



## President's Message



Dear ASCE Northwest Branch,

Greetings and welcome to another exciting year of ASCE in northwest Wisconsin! I am honored and delighted to serve you this year as President. The executive board has been working hard preparing great activities for you. The branch will have many opportunities for you to tour projects around our area, learn more about civil engineering as a whole, and network with other like-minded people. It's a good thing step away from the desk or job shack and to enjoy civil engineering outside of work. I hope you will be able to participate in upcoming activities and perhaps even take on a leadership role, no matter the size.

Speaking of leadership, the executive board is looking for a few good people to help us round out the board as Directors-at-Large. These positions have the least time commitment of any of the board positions. We do ask that you attend a monthly conference call, organize a tour or social, and help out during Northwest Branch events if possible. We are looking for someone from the La Crosse area, another from the Wausau/Stevens Point area, and a third from the Hudson/Menomonie/Rice Lake area. If you are interested in learning more about this position, please contact any board member.

The branch has also earned the honor of hosting the 2015 Spring Technical Conference in La Crosse. This March 12, 2015 event will showcase northwest Wisconsin. The board is looking forward to the conference as it will be the first time the Northwest Branch has undertaken such a venture. The conference co-chairs are looking for people to help plan and execute this fantastic event, as discussed later in the newsletter.

Finally, as a new feature to the newsletter, I will be adding an article or two about civil engineering features in northwest Wisconsin. Our area of the state has a rich civil engineering history and I feel that many of us may not know that some of these projects exist. If you have any suggestions for this new feature, please contact me so I can work with you to highlight local civil engineering gems.

Northwest Branch, I wish you a wonderful remainder of the autumn season, and I hope to meet many of you at our tours and activities. I am looking forward to a fun, exciting and successful year for the branch.

Sincerely,

*Teresa L. (Brunner) Davis*

Northwest Branch President

Email: [brunnete.80@gmail.com](mailto:brunnete.80@gmail.com)

*As always, the views expressed in the president's message are those of the author and do not necessarily represent the official positions of ASCE.*

## **Past-President's Message – A fond farewell & call for action**

Dear ASCE Northwest Branch,

Thank you for giving me the opportunity to serve you as the President of the Northwest Branch over the last year. It was an honor to be able to interact with you; plan events; and get your voice heard on the National Level regarding Infrastructure Initiatives.

Thanks to Will Kratt, the highlight for me this past year was when the Northwest Branch was selected to host the 2015 Spring Technical Conference. It has been a goal of the Branch to host either the WI Section Annual Meeting or the Spring Technical Conference for numerous years.

And now the fun part begins...the 2014-2015 Northwest Branch Board consists of a high-energy group of individuals that wants to serve you in every capacity that they can. BUT they need your support and need to hear your voice. Email or call a Board member to tell them what you would like out of your membership—more construction tours, trainings, networking, etc. Don't know what you want out of your membership—what about serving on the 2015 Spring Technical Conference Committee? Presenting at the 2015 Spring Technical Conference? Or encouraging your employer to be a sponsor?

I look forward to continuing to serve our members in the Past-President capacity and representative of the Branch at the WI Section.

Sincerely,

*Jessica L. Felix*

Northwest Branch Past-President  
Email: felix.jessica@att.net

## **MEMBER NEWS**

### **Mike Binsfeld receives Matthew Thomas Rynish Honorarium**

Mike Binsfeld was recognized for his dedication, leadership and enthusiasm to the Northwest Branch by receiving the Matthew Thomas Rynish Honorarium. The purpose of the Matthew Thomas Rynish Honorarium is to recognize and honor the contributions of Matthew Thomas Rynish to the Civil Engineering profession and the ASCE community, particularly to the Northwest Branch of the Wisconsin Section. For more information on the recipient criteria or to nominate a Northwest Branch member, please visit the website: <http://www.ascewinw.org/honorarium/>.



Congratulations, Mike!

