comes final inspection and the beginning of the correction period. A correction period is the time period in which a contractor has the right and/or obligation to rectify any failed work. After this, and after the punch list items are completed, comes the project close out.

For data management, Hansen suggested the use of the ARC Collector. With this, you can store and update everything on an iPhone, iPad or Android device.



Read them Right: How to Read Engineering Drawings

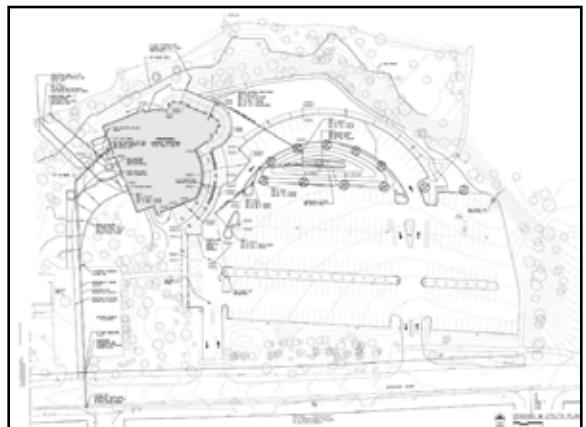
Claire Schwartz, P.E., Fishbeck, Thompson, Carr & Huber

Engineering drawings communicate information about the world in a 2-dimensional space (paper, computer screen). You can typically expect to see the following in a set of drawings:

- Title Sheet which usually includes the owner's name, title, location, date, contacts, designer, sheet index, and location map.
- Legend/Notes which define symbols
- Plan View which is a bird's eye view that shows the physical surface features, underground utilities, boundary and survey lines, existing and proposed information and topography.
- Profile View which is cut longitudinal to the pipe or watercourse that shows elevations, slope and lengths.
- Cross-Section View which is cut transverse to pipe or watercourse. This view shows elevations, widths and side slopes.
- Details



The above picture shows the project rendering. The below picture shows the engineer drawing.



Building and Maintaining Quality Relationships with your Road Commission

Marya N. Colpaert, P.E., Saginaw County Public Works Commission

Joe Wisniewski, P.E., Saginaw County Road Commission

Joe Bush, Ottawa County Water Resources Commission

Brett Laughlin, Ottawa County Road Commission

The panel discussion about building and maintaining relationships with county road commissions began with each panelist explaining how the relationships work in their counties.

Joe Bush previously worked at the road commission. He stressed how important a good relationship is to getting things done, but said he understood every county does things differently.

Joe explained that in Ottawa County the cost and resource allocation varies depending on who is leading the project. Joe explained the Ottawa County Water Resources Commission and the Ottawa County Road Commission often send plans to each other for review.

Joe explained that they don't always agree but at the end of the day they all work together to come up with a cost-effective solution.

Brett Laughlin then explained that communication is also key with townships and the county board. The Ottawa Road Commission has an Environmental Coordinator who handles calls that come in about drains and attends meetings on different projects. Brett stressed the importance of not pinning each other against the resident and explained that sometimes there isn't a solution but you should take the time to go out and listen to their concerns.

Joe Wisniewski explained how the relationship works in Saginaw County. The road commission attends as many board of determination meetings as possible. Many Saginaw drain projects include road work, in addition to improvements to the drain. He discussed a recent road project where they were reconstructing an urban street and collaborated with the Public Works Department to cost share.

Marya explained that, similar to Ottawa County, they often use the same contractors. She explained the importance of day-to-day coordination to figure out whose piece is failing and how to get it fixed.

The panel answered several questions from the crowd.

Q: With regards to building relationships, a lot of changeover often occurs, so who do you make the relationship with?

A: Marya Colpaert – Make sure to get written agreements, even if it's just a short paragraph, so that when those changes occur, the agreement remains. Often there are some upper level changes but the foremen are usually the same.

Joe Wisniewski – You need written agreements. We do a lot of handshakes but we've all been around a while. It's crucial to know your road commission board.

Q: How do you communicate with road commission on where county drains are located?

A: Joe Bush - Through our GIS.

Brett Laughlin – We have a detailed map of culverts that we give to all of our foremen.

Joe Wisniewski– When the road commission comes across the drain or unknown water sources, we start by looking at our GIS map. If it's not mapped yet, but it looks like a county drain, we call the drain office and request a size. The road commission does all of the work but the drain commission will size it and from there we keep notes for the future.

Q: Do either of you have a third entity (i.e. Conservation group or Watershed group) involved in the regular conversations? Often the environmental side can bring outside money and you can bring equipment to match.

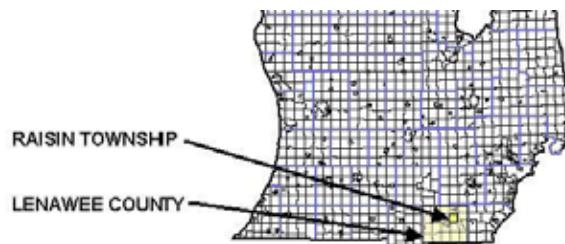
A: Joe Bush – We have a grant right now to do inventory on stream crossings and there might be another grant to replace that. We do work with all of our watershed and conservation groups

Townships and Drain Commissioners: Working Together

Larry Merrill, Michigan Townships Association

Michigan has 1,240 townships and over 6,500 elected township officials. When planning a drainage project, townships and their officials can be viewed as partners in the process.

WHAT IS A TOWNSHIP?



Townships were originally created as a description of land in the Northwest Ordinance. Lenawee County has some of the earliest platted townships in Michigan, moving up into Wayne, Macomb, etc. The political body came later out of the geographic boundaries. In the Lower Peninsula township, size is fairly consistent at 36 square miles, but some townships in the U.P. can be up to 500!

Townships have different levels of resources based on population and tax base. In Michigan, the township structure is embedded in the Michigan Constitution, legislative statutes and case law. Townships can be general law or charter and have an elected body made up of a Supervisor, Treasurer, Clerk, and 2 or 4 Trustees.

HOW CAN TOWNSHIP OFFICIALS AND DRAIN COMMISSIONERS WORK TOGETHER EFFECTIVELY?

Township officials see drain commissioners as partners in providing essential services.

Township officials appreciate seeing drain commissioners at their board meetings. Another way to interact is at the quarterly county chapter meetings. It's important to keep township officials informed. Like drain commissioners, they are elected and share a political environment; they don't like to look uninformed on issues.

Regarding assessments, as long as they appear fair, townships will usually be on board. The more information drain commissioners can provide township officials to provide to the public, the better.

