



Diving into Freshwater Sciences at the University of Wisconsin - Milwaukee



In an effort to expand the current Great Lakes WATER Institute at the University of Wisconsin - Milwaukee, School of Freshwater Sciences (UWM SFS), nearly 100,000 square feet of construction has taken place over the past 12 months to develop the nation's first graduate school of its kind. This additional space is being built adjacent to the existing facility, overlooking the Milwaukee harbor. Once complete, this facility will provide additional research, laboratory, and teaching spaces for freshwater, atmospheric, and marine research.

HOOPER'S ROLE

Since dechlorinated water is at the heart of this research facility, the plumbing group at Hooper played a major role in this expansion. The Hooper Plumbing Department installed multiple systems, including a dechlorination



water room that provides a system for removing any chlorine from the water that enters the facility. To ensure fresh, clean water, the EPA, U.S. Fish and Wildlife, and UWM are all involved in this project.

Throughout construction, the plumbing group installed over 65,000 feet of pipe, which equals over 12 miles! Most of the pipe installed is PVC and CVPC schedule-80 pipe and fittings. These plastic pipes are required for such a facility because copper and brass are not conducive to healthy fish life.

DISTINCT PROJECT SPECS

The underground soil at UWM SFS is not structurally sound, which means the plumbing and electrical work had to be hung below the slab-on-grade which is



supported by pilings.

In addition, most buildings have a fire protection water service that is bigger than their domestic water for the building; however, UWM SFS has just the opposite. Consider just what that means for water usage in this building!

CHALLENGES

The large and heavy decontamination tanks were a tight squeeze and crews had to use planning and coordination to ensure the tanks were properly placed within the allotted

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About SFS

The School of Freshwater Sciences (SFS) is located in Milwaukee, Wisconsin, at the edge of the largest freshwater system on the Earth's surface - the Great Lakes. Established in 2009, SFS expands the tradition of freshwater studies at UWM that began in 1966 with the Center for Great Lakes Studies and continued with the Great Lakes WATER Institute in 1973. The mission of the School of Freshwater Sciences is to train the next generation of freshwater professionals and to advance fundamental and strategic science to inform policy, improve management, and promote the health and sustainability of freshwater systems worldwide.

Information provided by www.uwm.edu/freshwater

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From the President

Looking to the Future: Safety and Learning Will Always be a Core Value of Hooper Corporation

Safety and learning are Hooper

Corporation's absolute core values. At Hooper, safety and learning are critical components to our daily life, and take precedence above all else in order to achieve meaningful and sustainable growth. When a company grows faster than its capability to deliver effective training, measured by both safety performance and evaluated learning, it spells a formula for certain disaster.

In today's fast paced, ever changing world, innovation and commitment make adhering to these fundamental principles seamless, and delivers proven, tangible results. By providing the safest possible work place in a rich and effective learning environment, the company nurtures a secure, healthy, productive, and rewarding working culture.

Since the beginning, Hooper Corporation has

prided itself in providing an up-to-date and cutting edge educational environment. During the last decade we were quick to develop in-house blended learning programs. Significant resources and great emphasis has been placed on staying ahead of the curve in this dynamic digital environment.

Our Vondron Road facility also plays a key role in this mission by providing a physical state-of-the-art training center for traditional classroom instruction and hands-on practical examinations. The training center comfortably seats 50 and is equipped with the latest audio/visual training tools. The exterior yard includes a facility for hot stick and equipment instruction, and is also set up for pole-top rescue training. Hooper utilizes this facility as an educational center to conduct training sessions for specialized components of our safety learning program. This instructional center has

also been utilized by some of our utility partners to conduct their own training programs as well as attend Hooper provided programs.

We continue to be enthusiastic about our blended learning initiatives in which we can guide our employees through both electronic and interpersonal learning. We believe because of our effort to incorporate key elements into a comprehensive structure, Hooper's personalized program is not only one of a kind, but also sets a new standard for excellence in safety and learning throughout the industries we serve.

