The Renaissance of Drinking Water

MSU Fountain Challenge

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Agenda

- History of Drinking Water Fountains
- Schools & Access to Safe Drinking Water
- Introduction to the Competition
- Project Scope
- Impact of Research
- Value to Industry
- Current Results
- Future Direction
- Project Plan

History of Drinking Water Fountains

Historically, the fountain was part of the water network providing drinking water to a community.

History of Drinking Water Fountains (cont.)

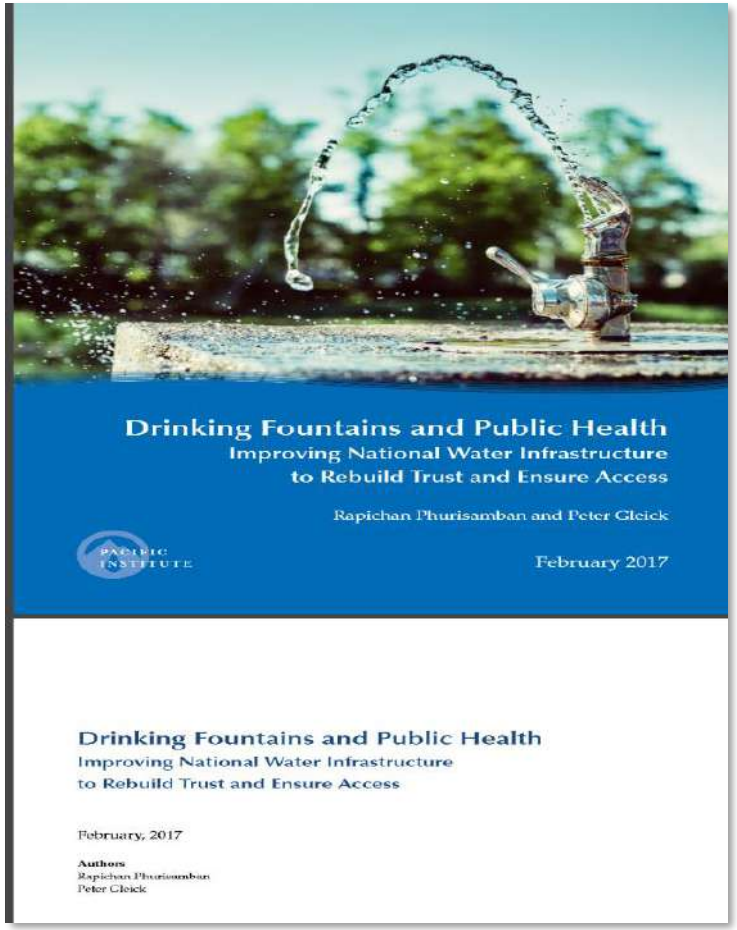
The architectural beauty of the designs has provided art for ages.

History of Drinking Water Fountains (cont.)

The fountains were always a community gathering place.

Schools and Access to Safe Water

- Sugary beverage consumption is an important component of dietary energy intake impacting body weight.
- Given the potential health benefits of increased water provision (particularly in schools), increased access to public water fountains may also promote healthy weights.



All public places and government buildings are to provide citizens with access to drinking water

- In 2009, California Project LEAN surveyed more than 200 school districts to determine the availability of drinking water in California schools. The survey revealed the following top three reasons students did not access free water at those schools where it was available:
  1. The **water** in the fountains or dispensers **is not cold**.
  2. Schools **do not have enough water fountains** for the number of students.
  3. Water fountains or dispensers are **poorly maintained**.
- Thus Chapter 558 of the Statutes of 2010 (Senate Bill [SB] 1413, Leno) established California Education Code (EC) Section 38086, which **required school districts to provide access to free, fresh drinking water during meal times in school food service areas**. All schools participating in the National School Lunches program must also meet the requirement for having free access to water during food service.

Introduction to the Competition

A competition for MSU undergraduate and graduate students to imagine and design the drinking water fountain of the future.