When there are disputes, especially private ones between property owners, it doesn't hurt to give the township manager a heads up as they are likely complaining at the township level as well.

Emerging and ongoing issues to consider:

- Increased frequency of major flooding incidents
- Non-point source pollution
- CSO separation projects
- Post Bolt-project funding solutions
- Community sustainability projects
- Asset management planning
- Multi-jurisdictional lake improvements

Green Infrastructure Maintenance and Upkeep

Samir Matta, P.E., Lockwood, Andrews & Newman, Inc.

What is typical of green infrastructure?

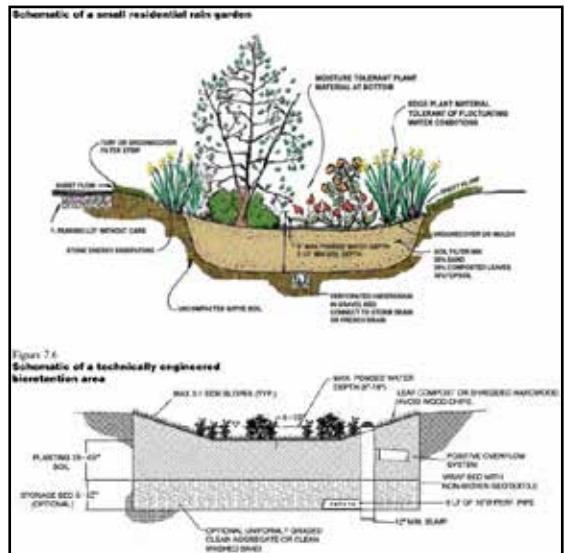
- Cost effective, resilient approach to managing wet weather impacts that provides many community benefits
- Reduces and treats stormwater at its source while delivering environmental, social, and economic benefits
- Seeks to protect our water resources
- Uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water
- Green Infrastructure is a patchwork of natural areas that provides habitat, flood protection, cleaner air and cleaner water

TYPICAL GREEN INFRASTRUCTURE

Downspout disconnection is a simple practice that reroutes rooftop drainage into rain barrels, cisterns, or permeable areas instead of routing it to storm sewers.

Rainwater harvesting directs drain water from downspouts and places it in a cistern to use for irrigation. This practice is particularly valuable in arid regions, where it could reduce demands on increasingly limited water supplies.

Rain gardens, also known as bioretention, have been used widely throughout Michigan. They are shallow, vegetated basins that collect and absorb runoff from rooftops, sidewalks, and streets. This practice mimics natural hydrology by infiltrating, and evaporating and transpiring — or “evapotranspiring” — stormwater runoff. They often require different design practices depending on where they are placed. It is a good idea to talk to stakeholders and property owners due to maintenance needs.



Planter boxes are urban rain gardens. They collect and absorb runoff from sidewalks, parking lots, and streets and are ideal for space-limited sites in dense urban areas and as a streetscaping element. Unfortunately, with a lot of these the intention is good, but many end up filled with trash if not maintained.

Bioswales are rain gardens placed in long narrow spaces such as the space between the sidewalk and the curb. These can eliminate the needs for culverts under driveways.

Permeable pavement consist of pervious concrete, porous asphalt or permeable interlocking pavers. Permeable pavements infiltrate, treat, and/or store rainwater.

Green streets and alleys are created by integrating multiple green infrastructure elements into their design to store, infiltrate, and evapotranspire stormwater.

Green roofs help manage stormwater and reduce energy costs for cooling. Green roofs are covered with growing media and vegetation that enable rainfall infiltration and evapotranspiration of stored water. They are particularly cost-effective in dense urban areas where land values are high and on large industrial or office buildings where stormwater management costs are likely to be high.

Urban tree canopies soak up stormwater, provide cooling shade and help to slow traffic. Trees reduce and slow stormwater by intercepting precipitation in their leaves and branches. Many cities have set tree canopy goals to restore some of the benefits of trees that were lost when the areas were developed.

Land conservation is another good tool for communities to use for reducing the risks of

stormwater runoff and sewer overflows. Natural areas that should be a focus of this effort include riparian areas, wetlands, and steep hillsides.

Traditional

- Large Piping Network & Structures (buried)
- Somewhat Redundant System
- Limited or No Maintenance (Out of Sight, Out of Mind)
- Typically Higher Upfront Costs
- Less Yearly Operational Costs
- Limited Public/Stakeholders Participation
- No Educational Requirements

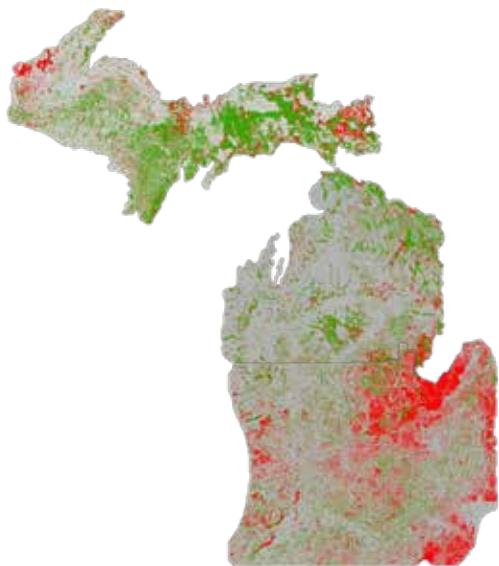
Green (Urban)

- Sizable Piping Network & Surface Features
- Limited Redundancy
- Regular Maintenance \$\$\$
- Lower Construction Costs
- Increased O&M Needs
- Critical Public Feedback & Support
- Educational Component (Design Features, Adopt Program, Public/Private Collaboration)

Michigan Municipal Wetland Alliance: The Benefits of Making Compliance Cheaper

*Deena Bosworth, Michigan Association of Counties
Stephen Shine, MDNR, Wildlife Division*

Before European settlement in Michigan, there were 10.7 million acres of wetlands. Since the early 1800s, more than 4.2 million acres have been drained – that’s 3 ½ times the size of the Grand Canyon National Park. Prior to World War II, the biggest culprit was agriculture – now, it’s development.



GREEN = CURRENT WETLAND

RED = WETLAND LOSS

How are Michigan wetlands regulated?

- Federal – Clean Water Act of 1972
- State – Natural Resources and Environmental Protection Act (NREPA) of 1994, Part 303 (Wetlands Protection)
- Local – Wetland ordinances

WETLAND MITIGATION

Wetland Mitigation is the replacement of wetland functions through the creation or restoration of wetlands. The goal is to replace wetland functions that provide public benefits:

- Flood storage
- Water quality protection
- Fish and wildlife habitat
- Groundwater recharge

Mitigation is a last resort and is only considered after wetland impacts have been avoided and minimized. Restoring previously existing wetlands is preferred over creating new wetlands where none previously existed, but they must be of a similar ecological type as the impacted wetland wherever feasible and practical.