The company is committed to proactively shaping the future through innovation in training and safety by improvement in process and the employment of new technologies.



Above: Hooper requires that all employees complete CPR/AED/First Aid training every two years.
Below: Steve Eisenberg safety training.

Hooper Blended Learning

- 100% commitment from top management
- Large group of multi-disciplined stakeholders engaged in continuous development
- True blended learning model that utilizes face-to-face instruction, e-learning modules, and role changing by reinforcing and measuring effective coaching, mentoring, and on the job training
- Individual performance based learning
- Collection of learning data, providing valuable forecasting, and program evolution mapping
- Seamlessly linked by use of technology utilizing all current IT tools available
- Flexibility for deployment while providing consistent measurable results during times of rapid expansion

- The ability to quickly and efficiently add to, modify, and/or delete curriculum, and/or learning delivery



TORNADO SAFETY AWARENESS

Have a Plan at Home, at Work, and While You're Away

- 1 In a home or building, move to a pre-designated shelter, such as a basement, and get under a sturdy table or the stairs. A specially-constructed "safe room" within a building offers the best protection. Use an internet search engine and look up "safe room" for more information.
- 2 If a basement is not available, move to a small interior room or hallway on the lowest floor and cover yourself with anything nearby: towels, blankets, or pillows. If possible, get under a sturdy table, desk, or counter. Put as many walls as possible between you and the storm. Stay away from windows.
- 3 If caught outdoors, seek shelter in a sturdy building. If you cannot quickly walk to a shelter, get into a vehicle, buckle your seat belt, and drive to the closest sturdy shelter. If flying debris occurs while you are driving, pull over and park. Now, you have two options as a last resort. 1. Stay in the vehicle with the seat belt on and place your head below the windows. 2. If you can safely get noticeably lower than the roadway, exit the vehicle and lie in that area, covering your head with your hands. Do not seek shelter under an overpass.
- 4 Mobile homes, even if tied down, offer little protection from tornadoes. You should leave a mobile home and go to the designated storm shelter or the lowest floor of a sturdy nearby building.
- 5 Hooper Jobsite Operations EAP: In the event of a tornado warning for the vicinity of a work site, employees should proceed to the nearest established tornado shelter or designated indoor meeting site. For crews working in the open, the evacuation plan will include ceasing outdoor activity and seeking initial shelter in covered vehicles. Even though an office trailer may be anchored, personnel shall quickly seek other shelter when warned of an approaching tornado. Employees should reference their office and jobsite EAP plans for further details.

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Tornado Myths and Truths

- MYTH:** Areas near lakes, rivers, and hills are safe from tornadoes.
TRUTH: No place is safe from tornadoes.
- MYTH:** The low pressure with a tornado causes buildings to explode as the tornado passes overhead.
TRUTH: Violent winds and debris slamming into buildings cause the most structural damage.
- MYTH:** Windows should be opened before a tornado approaches to equalize pressure and minimize damage.
TRUTH: Leave windows alone. The most important action is to immediately go to a safe shelter.
- MYTH:** People caught in the open should seek shelter under highway overpasses.
TRUTH: Take shelter in a sturdy, reinforced building if at all possible. The winds of a tornado may actually increase in the tight space of an overpass, increasing the chance for injury.

General Heating and Air Conditioning

An Impressive Outlook as Epic Continues to Expand its Energy Efficient Campus

Although the concept of geothermal piping at Epic isn't a new venture for General Heating and Air Conditioning (GHAC) crews, the current geothermal bore field and pump house expansion projects will ensure GHAC continues to expand their vast project experience and knowledge within this arena. Beginning late last year, GHAC crews started work on Bore Field #4 and an expansion to the existing pump house. Both projects will allow for the additional heating and cooling support necessary for future expansion on campus, including the new food service building as well as Campus 4 and 5 office buildings.