## **UPCOMING EVENTS**

### **ST. CROIX CROSSING TOUR AND SOCIAL**

**Wednesday, November 12, 2014 from 3:00 to 6:00 PM**

- Minnesota and Wisconsin sides of the St. Croix River
- Social at Agave Kitchen, 501 2<sup>nd</sup> Street, Hudson, WI

The tour has a limit of 20 participants, and everyone must RSVP by 7:00 PM, Monday, November 10. Detailed instructions for meeting locations will be distributed after registration is closed. Participants do not have to be members of ASCE to join in this unique opportunity.



Image credit: <http://www.dot.state.mn.us/stcroixcrossing/newsrels/121013wisdot.html>

The joint project connects Minnesota and Wisconsin in a new location downstream of the current crossing at the Stillwater Lift Bridge. The project includes grading and approach work on both sides of the river, bridge construction, and conversion of the Stillwater Lift Bridge to a loop trail. This high-profile project can be further investigated on the Wisconsin DOT website at <http://www.dot.wi.gov/projects/nwregion/stcroixcrossing/index.htm> and the Minnesota DOT at <http://www.dot.state.mn.us/stcroixcrossing/background.html>.

We will tour the grading on both sides of the river and more, depending on the group size. Participants must bring a safety vest, hard hat, steel-toed shoes and safety glasses. Earn 1 PDH and join us for learning and socialization in the beautiful St. Croix Valley.

## **2015 ASCE Wisconsin Spring Technical Conference**

The Wisconsin Section Northwest Branch is honored to be hosting the 2015 ASCE Wisconsin Spring Technical Conference for the first time on March 12th at the La Crosse Center in La Crosse. We are looking for some great people to help us make this a memorable event for the entire Wisconsin Section. Stay tuned for further details on this historic event.

The Spring Technical Conference Committee has been meeting frequently to set the agenda, budget and speakers for the 2015 Spring Tech Meeting in La Crosse. If you are interested in joining the committee, please contact Will Kratt at [william.kratt@gmail.com](mailto:william.kratt@gmail.com), Mike Binsfeld at [mike.binsfeld@gmail.com](mailto:mike.binsfeld@gmail.com) or Kris Roppe at [kristopher@roppe.net](mailto:kristopher@roppe.net).

## **PAST EVENTS**

### ***2014 Region 3 Assembly, August 14-15, Chicago, Illinois***

Teresa Davis attended the Region 3 Assembly in Chicago, IL this past August. The assembly included lively and thought-provoking discussions pertaining to the Infrastructure Initiatives as described below. The documents were developed to provide information to Sections and Branches regarding infrastructure projects and concerns. Below are a summary of the initiatives and a summary of the outcomes.

The American Society of Civil Engineers champions a national initiative centering upon educating the public and its elected representatives on the condition of the Nation's Infrastructure. The initiative concentrates upon highlighting the shortfalls in an array of Infrastructure categories, defining the Failures to Act and their consequences, and requesting the development of sustainable funding streams such that long-term public needs will be reliably met.

The Region 3 Board of Governors, representing ASCE members in Ohio, Michigan, Illinois, Wisconsin, Minnesota, and North Dakota, has assembled Sustainable Transportation Funding Sources. The purpose of these sources is to facilitate Legislative Solutions.

The goal of the Region 3 Infrastructure Initiative is to create new Infrastructure Funding Streams and to enhance Existing Funding Streams. The components of these streams include:

1. Funding Streams for Infrastructure Costs paid by the Users.
2. Funding Streams that automatically account for inflation.
3. Funding Streams that are adjustable for regulatory changes.
4. Funding Streams that are adjustable for future capital needs.

### **Sustainable Parks and Recreation Funding Sources**

A major commitment to families and community are Parks and Recreation. Parks add to the quality of life, offer opportunities for fresh air and exercise, and allow residents and visitors to enjoy public places. Generally parks and recreation are funded through community or park district taxes. The Region 3 Initiative concentrates upon philanthropic opportunities.