The *MSU Fountain Challenge* encouraged students to create interdisciplinary teams to stimulate creativity and design an innovative, functional, and aesthetically-pleasing indoor or outdoor public drinking water fountain that addressed concerns about water quality.

COMPETITION CATEGORIES

- Community Fountain
- School Drinking Fountain
- Emergency Response Fountain

Involving Students, Engineers, Scientists, Artists, and the Community

JURORS

Shannon Briggs, PhD
Toxicologist
MDEQ

Jeff DeBoer
Vice President
Sundberg-Ferar, Inc.

Linda Demmer
Artist

Scott Dierks, P.E.
Senior Water
Resources Engineer

Charles Fishman
Author

David Poulson
Senior Assoc. Director
MSU Knight Center for
Environmental Journalism

David Wilber, RLA
Certified Landscape
Architect

MENTORS

John Austin – Michigan Economic Center
Bruce Bartley – Bartley Water Associates LLC
Nathan Cai, PhD – Amway Corporation
Catlin Doherty – MSU Broad Museum
Dan Francis – MSU Planning, Design & Construction
Brian Kirschensteiner – MSU Broad Museum
Amber Pearson, PhD – MSU Geography (Health)
Rob Renner – Water Research Foundation
Alan Roberson – Assoc. of State Drinking Water Admin.
Patricia Weiss – Ernst & Young LLP
Volodymyr Tarabara, PhD – MSU Engineering

STEERING COMMITTEE

Joan B. Rose, PhD – MSU Fisheries & Wildlife
Erin Dreelin, PhD – MSU Fisheries & Wildlife
Jon Allan – Michigan Office of the Great Lakes
David Closs, PhD – MSU Supply Chain Management
C. Kurt Dewhurst – MSU Arts & Cultural Initiatives
Melissa Downs – MSU Fisheries & Wildlife
Ann Erhardt – MSU Sustainability
Emily Finnell – Michigan Office of the Great Lakes
Katherine Franz – The Axia Institute
Deb Kinney – MSU IPF Engineering & Architectural Svs
Susan Masten, PhD – MSU Environmental Engineering
Patricia E. Norris, PhD – MSU Community Sustainability
Grace Noyola – MSU IPF
Amber L. Pearson, PhD – MSU Geography (Health)
Volodymyr Tarabara, PhD – MSU Engineering