Pump House Expansion:

- The new expansion will add four new 10,000 GPM/450 horsepower pumps with room for four additional pumps for future expansion
- (8) 10,000 GPM/450 horsepower pumps in the original building
- (2) 13,333 GPM air separators were added
- (1) 16,000 gallon water storage tank was added, measuring 33 feet long and 9 feet in diameter
- The majority of the piping that ties the new addition to the original pump house ranges from 24"- 48" carbon steel piping

Geothermal Bore Field:

- Construction of (2,527) 500 feet deep vertical wells with 1-1/4" SDR-11 HDPE piping that totals 2,527,000 feet
*The campus already has 3,576 vertical wells which will bring the total count to over 6,100 wells on site
- 238,000 feet of horizontal main piping that ties all of the wells together ranging in size from 28" to 1-1/4" SDR-11 HDPE
- (9) concrete manifold vaults

Find past information on the original bore field and pump house in our Fall 2012 newsletter: www.hoopercorp.com/newsletter



General Heating and Air Conditioning invests significantly in the safety of our employees and in our customers. We are very proud to inform you that we have earned the highly coveted MCAA National Safety Excellence Award for our performance in 2013. This award is the result of a nationwide competition against the best safety performers in our industry. After an application process that compared our safety statistics, program elements, employee participation programs, management support of our safety program, and a panel interview, GHAC was chosen as the best in our industry for the entire country.

Please join us in congratulating our employees when you encounter them on your job sites. Our employees are the reason for our success. We will continue to strive for safety excellence on each and every job.

Custom Metals Fabrication

Custom Metals Fabrication: Spreading our Wings to Support our Lines

Hooper continues to place safety at the forefront of each and every project – no matter the location, or the elevation. With continued transmission line work across the country, we've recently had the need for additional batwing structures. Batwings are used as de facto guard structures during the stringing process to reduce risk of lines sagging onto roadways during construction.

Hooper's Custom Metals Fabrication Department built six new structures for use on job sites nationwide. Although the concept isn't new, Hooper is happy to keep this project in-house. The Custom Metals Department crafted the recent order of batwings; their strength and durability provide long lasting structures that can be used and transported time and again.

Custom Metals Fabrication Department

Looking for a custom design? Our Custom Metals Department is well known for the delivery of one of a kind, distinctive products that allow our customers to stand out from the crowd. Our craftsmen are able to modify, repair, and create new custom metal work.

Above: An illustration of Hooper batwings.

Below: Hooper's Custom Metals Fabrication Department built six new batwing structures for use on electric power job sites nationwide.



Freshwater Sciences, continued from cover

space. With a room as small as 10' x 20,' and the two tanks measuring in at 93" x 93" x 80," the tanks just barely fit within the decontamination room and crews had to work carefully as they installed these tanks in such a small area. However, the importance of this tank was not lost on crews. This vault pit holds waste from the laboratories where anything hazardous is killed and then pumped out to a sanitary sewer.

FUN FACTS

It is estimated that this facility alone uses more water than the whole UWM campus put together. With such a large water service going into this building, Hooper crews had to be extremely precise to ensure the safety and protection of marine life. To thank Hooper crews for their attention to detail and hard work, the group at SFS invited plumbers to join them for a fish lunch. What a treat!

Contractor: JP Cullen

Architect: Continuum Architects with

Bohlin Cywinski Jackson

Plumbing Contractor: Hooper Corporation



Project Updates

The 2014 summer season is just around the corner and Hooper crews are busy at work. From Wisconsin, to Minnesota, Colorado, Canada, and beyond, Hooper crews are always on the move. Read below to see what the Hooper Mechanical and Electric Power Division are up to this year.

Notable Department Projects

West Campus Cogeneration Facility

Department: Process & Power Piping
General Contractor: J.H. Findorff
Schedule: Summer 2013 - Fall 2014
Location: Madison, Wisconsin
Scope of Work: In order to accommodate the HVAC cooling demand of a growing campus, the UW has expanded the capacity of the chiller plant at the West Campus Cogeneration Facility, a plant owned in partnership with MG&E. This expansion includes the installation of 10,000 tons of added cooling capacity, with room for an additional 20,000 tons. This is transferred to the campus loop through a new 54" diameter chilled water distribution system fed by 1,500 HP pumps. The new cooling tower system is connected with custom fabricated 84" diameter stainless steel piping.