Permit conditions will include mitigation to assure that, upon completion, there will be no net loss of wetlands. Mitigation is often required as a condition of many permits issued under state and federal law:

- All projects impacting over 1/3 acre of wetland
- Any projects impacting under 1/3 acre of wetland if a reasonable opportunity for mitigation exists

Wetland mitigation is not required if the project falls under a general permit category or if the basic purpose of the project is to restore or create wetlands.

There are three options to accomplish wetland mitigation:

- On-site mitigation – restoration or creation of wetlands by permit holder within the project limits of the impacted wetlands.
- Off-site mitigation – restoration or creation of wetlands by permit holder at another site within the watershed or ecoregion.
- Mitigation banking – purchasing credits to offset the permitted impact to wetlands from an established bank within the watershed or ecoregion.

Wetland mitigation banking establishes new wetland areas – or “banks” – before existing wetland areas are impacted by development or other projects. Each new acre in an approved wetland mitigation bank represents a bank “credit” sold to permit holders to satisfy mitigation requirements associated with the permit.

Benefits of mitigation banking include:

- Reduces permit processing time and costs
- Increases certainty regarding the availability of adequate mitigation sites
- Consolidates small mitigation projects into larger, better designed and managed units
- Encourages integration of wetland mitigation projects with watershed-based resource planning

MICHIGAN MUNICIPAL WETLAND ALLIANCE

The Michigan Municipal Wetland Alliance (MMWA) was created in 2016 to help Michigan municipalities, farmers and blueberry growers. It is a coordination of effort between:

- Michigan Association of County Drain Commissioners (MACDC)
- Michigan Association of Counties (MAC)
- Michigan Townships Association (MTA)
- Michigan Municipal League (MML)
- County Road Association of Michigan (CRA)

The MMWA provides wetland mitigation bank credit opportunities to address wetland impacts from:

- Drain projects
- Road projects
- Municipal projects
- Swampbuster mitigation for noncompliance
- Blueberry production expansion

Why was the MMWA created?

- Public infrastructure projects can be delayed or put on hold due to mitigation requirements
- Mitigation construction on a per project basis can be expensive and time consuming
- Privately owned bank credits are not available in some areas of the state
- With the MDNR's assistance, the MMWA can get the price point down to a very reasonable level for municipalities that need to buy credits
- Assistance to blueberry and other agricultural producers was added after MMWA formation

MDNR likes it because restoring wetlands on MDNR-managed public lands will enhance recreational opportunities for the public and create more biodiverse ecosystems

Local Government likes it because:

- The MMWA builds or restores the wetland and the MDNR maintains the property
- Establishing bank sites across the state will expedite municipal infrastructure projects
- It makes the cost of compliance significantly cheaper

What about farmers?

The U.S. Farm Bill provides a wide range of programs through the USDA. Most USDA

programs require compliance with Swampbuster provisions for eligibility. The Wetland Conservation Compliance provisions (Swampbuster) were introduced in the 1985 Farm Bill to remove incentives to agricultural commodities on converted wetlands. This provision has sharply reduced wetland conversions – 235,000 acres converted per year before Swampbuster enacted, reduced to 27,000 acres per year from 1992 to 1997.

Over 600 landowners and 1,700 acres in Michigan were affected by Swampbuster non-compliance. If Swampbuster provisions are not met, USDA farm program benefits may be lost. If non-compliance was found after benefits were paid, benefits must be paid back until compliance is restored. The purchase of wetland mitigation credits is one option to regain compliance.

Michigan was 1 of 10 states selected by the USDA to receive a grant to establish a wetland mitigation banking program to assist with Swampbuster compliance. The NRCS will oversee this program, not the MDEQ, and the MDNR will coordinate the program and work with the MMWA to establish wetland mitigation banks.

MDNR's Role

- Allow construction of bank sites on MDNR lands
- Hold conservation easements on private lands used for bank sites
- Manage and maintain bank sites after construction

MMWA's Role

- Coordinate construction of sites and purchase of conservation easements
- Coordinate NRCS approval of bank sites
- Serve as bank sponsor
- Sell credits to landowners with Swampbuster compliance issues

Expiring Conservation Reserve Program (CRP) wetland projects may be eligible for conversion to wetland mitigation banks for Swampbuster compliance needs. MMWA is seeking to purchase easements over expired CRP wetland sites, while the landowners retain ownership, hunting rights, etc. However, they need to hear from property owners who are out of compliance since USDA maintains the confidentiality of CRP participants.

Tackling High Groundwater Problems: Sub-Surface Drainage Techniques and Discussion

Brian J. Cenci, P.E., Eng., Inc.

Ryan C. McEnhill, P.E., Eng., Inc.

High groundwater issues are becoming more frequent for many reasons, including: development, other infrastructure, and more rainfall raising groundwater level.

On a typical drain project, flooding problems are easier to identify as there is visible surface flooding.

With a high water table often there is no surface flooding, which makes it more challenging to assess the problem.



The picture above shows a typical drain project, while the picture below shows a project with a high water table.



Determining a Drainage District Boundary

- Make sure to look at topography and where are the problems located because you may have to potentially adjust the district.

Challenges in laying out a design

- Understanding long term water table depths
- Understanding individual basement flooding issues
- Understanding the history of an area
- Overall depths and grade

Design Issues

- Design of sub-surface system
- Collection of water into storm system

- Septic and well issues
- Permitting and environmental concerns
- Poor past building/construction choices
- Soil subsidence/nearby surface water

Construction and Bidding Issues

- Dewatering
- Bid concern and price disparity

Apportionment Issues

- Defining benefit based on wide range of factors and site conditions
- Just because someone doesn't have a problem doesn't mean they aren't contributing to their neighbor's problems

Drain Financing Primer: A Financial Advisor's Perspective

Paul Stauder, PFM Financial Advisors LLC

A Municipal Advisor is a person or firm that offers advice to or on behalf of a municipal entity (i.e. drainage district) regarding financial products or issuance of securities. Regulated pursuant to the Dodd Frank Act of 2010, a municipal financial advisor has a fiduciary duty to always do what is in the client's best interest.

A drainage district can borrow money in two ways: 1) the issuance of municipal bonds and 2) the issuance of drain notes. A drainage district cannot just go to the bank and borrow money. However, a local bank can buy the drainage district's bonds or notes.

Who is not a Municipal Advisor (unless registered as such)?

