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PRESIDENT'S MESSAGE

EVAN PRATT, PE
Washtenaw County
Water Resources Commissioner



Another summer conference is in the books, once again a fantastic team effort by many hands! We welcomed several first-time attendees, competed in the "MACDC District Games", celebrated 100 years of working with MDARD, checked in on legislative issues and enjoyed our favorite activities on Thursday once again. And bringing a tear (remotely) to past President and Life Member Brian Jonckheere's eye was the sight of district signs to help us sit in the right place on Friday morning. Get well, Brian!!

In addition to another set of informative sessions on topics both new and old, we spent time with each other. We asked each other questions about current challenges and workload, and had a chance to pin down the little details that made a unique program successful. These side conversations have always been my favorite part of conference, and quite frankly the main path for my own successes and learning experiences with new ideas.

One thing that stuck with me this year was the growing number of challenges that each drain commissioner faces – and the calm creativity each of you expresses when describing how you've responded to adversity, surprises, and emergencies. It seems that all of us understand the need to manage the external communications while leading a small or large team to an affordable technical solution to the emergency or crisis du jour.

So, in this issue I thought I would summarize a few bullets I seem to have heard over and over when talking to public works professionals like you about responding to situations that affect constituents. This isn't a recipe, but in the heat of the moment, these are the ingredients to not only keeping our jobs, but also building confidence with our constituents and local elected officials.

A confident team is best positioned for sustained high performance:

- Keep cool
- Stay positive
- Have empathy for those affected
- Prepare bullets for community officials and the media. You want to provide the story to them, not have them go looking. A communications void will always be filled by speculation and rumor.
- Share what you know and when you'll share more. NO timelines until you are 100% certain.
- Lean into "we're doing everything we can" – provide 2-3 examples of "what we're doing" ("looking into" isn't "doing"). People want to see action and hear about next steps.
- Continue to keep cool but stay on it – how often do you need updates??? If not you personally, is the person (staff or consultant) accountable for a solution meeting with the team weekly or daily?
- Document, document, document. When did it happen, when did we know, what significant steps happened when??
- Have even more empathy for those affected

Thank you all for the education you continue to provide to me and all your fellow public works professionals. I look forward to seeing you all at district meetings, winter conference, or sooner if I'm lucky!

~Evan

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BOSWORTH RECOGNIZED FOR DEDICATION TO DRAIN COMMISSIONERS

By: Kristen McCue, GCSI Association Services

This past July, MACDC honored Deena Bosworth, director of governmental affairs for the Michigan Association of Counties (MAC), for her commitment to advocating for Michigan's drain commissioners.

Bosworth received the Darwin McLeod Leadership Award during MACDC's annual summer conference. She's the fifth recipient of the award.

The McLeod Award recognizes those who go above and beyond, said MACDC Board President Evan Pratt.

"I am always impressed at how much she cares about the people we serve," Pratt said*. "Deena's ability to convey constituent benefits to legislators on a wide range of legislative issues is remarkable."



McLeod

McLeod, former drain commissioner of St. Clair County who has worked with, and for, 40 counties in the state, dedicated more than 50 years to MACDC. For example, he only missed two drain conferences from 1960 to 2009, where he often presented, taught, and advised newcomers.

Known for being professional, courteous, friendly, and helpful to members, McLeod always strived to improve the industry and assist colleagues with his candid and plainspoken advice, said Michael Quaine, senior project engineer for BMJ Engineers and Surveyors, shortly after the award was created 20 years ago. At the same time, McLeod's enthusiasm is contagious, inspiring others and fostering cooperation.

"Deena has time and again proven to be a wise counselor, tireless advocate and savvy operator on the state in Lansing on behalf of the MACDC," McLeod said.

Bosworth commends McLeod for his efforts to help MACDC run seamlessly, saying she's honored to be recognized for the same dedication McLeod has shown to the organization.

"Representing the drain commissioners is meaningful to me because I absolutely believe in what they do," she said. "I don't think we would have anywhere near the state infrastructure needed to live in Michigan if drain commissioners didn't do the work they do."

**Quotes are taken from an article in the August edition of Michigan Counties magazine.*



Bosworth



MDARD Intercounty Drain Program Celebrates 100 Years

By: Kristen McCue, GCSI Association Services

Founded in 1923, Michigan's Intercounty Drain Program has been protecting the state's drainage infrastructure for 100 years, providing support for roads and safeguards for homes and businesses.