Willy Street Co-op Remodel

Departments: Plumbing and Fire Protection
General Contractor: Vogel Brothers
Schedule: November 2013 - August 2014
Location: Madison, Wisconsin
Scope of Work: The Willy Street East remodel includes upgrades to many areas of the existing building to allow for improved working and shopping experiences.

Kromrey Middle School

Department: Plumbing
General Contractor: J.H. Findorff
Schedule: Fall 2013 - July 2015
Location: Middleton, Wisconsin
Scope of Work: This multi-phase project includes extensive additions and remodeling to the existing Kromrey Middle School. The Hooper plumbing group is installing state-of-the-art plumbing systems that will serve this school district for many years to come. Close attention to scheduling has been extremely important in order to keep the school open throughout construction.

CapX Alexandria Substation

Department: Substation
Owner: Western Minnesota Municipal Power Authority
Schedule: April 2014 - October 2014
Location: Alexandria, Minnesota
Scope of Work: Civil and electrical work for the addition of (2) 345 kV SF6 circuit breakers, (3) 345 kV group-operated disconnect switches, and associated steel and bus work. This project is to accommodate for the CapX2020 Fargo Line.



Xcel Energy Osprey to Park Falls 161 kV Rebuild

Department: Overhead Line
Owner: Xcel Energy
Schedule: November 2013 - December 2014
Location: Northern Wisconsin
Scope of Work: Rebuild of approximately 27 miles of existing 115 kV transmission line to accommodate for new 161 kV standards.

CapX2020 Brookings Segments 5 & 6

Department: Overhead Line
Owner: CapX2020
Construction Manager: Great River Energy
Schedule: January 2014 - December 2014
Location: Minnesota
Scope of Work: Construction of approximately 70 miles of two bundled, 345 kV overhead line structures.

Stone Lake to Radisson 161 kV/69 kV Transmission Line

Department: Overhead Line
Owner: Xcel Energy
Schedule: April 2013 - December 2014
Location: Northern Wisconsin
Scope of Work: Construction of nearly 20 miles of new double circuit, 161/69 kV transmission line and removal of existing 69 kV line.

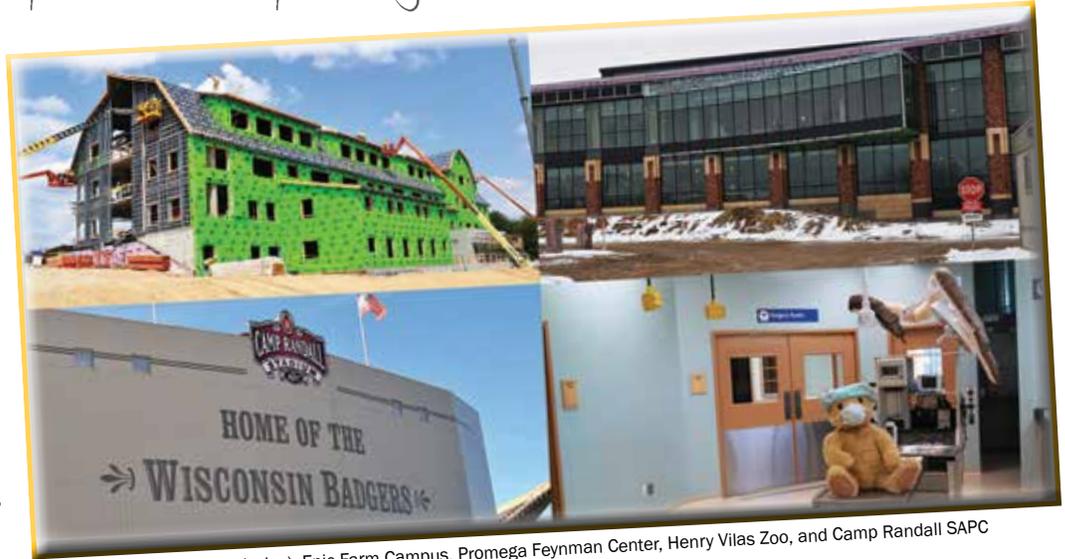
Mechanical Division News

2013 Daily Reporter Top Projects

2014 marks the Daily Reporter's 15th annual Top Projects Awards where 30 notable projects built across Wisconsin in 2013 are celebrated.