- Underwriters & Banks
- Registered Investment Advisers
- Attorneys, Engineers, Accountants, Public Officials and Employees
- Registered Commodity Trading Advisors & Swap Dealers

Municipal Bonds

A municipal bond is a promise by the state or local governmental unit to repay an amount of money borrowed with interest. Municipal bonds are usually tax-exempt to investors, which allow municipalities to borrow at lower interest rates because the bonds are not subject to federal and sometimes state or local taxation. A bond is repaid over a period of time.

Drain Notes

A drain note is a borrowing backed by the full faith and credit of the drainage district, special assessments and/or a general obligation pledge of the county. Typically drain notes are used to finance relatively

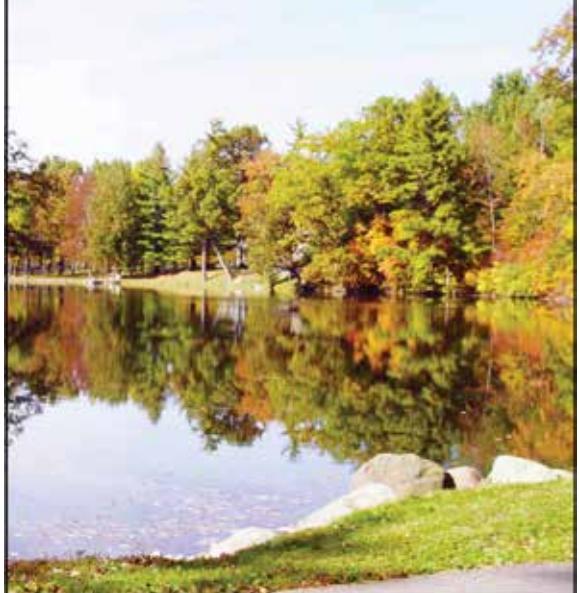
small projects or to provide interim financing for planning larger multi-year projects. Drain notes are usually tax-exempt to investors, which allow borrowing at lower interest rates because the notes are not subject to federal and sometimes state or local taxation. Notes are repaid over a short period of time, and financing quotes from several investors (banks) will assure the lowest interest rate.

Typical Municipal Financial Advisory Services:

- Preparing bond structures, bond size and estimated cash flows required for new money and refunding bond issuances
- Advising issuer on the final bond size, structure, sale method, bond type, and timing of bond sale
- Assisting with the preparation of Official Statements, assignment of bond ratings, and credit enhancements
- Assisting in preparing necessary financial applications and assisting with bond closing
- Ongoing assistance for client inquiries and annual continuing disclosure filings

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CLINTON RIVER SPILLWAY

Catherine Ticer, Hubbell, Roth & Clark, Inc.

Built in 1949 by the United States Army Corps of Engineers to alleviate flooding in Mount Clemens, Clinton Township and Harrison Township, the Clinton River Spillway's effectiveness at controlling floodwater had created a host of environmental problems. The damage hit a critical plateau, impacting connectivity to Lake St. Clair, hampering fish passage, creating habitat loss and promoting growth of invasive plant species. Changes in hydrology due to the installation of a weir led to sediment deposition in the natural channel and downcutting and erosion in the spillway.

Efforts to restore the damaged habitat along the 2½-mile, 80-foot wide man-made channel took shape in 2011 when the Macomb County Public Works office, on behalf of the Clinton River Spillway Intercounty Drain Drainage Board, was awarded initial funding of \$339,500 through the National Oceanic and Atmospheric Association's (NOAA) Great Lakes Restoration Program for habitation restoration planning. As one of 25 habitat restoration projects listed in the Clinton River Public Advisory Council's (PAC) 2011 strategy for removing loss of fish and wildlife habitat beneficial use impairment (BUI) in the Clinton River Remedial Action Plan, the Clinton River PAC selected this project as its highest priority for the 2011 funding cycle. Hubbell, Roth & Clark led the project team on the NOAA-funded engineering and design phase of that two-year project, which was completed in 2013.

In 2014, the Clinton River Spillway Phase I Implementation Plan, designed by HRC, was awarded \$2.5 million by NOAA. The Clinton River Spillway Intercounty Drain Drainage Board soon approved HRC as the lead consultant. The firm, along with its team of sub consultants, immediately began performing grant administration, monitoring, and construction engineering services on the spillway. An additional \$1.5 million from the Environmental Protection Agency completed the financial circle, giving the project 100 percent funding status for this phase.

The ecological enhancement project included the excavation of approximately 120,000 cubic yards of upland bank material, including approximately 0.32 acres of poor quality emergent wetland and 2,100 feet of bank treatment, for the creation of approximately 12.8 acres of riparian emergent and shrub-scrub wetland habitat.



Within 20 minutes of completion, fish and wildlife respond to the newly constructed Clinton River offline habitat

Designed to increase native species cover, fish spawning and other wildlife diversity within the Clinton River Spillway and adjacent Lake St. Clair shoreline, successful completion of this project reduces sediment loading and modifies bank heights through bank stabilization. A significant component of this project also targets the removal, treatment and determent of invasive species.

Today at 85 percent complete, healthy wildlife thrives in this habitat - now home to a variety of fish, birds and small animals. Bank heights have been reduced and 4,800 feet of banks have been stabilized. Marsh enhancements have taken hold with submergent plantings encompassing 17,000 square feet. Wildlife diversity has populated the area, aided in part by the construction and placement of four reptile hibernaculum and four turtle mounds. Basking logs now provide fish cover and turtle habitat, while 12 inverted root wads offer protective cover and bird perch habitats in off-channel areas and vernal pools.



The newly constructed Clinton River offline habitat

“The completion of the Clinton River Spillway project is a major step forward to the total health of the Clinton River,” said HRC Vice President Jamie Burton. “The vision and determination of countless city, county and state officials, along with concerned residents and the dedication of a passionate, highly-skilled engineering team, turned this project into a reality. We are grateful and respectful of the many individuals associated with NOAA and the EPA who granted us the financial capability.”

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SEYDELL DRAIN IMPROVEMENTS

2017 MACDC INNOVATION AND EXCELLENCE

Dan Fredricks, Land & Resource Engineering (LRE)



ENVIRONMENTAL SENSITIVITY AND STORMWATER SENSIBILITY MEET ON THE SEYDELL DRAIN

Often county drain projects can feel like a battle – a battle between neighbors supporting and opposing the project, a battle between regulators and drain commissioners, a battle between man’s grand plans and nature’s ways. In the case of the recent Seydell Drain Improvements project all three of these challenges had to be faced, but that didn’t mean a battle had to ensue. Rather, by working with interested stakeholders and combining a little environmental sensitivity with real world sensibility, a cost-effective and sustainable stormwater solution was provided for residents within the Seydell Drain Drainage District.

