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Jerrie Fiala, Editor: [jerrie.fiala@wmich.edu](mailto:jerrie.fiala@wmich.edu)**THE BLACK PEARL team earns third place in concrete canoe competition**

WMU's Concrete Canoe Team won third place at the 2009 North Central Regional Concrete Canoe Competition with this year's canoe, **THE BLACK PEARL**. The team is sponsored by the WMU student chapter of the American Society of Civil Engineers [ASCE].



The Black Pearl with the WMU team after the regional competition: Front (left to right) **Kim Warners, Nick Mannon, Britney Richmond, Andy Peruski, Allison Porrett, Allison Doty**, Second Row (left to right) **Mike Romkema, Alex Frazier, John Hannich, Ryan Stoughton, Perry Lyford-Stojic, Lindsay Mukans**; Back (left to right) **Matt Moran, Wade Cleary, Zach Adams, Steve Houren, Bryce DeQuoy, Paul Pagano**

Lawrence Technological University hosted the regional event, which consisted of four equivalent components: aesthetics, an oral presentation, a written presentation, and five canoe races. WMU's third place overall finish involved three other awards: first place in the oral presentation, second place for the technical paper, and third place in final product / aesthetics. The team also placed third in a "fun" concrete bocce ball competition.

"This is the first time we've ever placed among the top three teams, and it puts us in a position as a team to be reckoned with," said **Mike Romkema**, a civil engineering (CE) senior who serves as WMU's ASCE president.

For the competition, the team of 25 dedicated ASCE members used their engineering skills and spent countless hours designing, building, and polishing the canoe. This year's competition required that 25 percent of the concrete come from recycled materials.

"The concrete mix uses recycled medical waste glass for aggregate, recycled supplemental cementitious materials, and melted snow to achieve a mix with recycled content of over 88%," Romkema said. "We added black pigment to give it a charcoal color, so it could be polished to a granite-like finish."

The 2009 team includes Co-captains **Paul Pagano** and **Bryce DeQuoy**, who were greatly assisted by **Kim Warners**, a CE junior. **Blair Bates**, Building Restoration Inc. president, is the team's industry advisor. "Most of this [success] would not have been possible without [Bates'] insights and suggestions," Romkema said.



At 600 pounds, the WMU canoe was heavier than other entries due in part to the recycled aggregate used in the concrete. Left to right: **Kim Warners, Allison Porrett, and Britney Richmond**

Pagano attributed much of this year's success to staying on task and to the large number of freshmen and sophomores involved who will help future teams be more competitive. "It is important we get people involved as early as possible," he said.

Romkema said the team met its three goals to increase member involvement, to produce a "green" concrete mix with a high recycled content, and to manufacture a commercially applicable concrete. "After four years of finishing as one of the bottom three schools at the conference, we set out this year to improve the chapter in every way with the ultimate goal of finishing among the top teams, and we did it," he said. "Our canoe emphasizes the ability of concrete to be a green and decorative building material."



In January, the team mixed the concrete and cast the canoe. It then cured for 28 days. Then, it was refined and polished

The Black Pearl is the fifth canoe a WMU team has designed and built since the team was formed in 2002. Romkema praised the CEAS for its support of the project.

WMU competed against nine other Michigan and Ohio universities, including University of Michigan and Michigan State. Ohio Northern won first place, and Michigan Tech earned second. The ASCE faculty adviser is **Dr. Hubo Cai**, a CCE assistant professor. For more information about ASCE, visit <http://www.rso.wmich.edu/asce> or email the organization at [wmu\\_asce\\_cca@yahoo.com](mailto:wmu_asce_cca@yahoo.com)

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