It's a huge feat, and one that deserves recognition. So, in July, Dr. Tim Boring, director of the Michigan Department of Agriculture and Rural Development, presented a tribute on behalf of Gov. Gretchen Whitmer during MACDC's conference in July.

"Along with our partnership with drain commissioners, consultants, contractors and ongoing budget support from Gov. Whitmer, MDARD continues to improve our storm drains and sanitary sewers serving more than 17 million acres of agricultural and urban lands and roadways," Boring said.

Passage of Public Act 316 on Aug. 30, 1923 expanded MDARD's responsibilities to include the administration of intercounty drains and drainage boards. The program now establishes, improves, and maintains more than 950 intercounty drainage districts spanning about 68 counties.

Prior to the passage of the act, much of southern

lower Michigan was difficult to farm, said MACDC President Evan Pratt.

"MACDC appreciates our collaboration with MDARD," Pratt said. "Our members are responsible for over 6,000 of the more than 41,000 miles of drainage systems throughout the state. We're proud to have served our state's farmers and agriculture community for more than a century."

MDARD's Intercounty Drain Program and MACDC continue to work together, recently completing \$11 million Little Tobacco River Intercounty Drain in Clare and Isabella counties and \$45 million in upgrades to the Milk River Retention Treatment Basin Pumping Station in Macomb and Wayne counties.

"Along with our drainage boards and commissioners, MDARD will continue to utilize the vast tools of the Michigan Drain Code to improve the state's drainage infrastructure," Boring said.



Intercounty Drainage team with Dr. Boring. From left, Peggy Snyder, Tim Boring, Michael Gregg, Brady Harington and Joseph Brezvai. Not pictured, Joy Myers.

MDARD Intercounty Drain Program: A History

1920s

- The Intercounty Drain Program is established by Public Act No. 316.
- First major project on Royal Oak Drain.
- P.A. 316 is amended to allow for the creation of sanitary districts under the supervision of the drain commissioner or drainage board. The first district formed is the Nine Mile and Halfway located in Macomb County.

1930s

- The Depression stalls drainage petitions.
- Most work was done on existing drains with new drain construction falling dramatically.
- John Hudson appointed Chief of Drains.

1940s

- Post-war years saw an explosive growth in housing and outward growth from cities requiring additional storm drainage.
- by the end of the decade nearly 700 inter-county drains have been established since program inception.

1950s

- Interstate highway system begins requiring drainage and alteration of drains.
- Stan Quakenbush becomes Chief of Drains.
- 1956 Drain Code established.

1960s

- Completion of Milk River Pump Station in Macomb/Wayne counties - largest intercounty combined sewer pumping and treatment facility.
- Former drain commissioners Darwin McLeod, P.E. and Harry Mikan join Drains Division.

1970s

- multiple environmental acts established: Federal Clean Water Act, Michigan Inland Lakes and Streams Act, Michigan Wetland Protection Act, Freedom of Information Act, Open Meetings Act.
- Headlee Amendment is added to Michigan Constitution.
- Mike Gregg joins Drains Division as an inspector; Harry Mikan named Drains Division Chief.

1980s

- MDARD convenes task force amid pressure to change Drain Code.
- Jeff Friedle, P.E. and Karl Hausler join Drains Division.
- Harry Mikan retires and Mike Gregg is appointed manager of the of the intercounty drain program now part of the Michigan Department of Agriculture's Environmental Stewardship Division.

1990s

- Natural Resource and Environmental Protection Act (NREPA) passes.
- Major rewrites of Drain Code introduced but die in House of Representatives.
- Peggy Snyder joins Intercounty Drain staff.

2000s

- Another Drain Code rewrite introduced passing in House, but ultimately failing in Senate.
- Water Resources Commissioner is added as a title for drain commissioner.
- Increased emphasis on retention/detention, sustainable channel design and river restoration and stabilization.

2010s

- Drain Code amendments to Sections 196, 135 & 197. Brady Harrington, P.E. joins Intercounty Drain staff.
- EGLE petitions Milk River Pump Station rehabilitation. Department scanning project begins with State Archivist.

2020s

- COVID-19 Pandemic; drains designated as critical infrastructure.
- Joy Myers and Joe Brezvai join Intercounty Drain staff.
- Drain Code chapter 22 rewrite.

MEET MDARD DIRECTOR TIM BORING, PHD

In March 2023, Gov. Gretchen Whitmer appointed Tim Boring director of MDARD. He was previously the state executive director of the USDA Farm Service Agency, appointed to that position by the Biden administration.