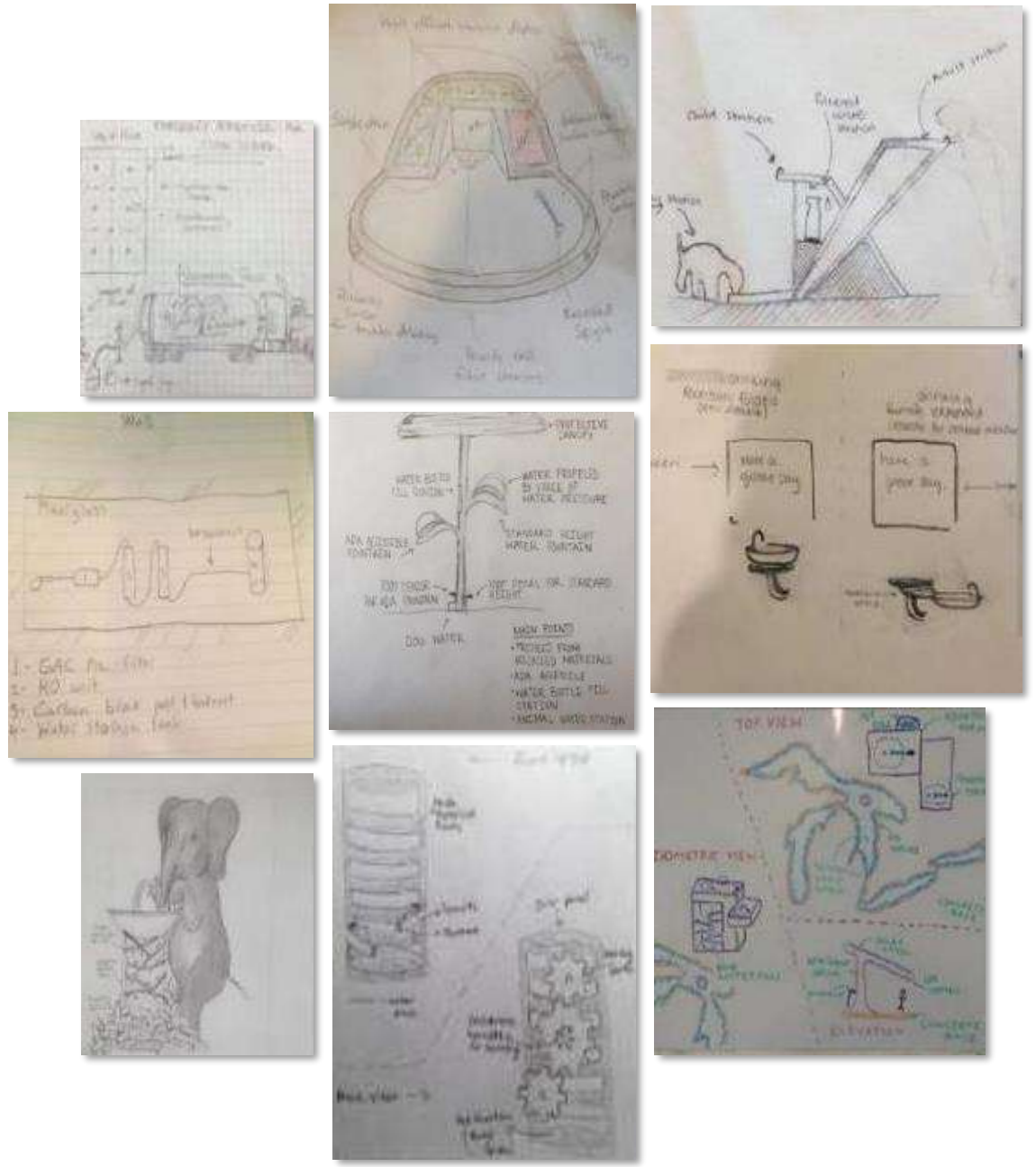
Project Scope

PHASE 1 – DESIGN CONCEPTS

- Written Narrative
- “Back of the Napkin” sketch
- Meet the team video
- 7 student teams went on from Phase 1 to Phase 2