Almost without exception, parks must be located and maintained within the geographic boundaries of the Unit of Government owner. Through the establishment of Parks Foundations, land can be owned or

dedicated through conservation easements inside or outside of those boundaries, private funds can be solicited, and willing donors will have a depository for gifts. Parks are popular for potential donors because they improve the community quality of life, they are permanent, and they allow the donor to leave a legacy.

**Strategy: Establish Parks Foundations (501c3 Organization)**

- Region 3 will develop a Foundation Development Guide.
- Foundation would accept land gifts, cash gifts and in-kind gifts.
- Sections or Branches could use the guide to approach Units of Local Government to propose a Parks Foundation.

**Strategy: Section and Branch Participation**

- As the Foundations are created, ASCE members could serve as Board Directors.
- Sections and Branches could participate as a partner with Foundation Boards to offer civil engineering advice, create maps, and solicit donors.
- Sections and Branches can participate in events related to the Foundation’s goals.
- Volunteers from Sections and Branches to provide technical guidance and grant writing.

Motion – Karen Cho  
 Second – Jennifer Gora

Passed Unanimously

**Sustainable Transportation (Highway, Road and Bridge) Funding Sources**

The Federal Highway Trust Fund receives revenues from the federal fuel taxes. Gasoline and gasohol is taxed at 18.4 cents per gallon, of which 15.4 cents is applied to the Highway Account, 2.9 cents to the Mass Transit Account, and 0.1 cent to the Leaking Underground Storage Tank Account. Diesel fuel is taxed at 24.4 cents per gallon, of which 21.4 cents is applied to the Highway Account, 2.9 cents to the Mass Transit Account, and 0.1 cent to the Leaking Underground Storage Tank Account. The tax has not been increased for two decades, is not indexed for inflation, and is not sustainable. The Trust Fund is being exhausted and is currently being bolstered with federal general revenue, adding to the annual Federal Deficit.

Region 3’s states have differing state gas taxes:

Illinois	19.0 cents per gallon gas	21.5 cents per gallon diesel
Michigan	19.0 cents per gallon gas	15.0 cents per gallon diesel
Minnesota	28.6 cents per gallon gas	28.5 cents per gallon diesel
North Dakota	23.0 cents per gallon gas	23.0 cents per gallon diesel
Ohio	28.0 cents per gallon gas	28.0 cents per gallon diesel
Wisconsin	32.9 cents per gallon gas	30.9 cents per gallon diesel

None of these states index gas taxes for inflation. Wisconsin indexed gas taxes; however, the indexing law was repealed in 2006. In Illinois, 85% of the state gas tax is spent funding the operations of the Department of Transportation and debt service. Comparatively, Wisconsin’s road program is only 26% dependent upon federal funding.

Tolling matches use against capital needs. Toll roads have been constructed in states where the federal gas tax allotments could not meet the traveling public’s needs. Toll roads provide an equitable opportunity to have roadway users contribute to the cost of operating the facility and have been introduced in several states. Travelers on Interstate 80, a route in Region 3 with tremendous traffic, pay tolls to the Illinois Toll way Authority and to the Ohio Turnpike. The toll revenue is critical to maintaining this artery and others like it.

In New York, Parks Director Robert Moses constructed grand divided highway systems for city dwellers to travel to the new parks constructed on Long Island. The road systems were called “parkways” and travelers paid a toll. Our interstate system followed decades later. There has been a major change in our interstate system in Region 3 since its construction in the 1960’s and 1970’s when they were intended to be “freeways”. Now our “freeways” carry much higher percentages of heavy truck traffic than originally designed. The higher percentage truck traffic shortens the life of pavements and bridge decks.

Our states need dependable user charge systems to adequately fund Road and Bridge Rehabilitation and Replacements, and one such system is Tolling.

Some communities assess gas taxes. In 2010, the City of Urbana Public Works Department under the leadership of ASCE Member William Gray, PE defined the unfunded backlog of the City’s transportation assets. By 2010, Director Gray had served the City for two decades and observed the Public Works Department falling behind in maintaining the City Roads, providing for community growth, and constructing contemporary safety components.