Dr. Boring

Boring has also served as president and founder of the Michigan Agri-Business Association, where he worked closely with Sen. Debbie Stabenow. He also worked as research director of the Michigan Soybean Promotion Committee.

Coming from a long line of farmers, Boring's family operates a sixth-generation farm in Stockbridge.

"I'm honored to be selected for this important position working on behalf of Michigan agriculture," Boring said in March. "There are tremendous opportunities ahead of us to make meaningful progress improving climate resiliency, water quality, rural economies and access to safe and nutritious food."

Boring holds a bachelor's degree in agriscience and a master's degree and Ph.D. in crop and soil sciences.

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Ottawa County's “Divide & Conquer” Approach to Successful Development Review

By: Amanda J. Knutson, Fahey Schultz Burzych Rhodes

Over the past several years, many Michigan counties have experienced significant population growth, resulting in increased development statewide. While development has many positive impacts on a county, it can also have daunting implications for drain and water resources commissioners who are responsible for stormwater development reviews. Ottawa County has charged headfirst into the challenge with a “divide and conquer” approach that splits the development review process into three manageable roles.

Dividing responsibilities during the development review process ensures the most thorough review by creating a specialization of duties as a project is taken from start to finish. It also allows for the involvement of professional consultants when appropriate. The key to a successful “divide and conquer” approach is high levels of communication among the following three roles: administrative, engineering and legal.

THE ADMINISTRATIVE ROLE

In Ottawa, the administrative role is handled by the Water Resources Office, which kicks off the development review process with the intake of applications from developers. An application should be accompanied by preliminary plans, a development review fee, and a signature by the developer. At this stage, the goal is to get all parties on the same page with a commitment to specific project plans to avoid wasting time and funds as the review process moves forward. For larger projects, a preliminary review/kick-off meeting to discuss the project plans is also utilized.

After the initial intake, the administrative role revolves around organization, communication, and documentation. This includes tasks such as coordinating with the developer, assigning necessary consultants, historical document lookup, issuance of approval letters,



Dividing responsibilities leads to a more successful review process for all parties.

invoicing, and permit reporting. It also includes maintenance of an internal tracking system for projects containing all relevant information on the project status.

THE ENGINEERING ROLE

To streamline the process, an engineering consultant (or internal engineer) is assigned to a project as quickly as possible upon receipt of the application. The engineer's role begins with identifying the project area, watershed, and expected outlet. The engineer then reviews the proposed stormwater infrastructure to verify that it satisfies the County's development standards. This generally includes a technical review of stormwater calculations and construction plans.

Next, the engineer reviews the project documentation and works with the developer to ensure that it is clear and comprehensive for the County's records. Finally, the engineer reviews the project design for long-term functionality

DIVIDE & CONQUER CONT.

and compliance with MS4 permitting requirements, if applicable. At this stage, the goal is to ensure that the infrastructure design is adequate and there is accessibility for future maintenance of the proposed stormwater infrastructure.

THE LEGAL ROLE

If an application for a project indicates that there may be an impact on a drain or drainage district or that the County may need to take over a portion

of the drainage system, legal counsel should be brought in for a project kick-off meeting. During the kick-off meeting, the parties should confirm



A successful review process leads to a successful project.

the expected outlet, route and course, drainage district impacts, and necessary easements. Legal counsel can then draft and review all necessary



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easements and agreements throughout the development review process.

While projects tend to fit into certain categories of activities, each project is unique, and the one size fits all approach does not work. Accordingly, it is important to engage legal counsel to have agreements and easements to fit each situation. Please also remember that if the review process is set up appropriately, all legal costs expended related to a development should be charged back to the developers. For projects without drain impacts, the legal role may not be required.

BRINGING IT ALL TOGETHER

Success of this divide and conquer approach hinges on collaboration and communication throughout the process. Once admin, engineering, and legal are satisfied with the proposed development plans, this process culminates in requiring final project documentation from the developer (agreements, easements, as-builts, etc.). As part of the final documentation, Ottawa WRC requires restrictive covenants (either as a separate document or integrated into the master deed) containing a block grading plan, minimum floor and opening elevations, footing drains and sump pumps, easements for rear or side yard and surface drainage, soil erosion and sedimentation control permits, and a statement that lot owners are responsible for the maintenance of open water bodies. This final documentation ensures that there are requirements in place to protect stormwater infrastructure and surrounding properties throughout the life of the development.