COMMUNITIES ENGAGED

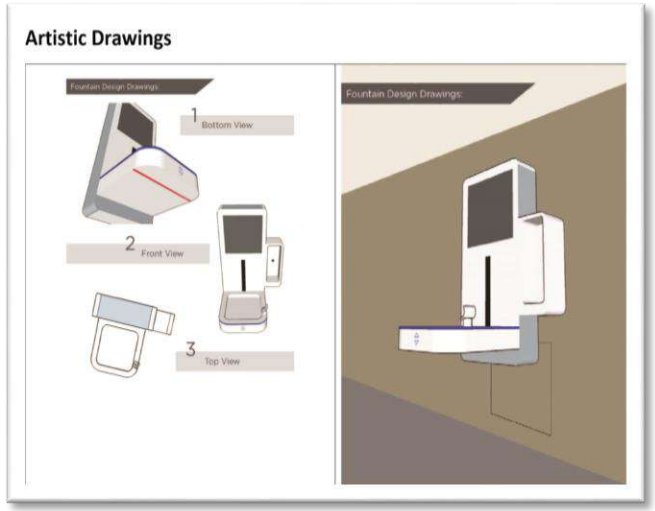
- East Lansing
- Midland
- Detroit Zoo

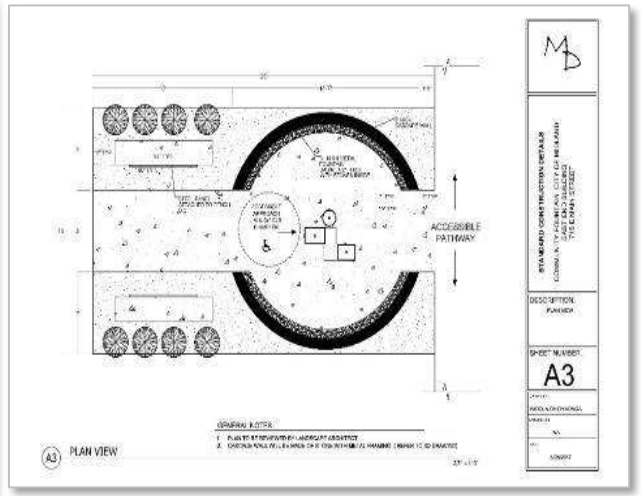


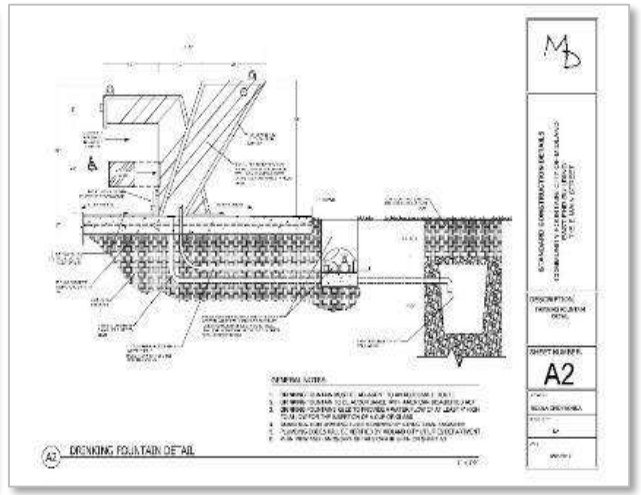
Project Scope

PHASE 2 – DESIGN SUBMISSIONS

- Technical Drawings