PROJECT BACKGROUND

The Seydell Drain is located in Sections 10, 11, and 13-15 of Blendon Township, Ottawa County, Michigan. The Seydell Drain Drainage District encompasses roughly 1,083 acres within the Grand River watershed and consists of primarily agricultural lands with some larger residential

tracts and forested areas. The mainline of the Drain was originally established in 1896.



Historic Flooding (Typ.)

Over the years, natural drainage ways, private ditches and culverts have deteriorated to a condition where chronic seasonal flooding and high ground water levels were adversely affecting homes and property in the upper (southwest corner) portion of the District. The Ottawa County Water Resources Commission (OCWRC) received

MOVEMENTS PROJECT

AWARD WINNER



The new channel

a petition from 25 freeholders of land within the District for cleaning out, relocating, widening, deepening, straightening, tiling, extending, adding a branch and/or adding lands pursuant to Chapter 8 of the Michigan Drain Code, PA 40 of 1956, as amended.

A Board of Determination (BOD) meeting was held on November 6, 2013. Testimony was brought forth from residents documenting flooding of private properties and county roads. The majority of those attending the BOD agreed flooding was an issue in the upper watershed and ultimately the BOD found the petition necessary. Specifically, landowners requested that the Drain be extended to service lands in the southwest corner of the District.

Land & Resource Engineering (LRE) was retained by the OCWRC to conduct an engineering study and design of the Seydell Drain with the focus on alleviating drainage issues in the upper watershed without increasing downstream flow rates or adversely affecting water quality. The subsequent project required extensive coordination with the Ottawa County Road Commission (OCRC), negotiation and acquisition

of easements from 12 landowners, and permits from the Michigan Department of Environmental Quality (MDEQ) pursuant to Part 301, Inland Lakes and Streams, and Part 303, Wetlands, of the of the Natural Resources and Environmental Protection Act, PA 451 of 1994 (NREPA). The final project included approximately 1.5 miles of new Drain construction that provided drainage relief to more than 40 properties and utilized existing wetland complexes to provide water quality treatment and attenuate downstream peak flows.

STAKEHOLDER INVOLVEMENT

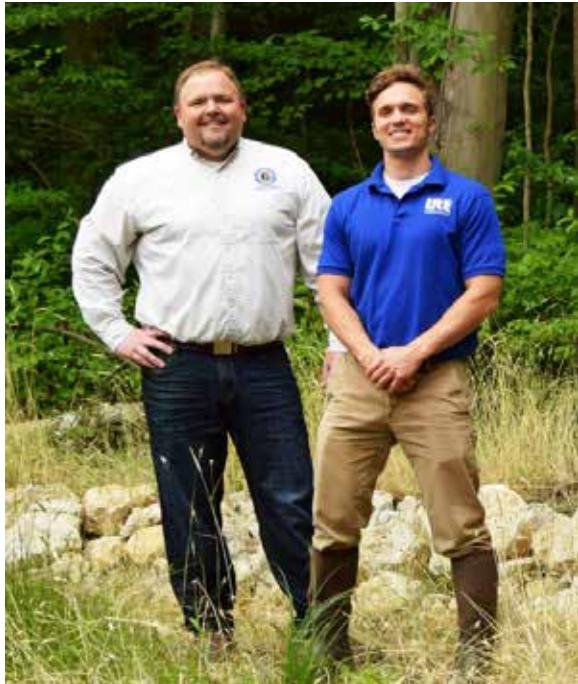
“We feel that working in cooperation with interested stakeholders as part of a team is the best way to ensure a successful project,” said Joe Bush, OCWRC.

Individual meetings were held with each property along the Drain extension to review the project scope, listen to landowner concerns, and negotiate an acceptable easement agreement. Residents expressed concern over flooding of roads, driveways and property, stagnant water in road ditches with no adequate outlet, high ground water, and poor agricultural production. A final project

scope was formulated to address these issues. Several meetings were also held with Blendon Township and the OCRC to address road drainage issues. The final project resulted in establishing portions of the road ditches along 64th Avenue, Baldwin Street and Polk Street as branches of the Seydell Drain. The road ditches were re-graded and driveway culverts replaced to provide an adequate outlet for stormwater. In addition, the road crossings at 64th Avenue, Baldwin Street and Polk Street were replaced with hydraulically superior culverts.



Wetland Complex



Joe Bush, Ottawa County Water Resources Commissioner (left) with Dan Fredricks, Vice President/Project Manager, LRE (right)

ENVIRONMENTAL AND WATER QUALITY BENEFITS

In addition to addressing flooding issues and improving the stormwater conveyance system, the OCWRC wanted to ensure that the proposed improvements did not adversely affect downstream hydrology or water quality. A substantial forested wetland complex separated the historically established Drain from the proposed Drain extension. The OCWRC and LRE worked with MDEQ staff to minimize impacts to existing wetlands adjacent to the Drain by altering the channel alignment to avoid sensitive areas and incorporating the large wetland complex into the project design.

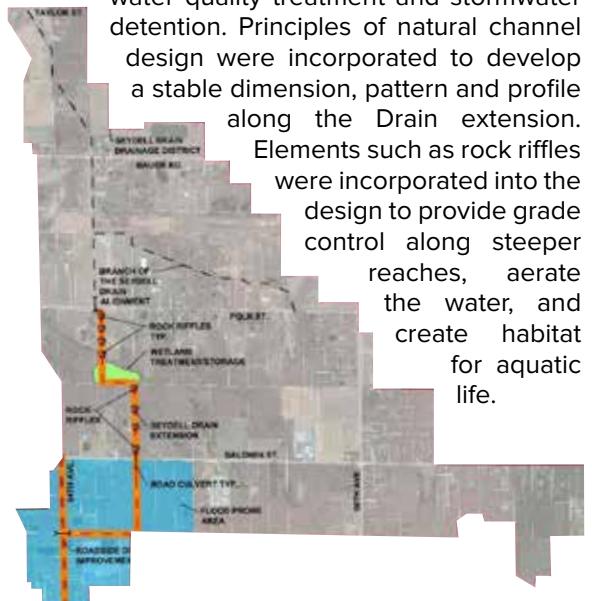
“We saw the existing wetland area as an asset, not an impediment”, said Dan Fredricks, P.E. of LRE, “one which provided an opportunity to attenuate downstream flows and provide water quality treatment”.