While stormwater reviews and the associated coordination with developers and landowners can be a taxing and tedious process, this divide and conquer approach helps ensure these projects remain manageable with the protection of multiple layers of review. More importantly, performing these reviews provides a crucial public service that helps protect private and public property by ensuring development occurs in a responsible way.



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Pre-application Entry Form must be received by **5:00 PM, November 1, 2023**

Complete applications are due by **5:00 PM, December 1, 2023**

Application is available at <https://macdc.us/awards>

Awards Program | Rules and Procedures

Purpose and Goals

This Awards Program aims to:

- Recognize creative and innovative accomplishments of all scopes, sizes, and budgets, 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.

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, 2021 and December 31, 2023.
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 (in no particular order):

1. Public involvement and education
2. Environmental and water quality benefits
3. Use of new materials
(including improving/finding new uses of existing materials)
4. Use of new technologies
(product/method/tool to solve problem)
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.

Electronic submissions are preferred*

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

Questions?

Contact MACDC at **517-484-9761**
or admin@macdc.us



Flood Mitigation Project Little Tobacco River



By: Erin M. Heitzenrater, Spicer Group, Inc.

PROJECT BACKGROUND

The Little Tobacco River Intercounty Drain begins just northeast of US-10 in Grant Township in Clare County and travels 2.83 miles through Clare County, southwest through the historic downtown in the City of Clare to Dunlop Road, which is the Isabella County Line. Its waters flow into the Tittabawassee River, the Saginaw River, and ultimately Saginaw Bay.

The drain was established in 1897 and is maintained by the Little Tobacco River Intercounty Drain Drainage Board. The Little Tobacco River Intercounty Drainage District services approximately 7,007 acres and consists of many different land uses.

Historically, the City of Clare had been built-out within the existing drain right-of-way and special flood hazard area for the Little Tobacco River Intercounty Drain. Businesses and residences were located directly next to the drain, which crosses beneath 13 bridges within the City. Flooding surrounding the drain was a proven and historical threat.

To mitigate this, the City of Clare petitioned the Little Tobacco River Intercounty Drain Drainage Board to develop an improvement and maintenance project to improve the drain and significantly reduce the possibility of flooding within the drainage district.

This project was found necessary by the drainage board in 2013 after a public Board of



Project Improves Intercounty Drain

2023 MACDC INNOVATION AND EXCELLENCE AWARD WINNER

Determination hearing where the board listened to the residents and stakeholders about the flooding concerns along their property and on roadways. This project was also found necessary after inspections of bridges throughout the City of Clare that crossed the drain were found to be at the end of their life expectancy and required replacement. Additionally, an inspection and survey of the drain found it overgrown with brush and vegetation, and undersized for the capacity necessary to convey the water downstream and mitigate potential flooding.

For the next few years, the drainage board worked with the City and other stakeholders to find a cost-effective solution that focused on mitigating the risk of flooding throughout the area.

Photo: Installation of the hyspan crossing with pedestal footings and precast wingwalls on the Little Tobacco River Intercounty Drain along S. Eberhart Ave. in the City of Clare.

PROJECT SCOPE

Multiple options on how to improve the drain and solve flooding issues were brought forward to the drainage board over the years. After a hydraulics study was completed by Spicer Group, it was determined the bridges and drain were inadequate to support the 100-year storm floodplain. To reduce flooding and improve the drain, all the bridges would have to be replaced, increased in size, and the drain channel would need to be increased to convey the water downstream and avoid flooding during significant rain events. This solution, however, was cost prohibitive for the municipality as their budget would not be able to sustain it.



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This home at 302 Maple Street in Clare was removed from FEMA's Special Flood Hazard Area as a result of the Pre-Disaster Mitigation Grant.



Dunlop Road flooding at the upper extent of the Little Tobacco River Intercounty drainage system before the improvement project.



Inspection of the Little Tobacco River Intercounty Drain before in the historic city of Clare before the improvement project.



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An alternative solution was proposed to replace the bridges, increasing their width, while also pursuing funding through the Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation Grant program to create a necessary floodplain for the drain. This program provides funding for municipalities to purchase property from owners at a fair market value to then remove the structures from the special flood hazard area, creating an open greenspace and floodplain.

Securing this grant funding reduced the scope of channel improvements and bridge spans within the project, lessening the project's cost to a more affordable number for the stakeholders. Removing buildings from the properties and restoring the greenspace also created and restored a floodplain shelf, restored floodplain connectivity, and reduced the risk of property flooding throughout the City of Clare.