- Artistic Drawings
- Written Narrative
- Cost Analysis

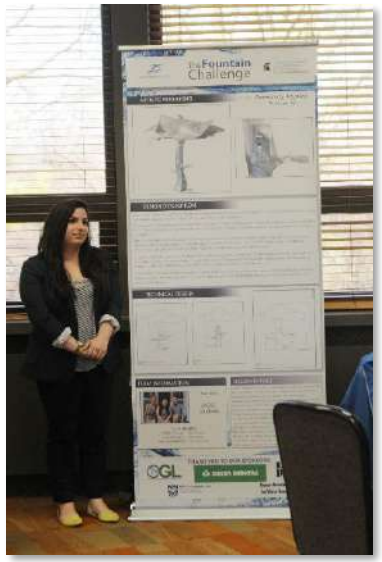
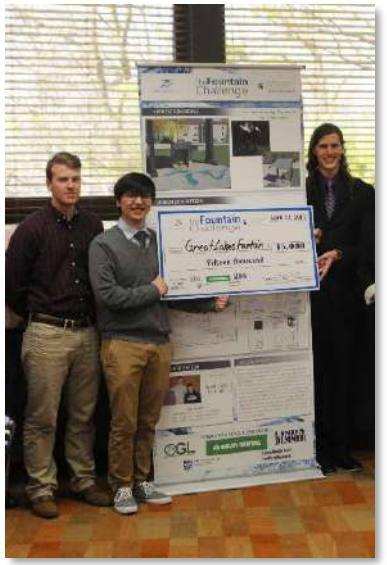
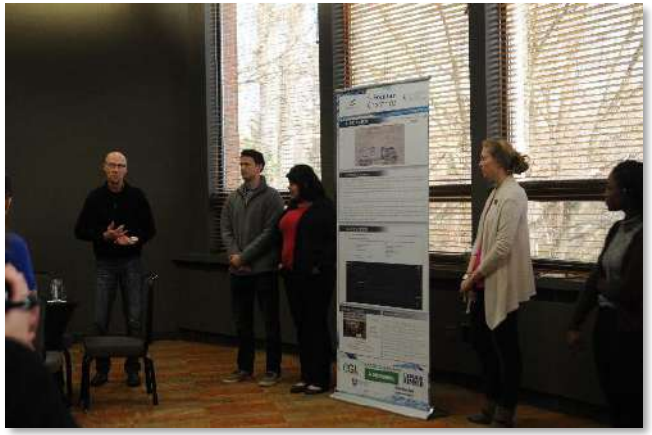
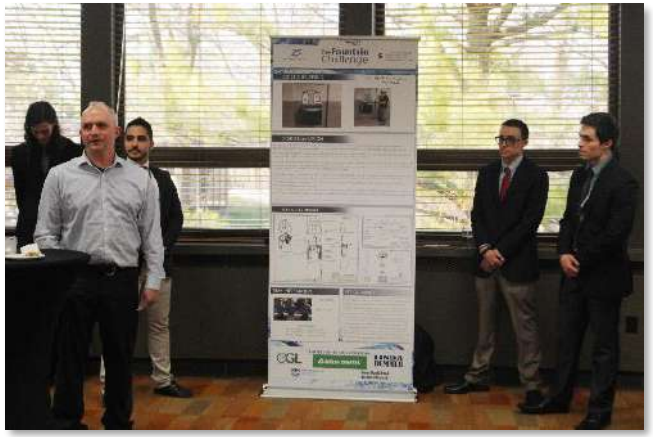
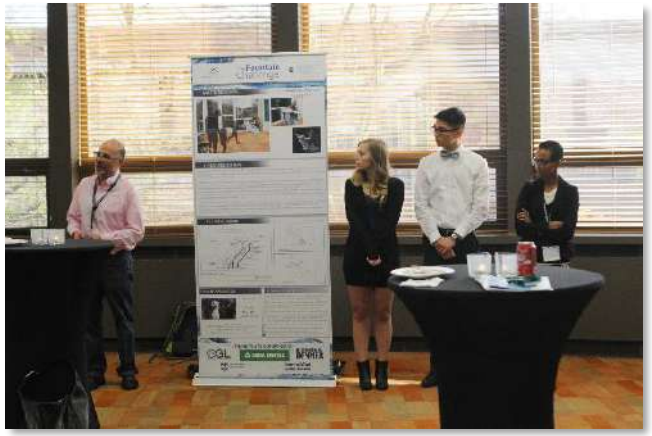






