

Concrete Canoe News

Michigan Tech Concrete Canoe 2008-2009

The 2008-2009 Michigan Tech Concrete Canoe team chose to shoot for the stars and launched the 2008-2009 campaign with a solar system theme. This theme was chosen based on the team's goal of implementing sustainability to our planet through civil engineering applications. The canoe, cast on January 17th, 2009 by a thirty member team in an astonishing 180 minutes, was dubbed *Polaris*, the Latin name for the North Star known for its use in navigation. The canoe was christened *Polaris* due to it's correlation to Michigan Tech's objective to show the way to the future of sustainability and become a guiding light in the concrete canoe competition. The team extended the theme not only to the boat, but also to the display, by creating an elaborate star shape cutaway section of the canoe construction process and futuristic canoe stands.

2008-09 Michigan Tech Concrete Canoe Team At a Glance	
Name	Polaris
Weight	180 pounds
Length	20 feet
Width	31 3/16 in
Depth	16 in
Thickness	3/8 in
Colors	Black, Blue, and Green

Regional Competition

The 2008-2009 North Central Conference Competition was held at Lawrence Technological University located in Southfield, MI. *Polaris* debuted on April 5th, 2009 and received praise for the intricate inlays and use of colors throughout the canoe. The competition was split into two days. Day one was comprised of the technical portion of the competition. Day two concluded the competition with the always entertaining races.

Unfortunately due to some compliance issues, we were unable to defend our record setting 10th consecutive regional title. The final tally left Michigan Tech out of the winner's circle by a narrow margin of 1.9 points when compared to the 100 points total. The 2nd place finish was a tough pill to swallow, but Michigan Tech has bounced back and is ready to show their resiliency during the 2009-10 campaign.

Competition Break Down	
<i>Races</i>	1st
<i>Presentation</i>	3rd
<i>Final Product</i>	2nd
<i>Technical Paper</i>	4th
Final Results	2nd



2009-2010 Campaign

In a close competition, the Michigan Tech team placed second overall at the Regional level. Though this may be an exciting accomplishment for some teams, Michigan Tech was disappointed to miss out on the opportunity to compete against the top teams in the nation for the first time in 11 years. Rather than letting last year's disappointment bring down hopes for the coming year, the Michigan Tech team is determined to claim the title of North Central Conference Champions and once again regain a national ranking. Already the team has made strides to improve on previous canoes.

Casting Day for the 2009 boat (yet to be named) has been set for Saturday, December 5th, much earlier than in previous years. The hope is that by casting early more time can be allotted for aesthetics, allowing the team to keep up with trends in the national competition. In order to make this a reality, the team has already begun optimizing the mix design, experimenting with new reinforcement techniques, discussing theme ideas, and paddling multiple times a week. With returning member's strong desire for retribution combined with the excitement and original ideas of new members, there's no telling what this team might achieve at the 2010 North Central Conference and National Concrete Canoe Competitions.

Team Leadership

Returning for a second year as a co-captain at Michigan Tech is civil engineering major Ryan Hoensheid. Ryan has been a member of Concrete Canoe all four years he's been at MTU. At last year's regional competition Ryan was a presenter in the Technical Presentation and a paddler for the men's endurance race.

Stepping into a leadership position as the other co-captain this year is junior Jon Zalud. Jon is a civil engineering student who has been apart of the team since his freshmen year. In the past, Jon has contributed to the team by helping with the FEA analysis and holding the position of construction manager for the 2008-2009 year.

Regional Competition

This year's North Central Conference Competition will be held at Western Michigan University. The team is looking forward to the trip to Kalamazoo and the tough competition the Broncos will be hosting.

National Competition

California Polytechnic State University is the host for this year's National Competition, which the Michigan Tech team intends to be a part of.





1. The team with Polaris on Race Day
2. The crack on Polaris
3. Mending the crack
4. Coed Sprint Finals
5. Troweling on Casting Day
6. Men's Endurance Paddlers





7. Adding Reinforcement on Casting Day
8. Cross Section
9. Co-ed Sprint Practicing in Ashland
10. Display Table
11. Planet Inlays on Polaris





12. Polaris Underside
13. 2009 Paddlers in Ashland
14. Slurry Coating
15. Adding Planet Inlays



Concrete Canoe Competition In A Nutshell

Concrete Canoes? Nope, We're Not Kidding!

Each year the MTU Concrete Canoe Team, along with 200 other teams around the nation, design and build a concrete canoe which they take to a regional competition. We compete against teams from University of Michigan, Michigan State, and Western Michigan University among others. We've placed in the top 10 teams in the nation with a team best 3rd place finish in 2005 and a recent 8th place finish in 2008.