Urbana annually received approximately one million dollars from the state’s motor fuel tax fund. Real needs over a twenty-year period were twice that allotment. Stopgaps had been accomplished by proactive grant and special fund applications, however those funds were not reliable and could be one-time occurrences. Director Gray needed a sustainable solution.

Director Gray prepared a plan complete with relevant statistics proposing a two cent Local Motor Fuel Tax that would generate an estimated \$340,000 annually.. The proposed Local Motor Fuel Tax would apply to the retail sale of diesel fuel as well as unleaded gasoline, premium unleaded gasoline mixes and E-85 ethanol. Bulk or wholesale gasoline purchases were exempted.

At the time of the proposal, twenty communities and four counties in the Chicago area plus eleven downstate communities impose a Local Motor Fuel Tax.

The City of Champaign shares a common boundary with the City of Urbana that bisects the University of Illinois Campus. The next year, the City of Champaign City Council approved a four cents per gallon local gas tax.

Director Gray presented the Urbana City Council with a four cent per gallon proposal to match Champaign’s local gas tax, and the Council approving.

Minnesota implemented a Road Use Test. In May 2011, the Minnesota Department of Transportation began conducting technical research of the mileage-based user fee. Five hundred people from Hennepin and Wright Counties tested technology to collect a mileage based user fee. Volunteers in the study used a Smart Phone with a GPS application in their car or truck. The phones were programmed for motorists to submit information that the Minnesota Department of Transportation will use to evaluate whether the device provides timely, reliable travel data. In addition, the test examines whether other applications, such as real-time traffic alerts providing information on construction zones, crashes, congestion and road hazards, are effective in communicating safety messages to motorists.

All of the strategies depend upon separating the funds generated and preserving these revenues for transportation infrastructure.

**Strategy: Index state and federal transportation fees for inflation.**

- As inflation impacts construction costs, highway construction revenues will follow.
- The level of service to the public will be more consistent with annually adjusting revenues.

Passed Unanimously

**Strategy: Local Gas Taxes**

- Local units of government no longer have the luxury of waiting for the next state or federal program to sustain transportation infrastructure.
- Dwindling state gas tax allotments to local units of government aggravate the unfunded backlogs.
- With the facts in hand, local political leaders have had the wisdom to create new revenue streams, indexed for inflation, to sustain local roads and bridges.
- Share information to help local units of government to implement a local gas tax program.
- Alternative local taxes could include emission tax, vehicle registration fee.

Passed with 2 opposed

**Sustainable Water and Wastewater Funding Sources****Case History: The Clean Water Act**

When the Clean Water Act was first passed, wastewater treatment plants across the country were going to be upgraded to secondary or tertiary treatment to reduce the biological oxygen demand and suspended solids in the nation's ditches, creeks, streams, and rivers. Capital funding in the form of 75% grants became systematically available to cities, municipalities, sanitary districts, and sanitation authorities. The Act required the formation of User Charges to fund operation, maintenance, and future capital needs. Congress had the foresight to require a Sustainable Funding Stream to protect the federal taxpayers' capital investment and assure long-term wastewater treatment performance.

The Region 3 Board of Governors and its Infrastructure Partners endeavor to translate all Infrastructure taxes, fees, and charges into Sustainable Funding Streams.

**Water and Wastewater Infrastructure**

Drinking water and wastewater treatment go hand-in-hand. For some drinking water supplies, the raw water source is partially the upstream wastewater treatment plant discharge. Some cities and communities have abundant raw surface water sources, such as Lake Michigan and Lake Superior, or plentiful aquifers, such as the Mahomet Teays or the Walworth Gravels. Others struggle with no sufficient well sources and surface water sources dependent upon annual rainfall or snowmelt subject to draught.