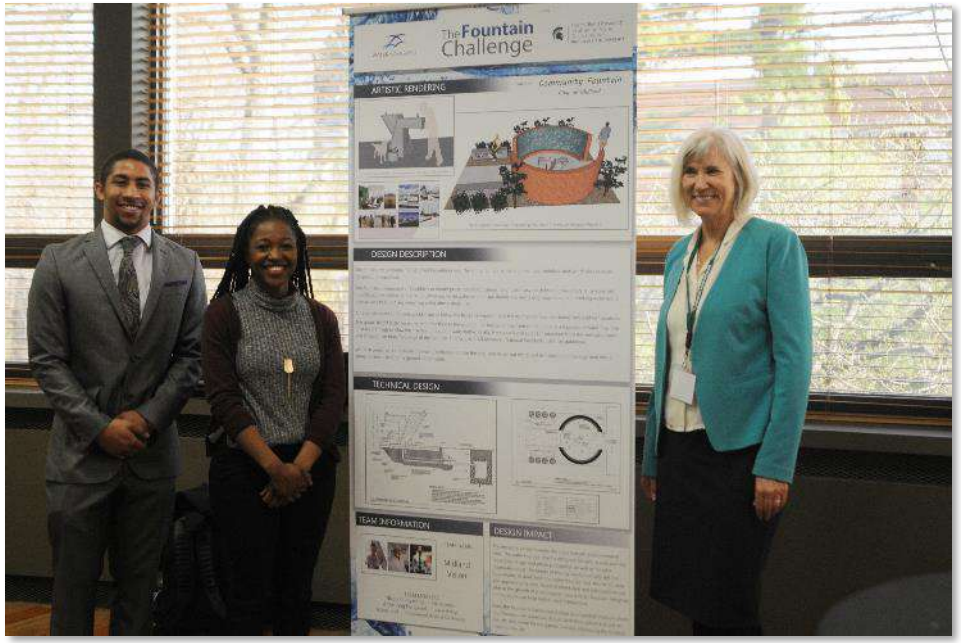
Competition Finalists

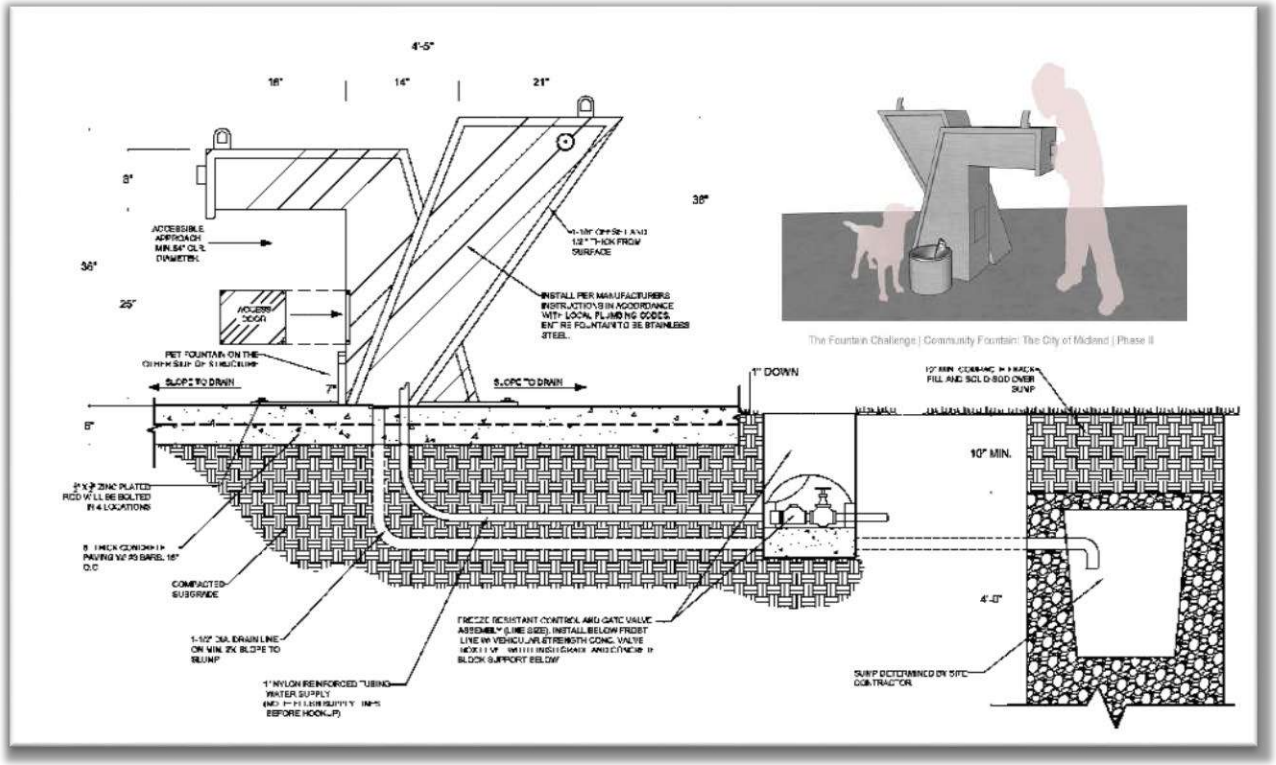


Current Results

Final student designs were high quality and well thought out concepts. The students were very engaged and excited about this project.



