

# **ASCE** *American Society of Civil Engineers*

**Northwest Branch Newsletter No. 115 July 30<sup>th</sup>, 2012**



## **President's Message – The End is Only the Beginning**

Dear ASCE Northwest Branch,

It has been my privilege to serve as President of the Northwest Branch for two years. My time as president has been a significant highlight in my career and I appreciate the support all of the Northwest Branch members and especially the support of the board members that served with me. We have accomplished much together in the two that passed so quickly. It took a team effort to contribute to the success of the Northwest Branch. Together we organized outstanding meeting opportunities throughout the Branch, we assembled a K-12 outreach program, we established a branch honorarium to support leadership within the Branch and promoted the engineering profession.

Throughout my two year journey as president, the Branch endured the hardship of losing a Branch member and friend. Matt Rynish died while fulfilling his engineering duties. Matt will always have earned a place in our hearts and live on in the Branch and Section with our establishment of the Matt Rynish Honoraria. The details of the honoraria are within this newsletter.

I would like to take this opportunity to welcome the new ASCE Northwest Branch President, Will Kratt. Will has been an integral part of the Northwest Branch Board for the past several years and I am confident that he will bring the ASCE Northwest Branch to the next level. Welcome, Will! Supporting Will during his term as President are the newly elected positions of President Elect – Jessica Felix, Secretary/Treasurer – Lisa Fleming, and Branch Directors; Andy Walters, Joe Behlen and Lucas Budden.

When we think of the word “Life”, how often do we associate it with the word “Choice”? The ability to make choices is an enormous responsibility as well as a great power we as human beings possess. They can move us to achieving success or failure in life no matter our circumstances. The choices we make can bring us happiness or heartache. The power to choose makes us the masters of our own destiny. Life is the sum of all your choices. I am happy I made the choice to link my professional career with ASCE and the opportunities it provides. I encourage every member in this branch to make the choice to engage with the Branch and the benefits ASCE has to offer. I envision that the Northwest Branch will grow and prosper with the members who chose to be part of the leadership team and with the continued participation of the branch members. My end as President is only the beginning of the Branch’s future.

Our next Branch event will be in the Wausau Area at the new construction of the We Energies/ Domtar Biomass plant. I hope you enjoy meeting this newsletters featured member Zach Ferrall.

Sincerely and civilly yours,

*Dan Borchardt* P.E.

Northwest Branch President

Email: [danborchart83@gmail.com](mailto:danborchart83@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.*

**ASCE FEATURED MEMBER**  
**ZACH FERRALL E.I.T.**

**Place of Employment:** [Krech Ojard & Assoc](#)

**Career Specialty (Highlight one):** [Structural](#)

**What are the current projects that you are working on?**  
[EOG Chippewa Falls Sand Plant](#)

**What would be your dream project?** [Underwater sea lab; preferably in a cool place](#)

**Favorite activity/hobby outside of work:** [All things outside, above and below the water](#)

**What is usually your first thought when you wake up?** [Already?!?!](#)

**What is your least favorite mode of transportation?** [3<sup>rd</sup> world buses; the smell never leaves you](#)

**If you could choose anyone who would you pick as your Mentor?** [Herbert Hoover](#)

**If you could stay a certain age forever what age would it be?** [24](#)

**What do you miss most about being a kid?** [Naps. But that's it. I get to play with all the cool toys now and no one's there to tell me to stop.](#)

**What would you name the autobiography of your life?** [The Road Goes on Forever...](#)

**If you could meet anyone, living or dead, who would you meet?** [Abraham Lincoln](#)

**If you could witness any event past, present or future, what would it be?** [To be on the Moon when Apollo 11 touched down.](#)

**What do you like most about the Civil Engineering Profession?** [Civil Engineers do profound work which impacts everyone in society.](#)



### **ASCE HISTORY DOCUMENTS - PAST OFFICER AND NEWSLETTER DOCUMENTS**

The current board has worked diligently over the past year to preserve the history of the Northwest Branch and convert paper copies of old newsletters into electronic copies. In addition to creating an electronic compilation of newsletters from 1974 the board has created a spreadsheet document showing who held leadership positions and during what years they served the Branch. This information is available to any member who would like an electronic copy of it. The branch is looking into placing the documents on the Wisconsin section website for everyone to access. If you have a piece of history from the Northwest Branch that you would like to see preserved please contact Dan Borchardt at [danborchardt83@gmail.com](mailto:danborchardt83@gmail.com).

## **Involvement Opportunities**

### **INVOLVEMENT OPPORTUNITY REQUEST**

If you have an Involvement Opportunity (example - community service event or organization) for Northwest Branch Members that you would like displayed in the the Northwest Branch Newsletter, email Dan Borchardt at [danborchardt83@gmail.com](mailto:danborchardt83@gmail.com) with a detailed description of the opportunity and help needed.