The segment of the public living within Region 3 without abundant raw water sources have stronger capital needs. The cost of a glass of drinking water varies widely across Region 3 due to the quality and quantity of the raw water source. The three components of delivering drinking water are:

1. Treatment Plant and Pumping Station Capital Costs
2. Energy Costs
3. Operations and Maintenance Costs

These three costs are interwoven with complexity. Energy costs are a large component of water and wastewater treatment. Technological advances have trimmed energy costs and improved energy recovery, however technological advances require capital improvements. Digital monitoring and control have moved facility operations from individual pump, blower, or clarifier panels to a single computer screen. Installation of these cost saving systems requires capital improvements. In addition to control advances, treatment of poor raw water sources previously considered impossible now operates successfully. Reverse osmosis systems are now feasible in water and wastewater treatment plants, allowing for enhanced contaminant removal rendering higher reliability of treated quality standards. Installation of reverse osmosis systems requires capital improvements.

Some states have revolving load funds to assist with capital improvement financing. Federal water resources funding can be helpful to cities with multi-million dollar projects. Region 3's water and

wastewater utilities of all sizes and complexities need access to advanced technologies to handle raw water source variability, to reliably discharge clear and clean water into our rivers and streams, to reduce energy consumption for cost savings and eco-stewardship, and to reduce operation and maintenance costs to save user fees.

In Region 3, citizens are accustomed to consistent quality safe drinking water at any faucet or tap, and the ASCE Region 3 Board of Governors endeavors to assure this ability through Sustainable Funding Sources.

Wastewater plants are the ends of the line of the sewage train, however the collection systems also require costly repairs, rehabilitations, and replacements. A community's health is dependent upon keeping the sewage in the sewers, and that can be easier said than done.

Further, the adequate capacity of a wastewater collection system is very dependent upon the adequate capacity of the storm sewer system. Too often, poor or inadequate storm systems inundate wastewater collection systems. In more that one occasion in the City of Champaign and Champaign Township, Illinois, correction of the storm conveyance systems alleviated sewage backups in basements.

Some communities in Region 3 have addressed their wastewater collection and storm conveyance problems by treating the systems as utilities. Modest annual wastewater and stormwater utility fees have been remarkably successful in allowing a coordinated approach to wastewater collection and storm conveyance problems.

**Strategy: Water Infrastructure Bank**

- Create State Water Infrastructure Banks.
- Bolster existing State Revolving Loan Funds with Water Infrastructure Bank operations.
- Assess an Infrastructure Bank Fee to every private and public water and wastewater user charge, usage rate, or facility assessment to create a new constant revenue source adjustable for inflation and regulatory changes.
- Establish the percentage of Bank Assets to be loaned or granted.
- Establish a loan rate formula based upon bond market fluctuations.
- Establish grant parameters allowing the weaker and more challenged water and wastewater utilities access to technological advances.
- Create grant incentives for energy cost reductions.

**Strategy: Wastewater and Stormwater Utility Fees**

- Identify communities with unsustainable funding for collection and conveyance systems.
- Share utility fee success throughout Region 3.
- Help Public Works Directors implement utility fees.
- Stormwater and Wastewater to be treated separately.

Motion: Cindy Voigt

Second: Thera Baldauf

Passed Unanimously

## **NORTHWEST WISCONSIN CIVIL ENGINEERING HIGHLIGHTS**



**The Cobban Bridge, Chippewa County**

The Cobban Bridge has an interesting and important history. Located just off of STH 178 on CTH TT in Chippewa County, the live traffic bridge offers a single-lane timber trail adventure to cross the Chippewa River. Driving over the bridge was a little unnerving, as boards were moving up and down, and one had to be careful not to drive off of the lane boards onto the bridge deck.