Each year we choose a theme that resonates with the attitude of the team. The boat's name, design and display as well as the presentation all tie into the theme. The team works all year and generally puts in over 3000 hours by the time competition rolls around.

Wait...How Can Concrete Float?

Traditional concrete is a mix of cement, water, sand and gravel. To make the canoe we use very small (less than 1mm in diameter) recycled hollow glass spheres instead of sand and gravel. This results in concrete that is actually lighter than water! This is important because at competition the canoe is submerged in water and disqualified if it does not rise back to the surface.

So What Happens at Competition?

There are 4 parts to competition which are judged by a panel of seasoned engineers:

- **Technical Paper:** The team writes a professional quality design paper detailing the engineering that went into designing our concrete mix proportions, management techniques, testing procedures, and construction methods.
- **Technical Presentation:** A group of presenters summarize the Technical Paper into presentation which can be no longer than 5 minutes. The challenge is to condense an entire year of work into a concise and dynamic presentation.
- **Races:** There are 5 races: 2 person Women's Sprint, 2 person Men's Sprint, 3 person Women's Endurance, 3 person Men's Endurance, and a 4 person Coed Sprint. Michigan Tech has traditionally excelled in the Race Category and successfully defended all 5 Regional race titles.
- **Final Product:** The canoe is displayed and judged for aesthetics and compliance with official rules of competition which detail dimensions and materials used in construction.

Hopefully this gives you an idea of the commitment and dedication necessary to be a national contender. Our success is completely dependent upon the generosity of our corporate sponsors, and we hope that you will be able to partner with us!

Concrete Canoe

Sponsorship Information

The Michigan Tech Concrete Canoe Team has been growing larger and more organized, more experienced, and more independent over the recent years. It is these advances that have led to our establishment as a national power in the world of concrete canoeing. These results are not only from the dedication of our numerous team members but also from the support of our trusted sponsors.

We are asking you personally to assist us in our goal of another nationally ranked canoe. Donations of technical expertise, products, or funding of any sort will help lead us to this achievement. As tokens of our appreciation for your generosity, you will be recognized in the following ways based on your level of donation:

- **Bronze Sponsorship – \$100 donation**
 - Semi-annual team newsletter
- **Silver Sponsorship – \$200 donation**
 - Semi-annual team newsletter
 - Company name and logo displayed on the back of team t-shirt
- **Gold Sponsorship - \$500 donation**
 - All of the above
 - Company name and logo displayed on the side of the team competition trailer used on the MTU campus and at the regional and national competition.
- **Platinum Sponsorship - \$1000+ donation**
 - All of the above
 - Framed and signed team picture
 - Company logo displayed on team promotional material

Any help that you are willing to provide, financial or otherwise, would be greatly appreciated. If you or your company are so willing, please make your tax-deductible contribution payable to the

Michigan Tech Fund with the memo filled out as *Concrete Canoe*,

and send it to:

*Michigan Technological University
Attn: Shelly Sandell
Department of Civil and Environmental Engineering
1400 Townsend Drive
Houghton, MI 49931-1295.*

Please do not hesitate to ask any questions about the team. Contact information can be found below. Once again, thank you for your time and consideration and we look forward to hearing from you.

Sincerely,

Ryan Hoensheid
rchoensh@mtu.edu
(231)-499-3795

Jon Zalud
Jwzalud@mtu.edu
(989)-330-0779

What will my donation be used for?

Michigan Tech has a strong tradition of taking the entire team to competition. Each and every person puts in hours and hours of their time throughout the academic year. The belief has been that every member earns a right to come to competition. This does however present a problem when it comes to the team's finances as you can see here:

Van Rental to Kalamazoo, MI for Regional Concrete Canoe Competition (3 Vans)
\$2300.00

Van Rental to San Luis Obispo, CA for National Concrete Canoe Competition (3 Vans)
\$4600.00

Accommodations in Kalamazoo, MI
\$1100.00

Accommodations in San Luis Obispo, CA
\$2700.00

Registration for Regional Concrete Canoe Competition (30 people, \$125/person)
\$3750.00

Registration for National Concrete Canoe Competition (30 people, \$250/person)
\$7500.00

As you can see from this sample, the team spent upwards of \$20,000 just in traveling expenses. The cost of constructing the canoe and display are a mere fraction of the cost of getting the team to and from the competition sites. This year will be no different. Regional competition will be held at Western Michigan University in Kalamazoo, MI. At a round trip distance of approximately 1260 miles at an average price of \$0.70/mile, the team expects to pay at least \$2300 again this year for travel to Kalamazoo.

Please consider becoming a sponsor of the Michigan Tech Concrete Canoe Team. Questions about the team are always welcome and if you are in the Houghton area, you are always welcome to come and see our progress. Thank you!