### **MATTHEW RYNISH HONORARIA**

**Purpose:** To recognize and honor the contributions of Matt Rynish to the Civil Engineering profession, to the ASCE community in general, and to the Northwest Branch of the Wisconsin Section of ASCE in particular. The honorarium is a NW Branch initiative and will be used to recognize NW Branch members for excellence in leadership, recruitment, or other support of NW Branch activities.

**Distribution of Funds:** The Matt Rynish Memorial Honorarium will be used for the following purpose:

- In recognition of Matt's energy and enthusiasm for Branch and Section participation, a \$500 honorarium will be awarded each year to an ASCE NW Branch member committed to active participation in leadership roles within the Branch. It is to be used as the recipient deems appropriate.

**Recipient Criteria:** The NW Branch Board of Direction has established the following criteria by which a candidate for the honorarium will be judged and may put forth a candidate or candidates of its choice for consideration. Each recipient is selected by the NW Branch Board of Directors. Nominations are not necessary.

- The recipient must be a member of ASCE and the NW Branch;
- Organizational knowledge and enthusiasm toward the ASCE Wisconsin Section and NW Branch;
- Values: sensitivity to trust, ethics, and excellence in professional integrity;
- The recipient must demonstrate leadership presence, recruitment, outreach or participation in NW Branch efforts;
- Leadership presence as defined below:
  - Intellectual curiosity – Take full advantage of educational opportunities. Demonstrates knowledge of learning how the profession changes;
  - Leadership potential – Practices leadership now and demonstrates the potential to practice leadership in the future, from small groups to large groups.
  - Commitment outside of self – Commitment to participate and help others, serve others and improve communities

Unique contribution to the Organization – This individual offers personal insight to the organization through life experiences or their personality makes their contribution unique;

- Strong interpersonal skills (as demonstrated by Matt Rynish) to work effectively with others: listening, confronting, challenging, straightforwardness, rapport, trust, warmth, compassion, humor;
- Personal maturity, stability, credibility and authenticity;
- Assessment skills and instrument knowledge applicable to the organization;
- Flexibility and ability to work effectively with other members;
- Ability to plan, conceptualize, implement and manage a coaching relationship over time;
- Productive for the organization; and
- Service prior to 2012 is not eligible for consideration.

**Administration:** The candidate selection will be made before August of each year and the award will be presented to an individual along with free admission at the Wisconsin Section Annual Fall Conference and that individual will receive a plaque award at the conference or in the mail (sponsored by the Wisconsin Section) for excellence in leadership in the Wisconsin Section NW Branch.

## Past Events

### **Joint Meeting WSPE and ASCE Rib Mountain Metropolitan Wastewater Treatment Plant Tour**

*By: Dan Borchardt P.E.*

The ASCE Northwest Branch was invited by the WSPE Wisconsin Valley chapter to tour the Rib Mountain Metropolitan Wastewater Treatment Plant. The wastewater treatment facility has a service area that covers the Town of Rib Mountain, Village of Weston, Village of Rothschild, Village of Kronenwetter and the newly acquired City of Mosinee. The plant currently serves a population of 39,700 without the addition of the City of Mosinee.

The tour guide and presenter was the plant superintendent Ken Johnson. Ken explained how a 25 ft deep main sewer interceptor was trenched under the Wisconsin River to get to the plant. Ken started the tour at the influent pumping station and showed everyone the process through the Grit tanks, primary sedimentation, aeration tanks, clarifiers and the final disinfection. Ken also showed us the solids processing building and the digesters. Ken filled all of us with the facts of the treatment plant. The maximum day flow is 4.27mgd, the BOD loading is 238mg/L, the SS is 284mg/L. Stand Associates is the consulting engineer who designed the plant and continues to provide engineering for plant maintenance and upgrades. The final disinfection at the plant was recently converted from chlorination to UV light.

About fourteen members attended the meeting. After the tour the group met at the Great Dane and enjoyed socializing with others.



### **Fracture Sand Mining Plants in Wisconsin and Impacts –May Branch Meeting**

*By: Lisa Fleming P.E.*

The May meeting of the Northwest Branch was a presentation of frac sand mining in Wisconsin. It was held at Ayres Associates Inc, in Eau Claire. About fifteen members and two invitees attended the meeting.

The two presenters were Mike Stoffel, PE and Lori Rosemore, PG from Ayres Associates Inc. Mike is a senior project manager at Ayres Associates and handles the clients within the company related to frac sand mining. His experience includes sand mine and processing facility site development, permitting, and reclamation plans; municipal streets and utilities; economic development; spur tracks; site designs; stormwater management; and construction specifications.