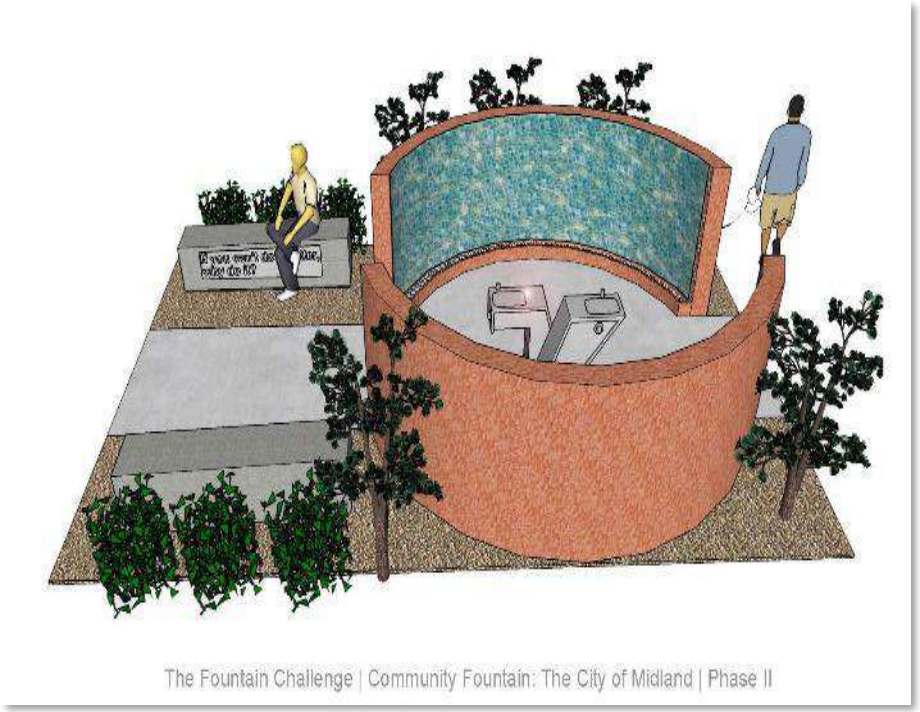


Impact of Work

- “It helped me think about water from a social, recreational, artistic, technical and community point of view. It also helped me use some of the skills and concepts that I have learned in a classroom setting and try to apply them to real-life situations.” – *Student participant*
- “What these Michigan State students did so wonderfully was use research, their own experience, the experience of many others, along with humor and a fresh sensibility, to imagine new kinds of water fountains.” - *Charles Fishman, Fountain Challenge Juror*
- The scope of this project aligns with several key Axia Institute grand challenges including:
  - Advancing Technologies
  - Management of potential contaminants and pathogens in drinking water
  - Promoting economic development within the region
  - Providing high visibility to the Axia Institute