Hooper Corporation's Mechanical Division and General Heating and Air Conditioning were involved in a variety of projects throughout 2013 - both in Dane County and throughout Wisconsin. Hooper and GHAC are proud to have been a part of so many landmark projects including the projects shown (and listed below) that won a 2013 Top Project Award!

Additional Top Project award winners are listed at dailyreporter.com.



From top left (clockwise): Epic Farm Campus, Promega Feynman Center, Henry Vilas Zoo, and Camp Randall SAPC

Safety Corner, continued from page 3

Distracted Driving Deaths Are Preventable; Prevention Starts With You

Did you know that at any given daylight moment across America, approximately 660,000 drivers are using cell phones or manipulating electronic devices while driving? This number has held steady since 2010.

Distracted driving puts not only the driver at risk, but anyone on roadways in danger as well. The government has made a strong effort to reduce, and hopefully eliminate the unnecessary deaths caused annually by distracted drivers; however, it is ultimately up to each individual to make a difference.

Hooper Corporation's business depends heavily on safe driving. For more than a decade, Hooper has sponsored the Real Men Drive Real Sober campaign, which aims to curb drunk driving during the holiday season. Hooper also enforces a fleet safety policy that strongly

discourages the use of cell phones while operating a motor vehicle.

The important thing for all drivers to be aware of is regulations that vary state by state. With our company's national geographic reach, it is important that drivers be aware of each state and locality's laws.

Distracted driving deaths are preventable: just "Put it down."

What is

DISTRACTED DRIVING?

- Texting
- Using a cell phone or smart phone
- Eating and drinking
- Talking to passengers
- Grooming
- Reading, including maps
- Using a navigation system
- Watching a video
- Adjusting a radio, CD player, or MP3 player

visit www.distraction.gov to learn more.

Hooper STAR Committee Update

The mission of the STAR Committee is to provide direct oversight to Hooper Corporation safety committees on both the operating and departmental levels. The STAR Committee is continually working to refresh and update current safety initiatives:

- The CARES Program has been fully developed and launched to both the Electric Power Division and the Mechanical Division and includes a set of feedback forms for new employees, a 10 minute CARES interactive training video, and hard hat stickers to signify the completion of this six month new hire program.
- An updated emergency evacuation plan has been implemented following office updates which included many office relocations.
- The 2014 EPD summer poster program has been finalized and is ready for implementation.

Congrats to Joan Witkowski on her retirement!

Joan Witkowski retired this April with more than 12 years of service at Hooper Corporation. Joan worked in the Sheet Metal Shop and will be greatly missed by all. Best wishes for your retirement years, Joan!



Above: Joan and employees of the Sheet Metal Department. Left: Fred Davie and Joan at her retirement gathering in April.



Hooper Corporation OnSite

Spring 2014

Electric Power • Mechanical • HVAC

Contributors: Fred Davie, President; Don Burkard, Project Manager; Mike Sutcliffe, CMF Shop Manager; Kurt Hedstrom, Project Manager at GHAC
Editor: Alison Van Bellinger, Corporate Communication Specialist

24/7 Emergency Storm Response
For all your emergency storm response needs, look no further than the Hooper Corporation Emergency Storm Response Team. Reach our emergency line 24/7 at (877) 630.7554

OnSite is available electronically!

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2030 Pennsylvania Avenue
P.O. Box 7455
Madison, WI 53707-7455
608.249.0451

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