As a hydro geologist in the environmental services operation, Lori's duties include groundwater monitoring well installation, groundwater monitoring plans, health and safety planning, management of volatile organic compound data for reporting and modeling purposes, well site surveys, and wellhead protection modeling. She is a project contact for landfill groundwater monitoring projects, well installation projects, and underground storage tank site investigations and also manages the groundwater sampling program.

The presentation centered on the who, what, when, why, and how of frac sand and its uses in many different applications. There were short video demonstrations of how sand is used in the casting industry, glass making as well as fracturing in the oil and gas industry. Discussion included the permitting and process to obtain permits on mining and processing sites in Wisconsin. Jessica Felix, from WisDOT also provided insight from their perspective on the traffic impacts and safety issues surrounding the opening of these mines and the transportation of the sand to the railroad.

Dinner was catered by Dickey's BBQ in Eau Claire. It was an informative session with many lively questions. Future meetings may include a tour of a glass manufacturing company, and a sand mining and processing operation.

## **ASCE NORTHWEST BRANCH K-12 OUTREACH** **(CONTINUED FROM LAST NEWSLETTER)**

*By: Will Kratt P.E. Zach Ferrall E.I.T*

The ASCE Northwest Branch utilized a \$375.00 State Public Affairs Grant (SPAG), awarded through ASCE National, to build a base for its continued outreach efforts. The stories of our Northwest Branch member contributing to the K-12 Outreach are continued below.

On May 8th and 10th, Will Kratt worked with Longfellow Middle School teacher Mr. Randy Ketelhut in La Crosse to teach 2 sections of 8th grade students how some of the concepts they learned in algebra are applied to real situations. Will gave a brief introduction into the wide world of engineering and discussed some of the things civil engineers do. The teaming arrangement went through a review of what the students had learned earlier in the academic year for the slope of a line. This knowledge was then applied to real world situations, specifically the layout of an urban roadway intersection and the related infrastructure. Will and Mr. Ketelhut reintroduced the mathematical concepts on the first day and walked the students through some of the tasks related to the intersection. The second day was an off day for

Will, which allowed Mr. Ketelhut and his students to continue work on the intersections and move towards mastery of the concepts. On the third day, Will performed a short review of the material with Mr. Ketelhut and the students. Then the group took to the field with basic survey equipment to analyze and critically think about slopes all around the school grounds. It was great to see the students understand the connection between the formulas they had learned earlier in the year and how they applied to everyday life. When surveyed, some students even said they are considering engineering in their future studies. Mr. Ketelhut considered the experience a success and would like to expand the topic for next year.

On March 6 Zach Ferrall visited Notre Dame Middle School in Chippewa Falls, WI and gave an engineering oriented presentation to 35 seventh grade students. The topic of the presentation was density and other related physical properties of materials. These ideas were demonstrated through the use of clay, marbles, and water. These ideas were also related to relevant scenarios in today's economy; mainly through shipping industry.

After having a brief discussion on what density is, and how things float, Zach challenged to the class to use 2oz of modeling clay to construct an object that would float. After they successfully accomplished this task, Zach challenged them to improve their designs to maximize the amount of marbles their vessel could keep afloat.

Throughout this process, Zach asked the students about what sort of features would help a cargo ship stay dry while carrying such heavy loads; such as flat or round hulls? The students were very successful; one team's vessel was able to hold 31 marbles.

Zach concluded the presentation with final thoughts that engineers are responsible for taking on societal challenges, such as how to maximize a boats cargo capacity, and finding the best solutions for them.

## **Upcoming Meetings**

### **MASONRY DAY AT UNIVERSITY OF WISCONSIN-STOUT**

MARK YOUR CALENDARS FOR AN EXCITING UPCOMING OPPORTUNITY! More information about the day's events and registration will be in upcoming newsletters.

Date: October 10, 2012

Location: UW-Stout

Speakers:

- Dr. Klingner from the University of Texas
- Pat Conway from International Masonry Institute

## **We Energies and Domtar Biomass Energy Project –August Branch Meeting**

Domtar and We Energies are partnering to build a 50-MW biomass-fueled cogeneration facility on the Domtar property in Rothschild, Wis. Domtar is an international paper manufacturer with facilities across the U.S. and Canada. In November 2010, the Domtar mill in Rothschild, Wis. celebrated its 100th anniversary of making paper at this location.

We Energies is a Milwaukee-based electricity, natural gas and steam service provider to residents in southeast Wisconsin, the Fox Valley and Michigan's Upper Peninsula.