Value to Industry

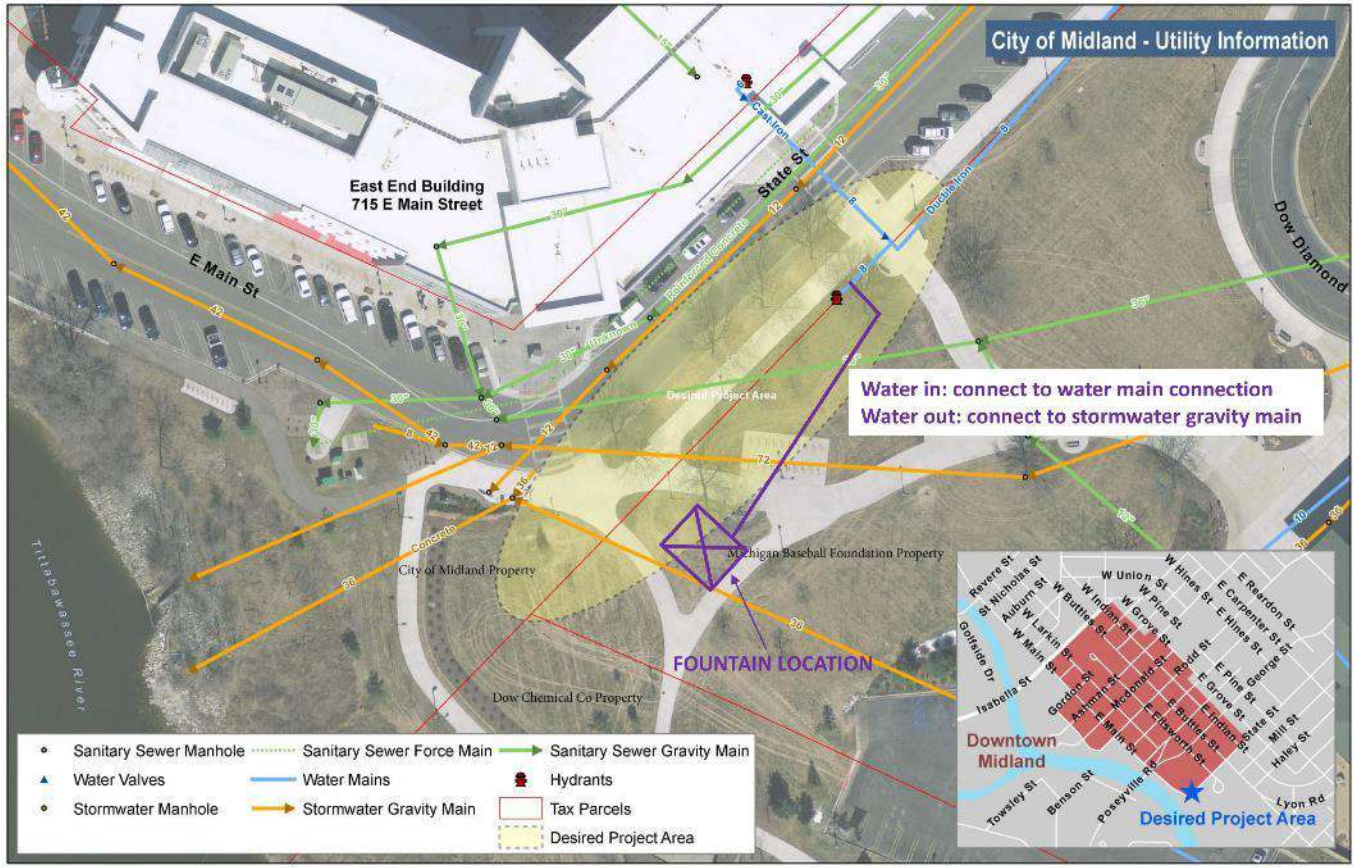
Collaborations between business, government, and education can produce exciting results that improve our communities. This is one such project that provides safe water, art, and public space.



The Fountain Challenge | Community Fountain: The City of Midland | Phase II

Value to Industry

We are currently working with the City of Midland and City of East Lansing to submit proposals for fountain construction approval.



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Future Direction

- Construction of winning designs
  - City of Midland – city approval process in progress
  - City of East Lansing – city approval process in progress; submitted grant for funding
- Exploring additional fundraising and grant opportunities for funding to construct one or more of the fountain designs.
- Discussing the possibility of running competition for the 2018-2019 school year. May expand to students at all state of Michigan colleges and universities.

Project Plan

Timing	Project Plan Activity	Status
Fall 2017	Submit proposal(s) for city approval	Pending approval
Winter 2018	Fundraising	
Spring/Summer 2018	Construction of fountain(s)	
Fall 2018	2018-2019 Fountain Challenge Competition	

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Thank you