It was determined that 26 landowners with properties within the City were eligible for the grant process. The Drainage Board worked with the landowners to use the grant to voluntarily move from the floodplain area. Once vacant, these homes and buildings were removed from the floodplain, reducing the risk from the 100-year stormwater levels.



Demolition of a building along W. First Street in the City of Clare as part of the FEMA Pre-Disaster Mitigation Grant Program part of this project.



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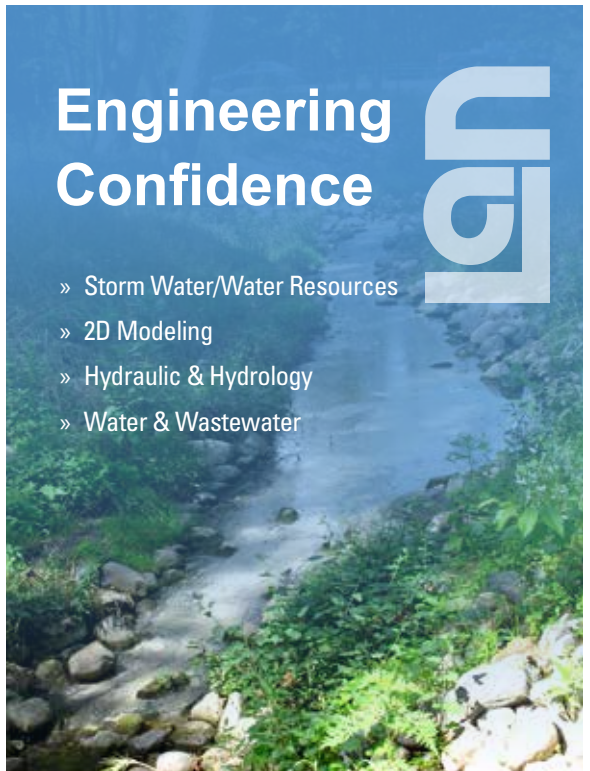
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Once those structures were removed and the floodplain was restored to a more natural state, the greenspace within the floodplain allows runoff and stormwater to be filtered, removing more contaminants than were removed previously, prior to the water entering the drain and being carried downstream. This natural filtration benefits not only the Little Tobacco River Intercounty Drain, but the Tobacco River, and Tittabawassee River, and Saginaw River before entering the Saginaw Bay.

Other innovative design approaches were also used within this improvement project, including utilizing exemptions within the Michigan Drain Code.



Demolition of the Great Lakes Central Railroad Crossing on the Little Tobacco River Intercounty Drain.



Demolition of the Great Lakes Central Railroad Crossing along the Little Tobacco River Intercounty Drain in the City of Clare.

The original depth and features of the drain channel were maintained, and the ordinary high-water mark was improved, which omitted the need for a permit application through the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and expensive improvements and expansions to the bridge infrastructures around the drain. This, along with utilizing the FEMA Pre-Disaster Mitigation Grant in conjunction with replacing the bridges at their original size, helped the project become a financially feasible undertaking for the municipality and stakeholders.

The bridge-replacement portion of the project included the replacement of 11 bridges that crossed the Little Tobacco River Intercounty Drain. These bridges were at or near life expectancy – some having been built more than 80 years ago—posing a risk to those that traveled them every day. These bridges were replaced with new and improved structures, creating safer, more sustainable roadways.

In seven of the bridge replacements, three-sided bridge spans with pedestal footings or pilings were used. These pedestal footings were specially designed by Spicer Group and Northern Concrete Pipe and were the first of their kind implemented on a three-sided structure. This design allowed the drain's natural stream bed to be retained, rather than be replaced with a flat-bottomed stream bed typically used in a four-sided box culvert crossing. In addition, the footings allowed for manageable loads of precast materials to be shipped to the site by lessening the need for a greater scaled three-sided box culvert.

PROJECT PARTNERS


Spicer Group, Wade Trim, and Fahey Shultz Burzych Rhodes, assisted the Little Tobacco River Intercounty Drain Drainage Board with managing the improvement project, maintaining a high level of communication and coordination throughout the entirety of the project, designing the replacement bridges, designing the drain improvements, applying for the grant, administering the grant, construction the improved drain, demolishing the buildings within the floodplain, and constructing the greenspace and floodplain shelf.