**Biomass use:** Domtar currently burns 130,000 tons of clean woody biomass each year to generate steam for their paper-making process. Domtar produces 50,000 tons of biomass through their paper-making process and purchases an additional 80,000 tons annually. The new project will use an additional 370,000 tons of biomass annually.

**Air quality:** With the combination of the biomass facility's air quality technology and the retirement of Domtar's existing boilers, we anticipate that the new facility will reduce the overall emissions from the mill site by approximately 30 percent. Ambient air quality will improve as shown by analysis that includes the effects of truck traffic.

**Jobs:** The project is expected to create 400+ construction jobs over the 2.5-year building process and approximately 150 permanent jobs in fields supporting the operation of the biomass facility (forest management, logging, transportation). The project will enable Domtar to be better positioned in the competitive global market. Domtar's Rothschild pulp and paper mill and the associated Lignotech chemical facility directly employ 460 men and women at family supporting wages. Roughly 800 external jobs rely on the economic impact of the mill.

**When: Wednesday, August 28, 2012**

**Time: 5:30pm—Presentation/Pizza (provided by ASCE), Tour to Follow**

**Location:** 200 N. Grand Avenue, Rothschild, Wisconsin 54474. Vehicles should enter through the Mill's south entrance (across from Weston Ave.). Staff will direct vehicles to the appropriate parking area on the construction site.

**Details:**

We will start in the construction trailer meeting room with a presentation/overview of the project – which will last 30-45 minutes. Then we will break into two smaller groups and head out for a walk through the site for about 45 minutes. We should be wrapped up around 7 p.m.

**All visitors must wear long pants and sturdy leather work boots** (no sneakers, sandals, loafers...). If your folks have their own Personal Protective Equipment (PPE) – hard hat, safety glasses, hi-vis vest – please bring them if you do not have them please let me know before the meeting and we will arrange to have PPE for you



Please contact: Dan Borchardt at [danborchardt83@gmail.com](mailto:danborchardt83@gmail.com) if you have questions or suggestions for content. An Evite with additional details and request to RSVP will be sent closer to the meeting day.

## 2012- 2013 Calendar of Events

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

### JULY:

- July 28<sup>th</sup> Application for October 2012 PE Exams due to WI Dept of Regulation & Licensing
- July 31<sup>st</sup> Last day to renew WI Professional Engineering License (credentials expire today!)

### AUGUST:

- August 1<sup>st</sup> New WI Professional Engineering License Continuing Education Requirement begins (complete 30 PDHs between 8/1/2012-7/31/2014)
- **August 9<sup>th</sup> Owen Ayres Memorial Service. Friends and colleagues are invited to a celebration of life from 5:00 – 9:00 pm at the Florian Gardens, 2340 Lorch Avenue, Eau Claire, WI 54701**
- August 10 & 11 ASCE Region 3 Assembly –Chicago, IL
- August 28<sup>th</sup> Wausau Area meeting - Domtar Biomass Plant, (Organizer – Dan Borchardt)

### SEPTEMBER:

- WI Section Annual Meeting
- September 23<sup>rd</sup> & 24<sup>th</sup> ASCE 2012 Section & Branch Presidents and Region Governors Forum; Reston, VA

### OCTOBER:

- October 10<sup>th</sup> Masonry Day – UW Stout
- October 26<sup>th</sup> & 27<sup>th</sup> PE Exams

### NOVEMBER:

### DECEMBER:

### JANUARY 2013:

- January 11<sup>th</sup>-12<sup>th</sup> Regions 3, 6 & 7 Workshops for Section & Branch Leaders; Milwaukee, WI

### UPDATE ASCE ONLINE PROFILE REGULARLY

Please update your ASCE Online Profile with current email 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.

### CURRENT NORTHWEST BRANCH OFFICERS

**President:** Dan Borchardt, MSA Professional Services; Marshfield (715) 216-3601  
**President-Elect:** Will Kratt, Mead and Hunt, Inc.: La Crosse; (608) 784-6040  
**Secretary-Treasurer:** Lisa Fleming, Ayres Associates, Inc.; Eau Claire; (715) 831-7677  
**Wisconsin Section Northwest Branch Representative:** Dan Borchardt, MSA Professional Services, Marshfield; (715) 216-3601  
**Northwest Branch Directors-At-Large:**  
 1. Andy Walters, Tetra Tech, Wausau, WI; (715) 355-4180  
 2. Jessica Felix, WisDOT Northwest Region: Eau Claire, WI; (715) 577-4365 or (612) 803-2959  
 3. Zach Ferrall, Krech Ojard & Associates: Eau Claire; (715) 552-7374

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