The historical marker erected in 1986 gives the following narrative: “The Cobban Bridge, constructed in 1908 by the Modern Steel Structural Company of Waukesha, is a two-span Pennsylvania overhead truss type bridge and is the oldest of its kind in Wisconsin. Originally it crossed the Chippewa River just upstream from its junction with the Yellow River. The bridge was dismantled during the construction of the Wissota Dam in 1916, and through the efforts of Oscar Anderson, a Cobban store owner, the bridge was acquired to be placed on land donated by S.C.F. Cobban. During the winters of 1916 and 1917, the disassembled bridge was hauled here by horse and sled, with the movers receiving one dollar per ton for the fifteen mile trip. Footings were placed by the L.G. Arnold Company, and reconstruction was done by Cromby and Thilacker of Milwaukee in 1918-1919. The ferry that had provided crossing to Cobban was discontinued, replaced by the Cobban Bridge, which soon was nicknamed the “Little Wagon Bridge”.

The bridge is considered for rehabilitation or replacement, as discussed on the Chippewa County [website](#), so your opportunities for visiting this bridge may be dwindling, depending on the design outcome.

### Upper Mississippi River receives Federal Marine Corridor Highway Designation

According to this Wisconsin Department News Release [news release](#), northwestern Wisconsin is part of the M-35 marine corridor. The M-35 designation calls attention to the river's role in freight movement and the subsequent availability of federal program support for eligible domestic and port services that operate on the corridor. The M-35 name is a nod to Interstate 35, a highway alignment that generally represents the river route.



Wisconsin's "west coast" makes for a beautiful drive. There are many waysides and parking locations in which to stop and take in the natural scenery or such fabulous engineering feats as the locks and dams. Did you also know that this highway corridor was noted as the 2012 most scenic drive, according to a poll from the [Huffington Post](#)? Spend a day getting lost in between the bluffs and Mississippi River.



## **Renew your ASCE Membership for 2015**



Online, in person, and wherever your membership takes you, ASCE benefits every Civil Engineer. See the ways you benefit from your ASCE membership, such as the ability to earn 5 free PDHs, save with car rentals and UPS shipping, and obtain technology discounts with HP and DataSource Mobility.

Keep your benefits and [renew today!](#)

## **UPDATE ASCE ONLINE PROFILE REGULARLY**

Please update your ASCE online profile with current E-mail and mailing addresses to guarantee you receive ASCE newsletters and important information. As a reminder, those of you that have passed your PE exam, make sure to change your account with ASCE National. To update your ASCE profile, go to [www.asce.org](http://www.asce.org) or call (800) 548-2723.

## 2014-2015 Calendar of Events

The calendar is simply a guide and may change throughout the year

### NOVEMBER:

- November 6-8—International Conference on Sustainable Infrastructure 2014—Long Beach, CA
- November 12, 3:00 PM – St. Croix River Crossing tour and social
- November 13, 2:00 PM – WI Section Board Meeting
- Spring Technical Conference Planning Committee meeting

### DECEMBER:

- Northwest Branch Board Meeting

### JANUARY 2015:

- January 30-31, 2015 Central Region Younger Member Council (CRYMC) Annual General Meeting, Houston, TX
- Spring Technical Conference Planning Committee meeting

### FEBRUARY:

- Northwest Branch Board Meeting
- February 22-28, 2015 E-week Social and Celebration of Engineering, stay tuned for more information!

### MARCH:

- Spring Technical Conference Planning Committee meeting
- March 12 – ASCE Wisconsin Section Annual Spring Technical Conference, La Crosse

### APRIL:

- April 12 – PE, PS, and SE Vertical Exam (offered in Madison, Milwaukee and Platteville)
- April 13 – SE Lateral Exam (offered in Madison, Milwaukee and Platteville)
- Northwest Branch Board Meeting

### MAY:

- Northwest Branch Board Meeting

### CURRENT NORTHWEST BRANCH OFFICERS

**President:** [Teresa Davis](#), WisDOT Northwest Region: Eau Claire; (715) 836-7277; [brunnete.80@gmail.com](mailto:brunnete.80@gmail.com)

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#### **Northwest Branch Directors-At-Large:**

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2. Position Available
3. Position Available
4. Position Available

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