Demolition of the Great Lakes Central Railroad Crossing along the Little Tobacco River Intercounty Drain in the City of Clare.



Installation of culvert crossing on the Little Tobacco River Intercounty Drain.



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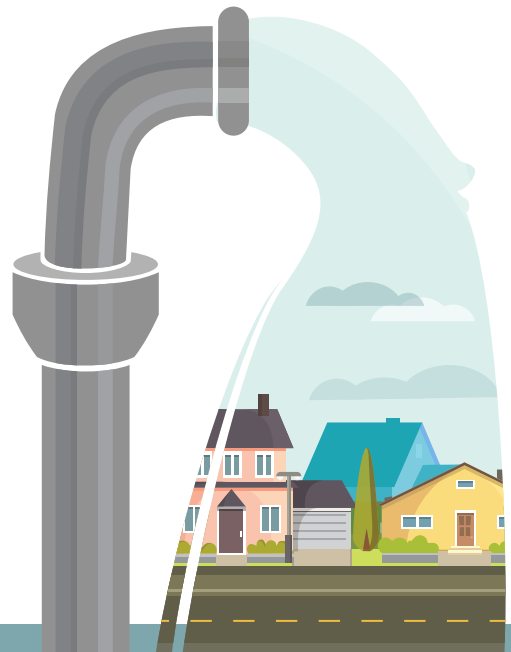


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NEW DIRECTOR AT EGLE

Phil Roos was named director of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) in July of 2023. Roos oversees EGLE's \$1 billion budget and 1,400-person team dedicated to protecting Michigan's environment and public health through managing the state's air, water and land and energy resources.

Nestled in the heart of the world's greatest freshwater ecosystem, EGLE has a unique regulatory role in ensuring the Great Lakes and their connecting waters remain the vital cultural, recreational, ecological, and economic engines of the region. The agency also regulates air quality, waste management, drinking water, groundwater, oil and gas extraction, and contaminated site remediation.

Roos is an entrepreneur, business leader, and a consultant with deep expertise in organizational strategy, innovation, and growth. He has held senior leadership positions in numerous large

and early-stage companies, as well as two consulting firms he founded.

Environmental protection has been a constant in Roos' life. He has been a longtime board member and officer of wildlife, conservation, and health organizations and was vice chair of Michigan's Council on Climate Solutions.



Roos

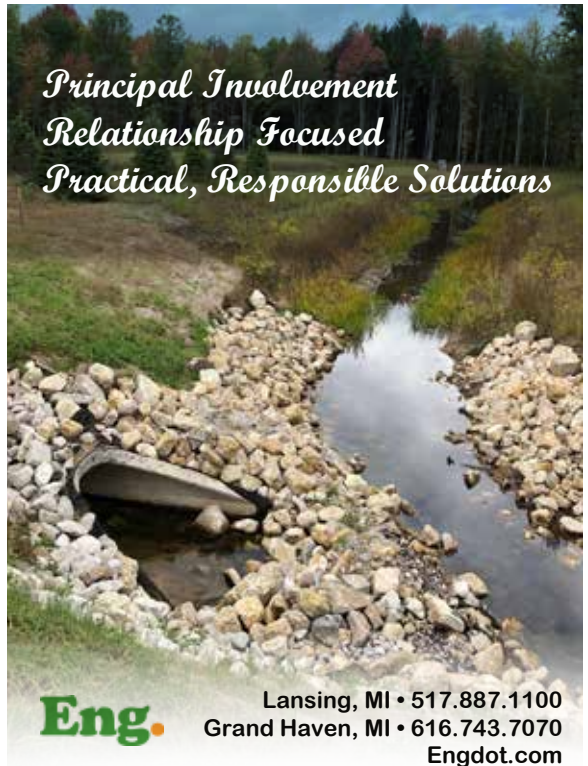
Roos holds an bachelor's degree in Business Administration from the University of Michigan's Ross School of Business and a master's degree in Business Administration from the Harvard Business School.



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Bay City, MI

OCTOBER 17, 2023

MACDC Southeast District Meeting
Fenton, MI

OCTOBER 18, 2023

MACDC Northwest District Meeting
Bitely, MI

OCTOBER 20, 2023

MACDC Southwest District Meeting
Holland, MI

FEBRUARY 14-16, 2024

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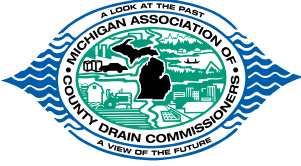
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