Approximately 500 linear feet of the Drain extension was routed through an existing wetland complex. The wetland area provides vital stormwater detention storage and natural filtration of sediment and attached nutrients. No excavation was performed within the wetland, only limited woody debris management. In addition, a small berm and rock grade control structure were constructed along the downstream limits of the wetland complex to provide additional stormwater storage volume and direct surface water into the outlet channel.

PROJECT SCOPE

By working directly with impacted stakeholders, a cost-effective, sustainable solution was selected which minimized the length of Drain extension, utilized the existing drainage-ways to reduce the amount of excavation, and limited the number of new or replacement culverts. In addition, the recommended Drain extension alignment minimized the encumbrance to land use / development by following existing property lines and utilized existing wetland areas for water quality treatment and stormwater detention.

Principles of natural channel design were incorporated to develop a stable dimension, pattern and profile along the Drain extension. Elements such as rock riffles were incorporated into the design to provide grade control along steeper reaches, aerate the water, and create habitat for aquatic life.





Rock Riffle (Typ.)

The final scope of work consisted of the following elements:

- Construction of more than 1 mile of new open channel along the Drain extension.
- Improvements to more than ½ mile of ditches along county roads (64th Avenue, Baldwin Street and Polk Street).
- Replacement of 3 county road culverts and 5 driveway culverts.
- Installation of in-stream rock riffles to stabilize the channel grade.
- Placement of stabilized side inlets to allow surface water to enter the Drain and relieve flood-prone/isolated areas.

- Incorporation of existing wetland areas into the Drain extension to provide for natural stormwater detention and water quality treatment.
- Restoration of all disturbed areas with topsoil, seed and biodegradable mulch blanket.

COST EFFECTIVENESS

The total project cost including construction, engineering, easement acquisition, financing and contingency was just under \$300,000. The OCWRC negotiated supplemental benefit costs with the OCRC, which helped offset project costs and reduced the burden on residents within the District. Improvement to road ditches and replacement of road culverts preserved the integrity of public roads.

Benefits realized from the project greatly outweighed the cost. The southwest corner of the District now has an adequate drainage outlet. The Drain extension handled several heavy rainfall events since August 2016, including more than 2 inches of rainfall over a two-hour period (10-year return frequency), without any reported flooding issues. The Drain has significantly lowered groundwater levels such that basement sump pumps no longer run continuously and

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agricultural production has increased. In addition, routing the Drain extension through the wetland complex provides water quality treatment.



Pre-Construction (Flooding)



Post-Construction



Bush

DRAIN COMMISSIONER RESPONSE

We want to be good stewards of the environment but also cognizant of the drainage concerns of the constituents we serve.

The Seydell Drain Improvements project proved that drainage doesn't always have to come at the expense of the environment and vice versa. Rather, working with mother nature more often than not yields a sustainable and cost-effective solution, which serves the greater good.

The project met the objectives laid out by impacted property owners and OCWRC by providing a holistic, sustainable solution to address drainage issues within the District. The success of this project was due to the coordination and collaboration of the OCWRC with the public, Blendon Township, OCRC and MDEQ. The efforts of the project team helped to reduce localized flooding, improve water quality, lower ground water levels, increase agricultural production and improve public roads within the District.

- Joe Bush, Ottawa County Water Resources Commissioner

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PRODUCERS IN THE RIVER RAISIN STEP UP TO SOLVE ALGAE BLOOM DILEMMA

Alaina Nunn, Graduate Student Michigan State University Institute of Water Research

Lake Erie has undergone serious environmental stress over the past two decades due to extensive algae growth, and conditions do not appear to be improving. Dissolved reactive phosphorus (DRP) (a bioavailable nutrient that algae feeds on) entering Lake Erie has more than doubled since the mid-1990s, leaving agricultural producers concerned that they will become subject to increased regulation on spreading fertilizers containing phosphorus. This was seen in Ohio after the Toledo Water Crisis in 2014, but has yet to occur in Michigan.

Currently, the state of Michigan relies heavily on financial and technical assistance programs, as well as voluntary participation from producers, to engage in conservation efforts. These programs focus mainly on education and providing resources that encourage the adoption of best management practices (BMPs) intended to reduce phosphorus losses. Whether these types of programs will result in the widescale BMP adoption needed to achieve phosphorus reduction goals, however, is still under debate.

Pete Nowak touches on these concerns in [The Conservation Journey](#) where he states “We have created uniform and standardized pathways to conservation with technical guides, models, and consistent program requirements,” and he has encouraged researchers to take a more creative

approach. Additionally, a lack of data which demonstrates the effectiveness of BMPs has left producers uncertain of which practices best reduce phosphorus loading, making it difficult to know where they should focus their efforts. To address these issues, the Michigan State University (MSU) Institute of Water Research (IWR) is engaging farmers in a tile drain water monitoring project in the River Raisin watershed to help clarify what assortment of farm management practices lead to positive environmental results.

The River Raisin watershed, whose land use is approximately 70 percent agricultural, drains into Lake Erie, which makes it a key area for focused conservation efforts. The River Raisin was also deemed a priority watershed following the launch of the Great Lakes Restoration Initiative (GLRI), which has initiated several projects intended to address nutrient pollution and increase awareness of Lake Erie’s condition. Producers in this area have also been actively involved in a farmer-led watershed group (from which participants for this project were recruited), and momentum to help restore Lake Erie has continued to build.

Producers were enrolled in this monitoring project during the spring of 2016, and since then samples have been collected weekly from tile drains by students at Adrian College. Samples are analyzed back at the college, where students have been



Ben Woerner, senior in Biology and Environmental Science at Adrian College

trained to measure levels of dissolved reactive phosphorus and nitrate, which is overseen by Dr. Jim Martin, an Associate Professor of Biology.

“This project has been a wonderful opportunity for me and my students to use new tools, interact with farmers and other stakeholders, and to see how land use and best management practices can influence nutrient runoff. This has given my students an excellent opportunity to see a bigger and clearer picture of a real world problem up close.” - Jim Martin

Farmers have also been enthusiastic about this project, and were more than happy to share some of their thoughts about this work so far:

“I got involved in the MSU water quality study because my farm is located in the River Raisin Watershed. With all the problems with phosphorus and algae blooms in the Great Lakes in recent years I want to be part of the solution, not the problem. So when I was asked to participate in this study, I jumped at the opportunity.” - participating producer

“Farmers need to know what is coming out of their tile. We need to know what practices are cutting nutrient losses.” - participating producer

Each producer met with the lab team after the completion of one growing season to review their water quality results and discuss their interpretations of the data. This has offered a unique opportunity for producers to become fully engaged in the research process and learn something about their individual farm operations.

“So far I have been pleasantly surprised to learn that the phosphorus levels coming off my field tiles are well below other farmers in the study. What that tells me is all the conservation practices I have been doing (i.e., no-till, cover crops, water control structures, manure management and careful timing/placement of fertilizer) is paying off. The most valuable thing I have learned so far is we, as farmers, can make a difference in what nutrients and chemicals leave our fields if we just continue to learn and try new things.” - participating producer

Currently, this project is entering its second year with funding from the Michigan Water

Environmental Association (MWEA), US Geological Survey (USGS), the Department of Environmental Quality (DEQ) Office of the Great Lakes, Adrian College, and MSU AgBioResearch. Additionally, a number of other organizations, such as MSU Extension, the Michigan Agricultural Environmental Assurance Program (MAEAP), and the River Raisin Watershed Council (RRWC) have offered invaluable insight and resources to help make this project a success.

Looking forward, we do realize that it is unreasonable to provide this type of data to every farmer in the watershed, but we are hoping that by providing it to those who are seen as leaders in their community we can capture the attention of their neighbors, and many others. This could be done through asking participants to present their results at field days or farmer-led watershed meetings, which is what we hope to accomplish by the end of this project next spring.

“This project is showing the value of working together from a watershed perspective to continue food production in an environmentally conscious and sustainable way. Alaina’s project with farmers, farmer-led organizations, and numerous agencies and local organizations is providing critically important information. These activities are also part of other efforts making progress on similar issues across the state and Great Lakes Region.” - Jon Bartholic, MSU Institute of Water Research

A full report on the specifics of the study’s findings, including nutrient levels throughout the year on each field (locations to remain confidential), and specific farm management practices used on those fields will be released during the summer of 2018.



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Michigan Association of County Drain Commissioners 2018 Awards Program | Official Entry Form

Pre-application Entry Form must be received by 5:00 PM, November 1, 2017

Complete applications are due by 5:00 PM, December 1, 2017

Information supplied on this form will be used to print awards and/or certificates. Please type or print the project name and the names of firms EXACTLY as they should appear on the award.

Award Winners must supply project abstract and photos electronically so that they can be posted on the MACDC website (macdc.us).

Note: Engineers, Contractors, Suppliers, or Consultants must be MACDC Members or Associate Members to be listed on the award.

Project Name: _____

Project Summary: (3-4 sentences)

Submitted by:

Applicant's Name

Address

City/State/Zip

Phone

Email

Engineer(s):

Contractor(s):

Other Firms or Individuals:

Drain Commissioner's Approval

I approve this submission to MACDC's 2018 Awards Program. The project was completed under my authority or through the authority of a Board of which I am a member. To my knowledge, the entry meets all program requirements.

Name _____

Office _____

Signature _____

Submission Checklist

- Completed Official Entry Form (due November 1)
- \$50 Entry Fee (Checks payable to MACDC) (due November 1)
- Final Application narrative including photos (due December 1)

***Please submit a separate application for each submission.
The \$50 entry fee must accompany each pre-application entry form***



Michigan Association of County Drain Commissioners

2018 Awards Program | Rules and Procedures

Purpose and Goals

This Awards Program aims to:

- Recognize creative and innovative accomplishments of Members and Associate Members of the Michigan Association of County Drain Commissioners (MACDC).
- Promote public awareness of the activities and contributions of MACDC, its Members and Associate Members.

Eligibility

Any MACDC Member or Associate Member may enter this Awards Program. Drain Commissioner(s) and/or Associate Member(s) may submit projects jointly or separately. Associate Members submitting separately must obtain the signature of the Drain Commissioner of record on their Entry Form.

Award Categories

MACDC's panel of judges will review submittals. Two projects will receive an *Innovation and Excellence* award. MACDC will provide one award for each winning project; recipients may purchase additional copies of the award. MACDC may also award Honorable Mention certificates to a maximum of two projects.

Schedule

- Pre-application Entry Form Due: 5:00 PM on November 1, 2017
- Complete Application Due: 5:00 PM on December 1, 2017
- Notification of Winners: on or before January 5, 2018
- Awards Presentation: Thursday, February 15, 2018

General Criteria

1. All entries must be submitted in accordance with the rules outlined in this document.
2. The project must have been conducted under the direct authority of the Drain Commissioner or through a Board of which the Drain Commissioner is a member.
3. A Member or Associate Member may enter as many qualified projects as they wish.
4. Projects that have received awards from other organizations may be entered.
5. Projects must have been completed and in use between April 1, 2015 and December 31, 2017.
6. Entries must comply with Submission Guidelines section of this document. Failure to comply may disqualify an entry. Please read the Guidelines thoroughly.
7. MACDC Awards Committee reserves the right to determine entry eligibility.
8. MACDC Awards Committee determines the Award Category based on submitted information.

Judges and Judging Criteria

The MACDC Awards Committee will evaluate entries based on the work completed by the entering organization(s). Finalists and winners are selected based on overall project excellence. Judges will evaluate and compare projects based on the following.

Judging Criteria:

1. Public involvement and education
2. Environmental and water quality benefits
3. Use of new materials
4. Use of new technologies
5. Innovation
6. Complexity
7. Cost effectiveness

Note: Projects need not contain all seven of the above criteria.

However, the more criteria that a project effectively encompasses, the greater consideration it will be given.

Submission Guidelines

Each entry must include:

1. Completed Official Entry Form; **forms must be signed by the Drain Commissioner** with jurisdiction over the project. **Due November 1.**
2. A non-refundable \$50 Entry Fee is required for each submission. (Checks payable to Michigan Association of County Drain Commissioners). Submit with official entry form; **due November 1.**
3. A brief narrative describing the project as it relates to the Judging Criteria previously listed. The narrative should not exceed five (5) pages. Submit at least three (3) photographs; additional photographs and other relevant material may also be submitted. The complete application packet must not exceed ten (10) pages.
4. Application packets should be bound or stapled; Electronic submissions are preferred. **No 3-ring binders. Due December 1.**

Entry Form Due: 5:00 p.m., November 1, 2017

Final Application Due: 5:00 p.m., December 1, 2017

****Electronic submissions are preferred****

Email Entry Form and Final Application packet to:
admin@macdc.us

Mail Entry Form and Final Application packet to:
MACDC Awards Committee
120 N. Washington Sq., Suite 110A
Lansing, MI 48933

Public Relations

Winning Projects are honored at MACDC's Winter Conference, and are featured in Pipeline Magazine. The Awards Committee will issue a press release to publicize the Awards Program and award-winning projects. Project descriptions will be posted on the MACDC Website (macdc.us).

Special Requirements

All entries will be recognized at the 2018 Winter Conference. MACDC will host a display area. All applicants, regardless of whether they receive an award, may present graphic panels for their projects. Applicants provide a 32" x 40" graphic panel mounted on foam core. The panel should include text such as the Project Title, Drain Commissioner's Name, and a brief list of project highlights. Type size no smaller than 18 point is recommended. Photos, other graphics, and captions that illustrate project features should also be incorporated. The finished graphic panel should "tell a story" about the project. MACDC's Awards Committee recommends simple, inexpensive production for these panels.

Award Winners will be invited to make brief slide presentations highlighting their projects at a conference session on Thursday, February 15, 2018. Further information will be provided with the notification of award (on or before January 5th). Due to time constraints, slide presentations cannot be made for projects receiving Honorable Mention.

Questions?

Contact James Davis, P.E., Awards Program Co-Chair at
517.373.6781 or **davisj19@michigan.gov**

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HUBBELL, ROTH & CLARK, INC. OPENS JACKSON OFFICE

Hubbell, Roth & Clark, Inc. (HRC) has recently opened an office in Jackson, the eighth location for the 102-year-old Bloomfield Hills-based civil engineering firm.

Located at 401 S. Mechanic Street, Suite B, the new office offers full-service civil engineering and provides services to municipal, industrial and private clients.

“HRC has had the privilege of working in Jackson for many years; we are delighted to have the opportunity to continue servicing local clients from our new home as members of the community,” said Nancy Faight, HRC executive vice president.

HRC is a full-service consulting engineering firm providing planning, design and construction engineering. Projects include roads, bridges, stormwater, water and wastewater treatment projects, traffic engineering, GIS, architectural, surveying, materials testing, plan review services and grant funding assistance.

In addition to Bloomfield Hills and Jackson, HRC has offices in Delhi Township, Detroit, Grand Rapids, Howell, Kalamazoo and Lansing.

AFTER 24 YEARS, F&V COMPANIES, INC. ANNOUNCES LEADERSHIP MOVES



Fleis

Co-founder Larry J. Fleis, PE, the President of the F&V Companies, Inc. announced to staff in July that the board has moved forward with some leadership transition moves. The Board of Directors has appointed Fleis as the Chairman of the Board. He will continue to serve as president of FVCI, the parent company of Fleis & VandenBrink Engineering (F&V), F&V Construction (FVC) and F&V Operations and Resources Management (FVOP).

Paul R. Galdes, PE, Vice-President of all the operating companies, has been appointed President of the engineering company and Sr. Vice-President of the other companies.

Craig L. Shumaker, PE, the Kalamazoo office manager who has been handling QA/QC for all the companies, has been appointed as Vice President of Operations and Treasurer for all the companies.



Shumaker

As President of the parent company, Fleis will continue to oversee all three operating companies and support the management teams. Galdes will now be responsible for the day-to-day management of the engineering company.

“I’m not turning in my key and walking out the door,” said Fleis, who along with fellow civil engineer and friend, Steve VandenBrink founded the firm in 1993. “But the transition is continuing.”

“It’s an exciting time to be at F&V,” said Galdes, who joined F&V in 1993. “We’ve all been anticipating and planning the transition for a long time.

“A lot of companies fail when they don’t plan and all of a sudden the founders want to retire and people are left looking around for their next move.”



Galdes

F&V initiated its leadership and ownership transition plan in 2006 with the creation of the Principal/Associate program. Galdes was one of six Principals named at that time. In 2014, Galdes was also named Vice President of Operations.

“This is going to have a positive ripple effect throughout the company because somebody has to fill in what Craig and I have been doing,” Galdes added. “There are opportunities for folks that have been with the company to fill leadership roles today and for years to come.

“I’m looking forward to the next 25 years and seeing our current staff grow and meet those challenges.”

“This transition is just a natural progression,”

added Shumaker, who joined the firm in 2006 when F&V merged with Gove Associates, Inc. “And it’s already been happening for a few years with some of us doing various duties.

“None of us are getting younger so there’s a whole next generation that is evolving and being coached here at F&V. It’s going to be cool to be a part of it in the next few years.”

Fleis said he has been working closely with Galdes in just about everything that is happening at the company and that Schumaker has already been responsible for QA/QC for the company and monitoring all the projects.

VandenBrink was Vice-President at F&V until his departure in 2015. Fleis set no timetable for his retirement, but said he would like to begin reducing his hours and work load.

“I’ll still be helping Paul and the management team and I’ll still be cracking the whip where I can,” Fleis said.

In addition to the transition moves, John DeVol,

PE, Robert W. Wilcox, PE, Donald J. DeVries, Kendall A. Beck, PE were appointed as advisors to the Board of Directors.

F&V will celebrate its 25th anniversary in January of 2018. It has grown from a two-person civil engineering firm to over 200 employees with nine offices in Michigan and Indiana.

Earlier this year, F&V was recognized again as one of the “101 Best and Brightest Firms to Work For” in West Michigan and it will also be recognized next month as the 30th fastest growing firm in the United States and Canada – A Zweig White “Hot Firm”.



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CALENDAR OF EVENTS

SEPTEMBER 24 – 26, 2017

MAC Annual Conference
Grand Hotel, Mackinac Island

SEPTEMBER 27 – 29, 2017

Michigan Wetlands Association Conference
Treetops Resort, Gaylord

SEPTEMBER 29, 2017

Northeast District Meeting
Northern Concrete Pipe, Bay City

OCTOBER 5, 2017

Northwest District Meeting
Northern Concrete Pipe, Wyoming

OCTOBER 20, 2017

Southwest District Meeting
St. Joseph County

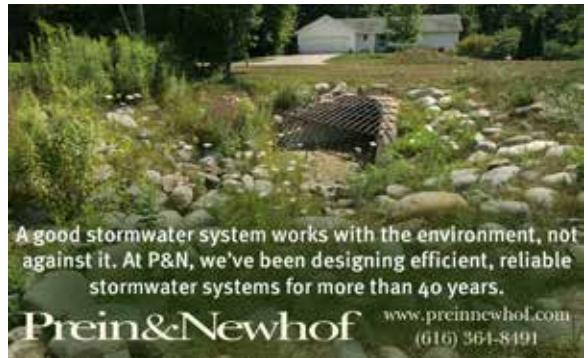
Check our website www.macdc.us for a complete list of events. To place your event on this calendar, contact us at 517.484.9761 or admin@macdc.us.



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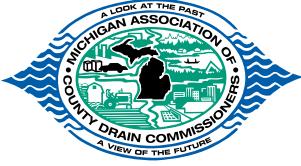
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