Discover Your University

Title: IIHR—Hydroscience and Engineering Research Facility Open House

Tour date: July 14, 2023

Time: Morning tours are available 10:00-noon, and afternoon tours are available 1:00-3:00 pm

Host: Breanna Shea

About:

IIHR's extensive state-of-the-art facilities and instrumentation at the University of Iowa support research and education in hydrosciences, including a wide range of physical and numerical modeling and field data collection projects.

In recognition of IIHR's Reunion Celebration, tours of IIHR facilities and current research projects will be offered throughout the day led by researchers and graduate students and will be open to the broader University of Iowa campus community. Individuals or groups are encouraged to explore locations on their own and at their own pace.

A map of tour locations with details is available to help guide attendees to their destinations of interest.

10:00 AM – 12:00 PM Morning Open House Tour Locations

Hydraulics Wave Basin Facility (Oakdale Campus)
2274 Old Farmstead Road
Coralville, Iowa 52241

IIHR is a world-renowned leader in ship hydrodynamics research, supported by the most advanced state-of-the-art wave basin facility in the country. The 40x20x3-meter basin accommodates model testing in an open body of water for critical analysis of naval vessel maneuverability and seaworthiness. Research engineers test scale-model navy ships and marine vessels under a variety of real-life conditions created by the basin's wavemakers.

Tour attendees will have an opportunity to see the wave basin in action and learn more about how landlocked Iowa has been leading front-line research in this area since World War II.

Hydraulics Annex 2 (Oakdale Campus)
2275 Old Farmstead Road
Coralville, Iowa 52241

IIHR's international reputation in perfecting the design and construction of large-scale laboratory models for applied hydraulics research has supported clients from London, New York City, Washington, D.C., Abu Dhabi, and major hydroelectric public utilities.

Tour attendees will learn about IIHR's capabilities through a current project with the Ohio Department of Transportation to provide safe, effective, and cost-efficient recommendations to keep litter and debris from clogging urban highway drainage systems. The project is focused on how to prevent dangerous conditions for motorists and reduce the labor and time spent on clean-up.

Iowa Geological Survey Building (Oakdale Campus)
2390 Old Farmstead Road
Coralville, Iowa 52241

The Iowa Geological Survey (IGS) joined IIHR in 2014 and completes IIHR's water resources research profile to cover all aspects of Iowa's hydrologic cycle—surface to subsurface. IGS's expertise facilitates collaborations that allow researchers to develop the best possible water-related information, analyses, and tools for Iowans. IGS staff will have field equipment and geologic artifacts from across Iowa on display.

Morning Parking

On-site free public parking is available at the Wave Basin and Hydraulics Annex 2. Tour attendees are encouraged to carpool if possible.

1:00 – 3:00 PM Afternoon Open House Tour Locations

Model Annex and Wind Tunnel Annex
130 W. Harrison St.
Iowa City, Iowa 52242

Following the devastating 2008 flood, the Iowa Flood Center (IFC) was created at IIHR in 2009 and provides Iowans with critical tools and information to help them understand and mitigate flood risks. A demonstration of Iowa Flood Center monitoring equipment, including stream sensors and hydrologic weather stations, and online tools will be presented.

The Iowa Wastewater and Waste to Energy Research Program (IWWERP) develops solutions for small-town wastewater treatment, renewable natural gas production from waste organics, algae-based treatment technologies, and decarbonizing water resource recovery facilities. Attendees will learn about these IWWERP activities and the associated real-time sensing and data analytics innovations.

Tour attendees will also get a glimpse of IIHR's physical model capabilities by looking at a running stormwater model designed for Ellicott City in Maryland to evaluate its flood mitigation system, and see the design of a spillway gate used for emergency flow and fish passage at Trail Bridge Dam on the McKenzie River in Oregon.

Environmental Engineering and Sciences Graduate Research Laboratories
4242 Seamans Center
Iowa City, Iowa 52242

The Environmental Engineering and Sciences graduate research laboratories support research and teaching in the areas of water quality, quantity, and sustainability, helping to support our students in developing solutions to complex water-related challenges. Participants can tour a variety of advanced laboratories and talk with investigators about their research.

Engineering Fluids Laboratories
Seamans Center, 1070 and 1074 SC Annex
103 South Capitol Street
Iowa City, Iowa 52240

The Engineering Fluids Laboratories consist of a suite of three labs serving students in the College of Engineering in a broad array of activities, from a first introduction to fluid mechanics to independent research, supporting scheduled course laboratories, independent course projects and research, student organizations, and other extra-curricular activities. Attendees can learn about fluids lab experiments using a wind tunnel, tilting flume, pelton turbine, and more.

Parking for Afternoon Activities

The closest public parking is in the Recreation Center Lot 11 across from the UI's Campus Recreation and Wellness Center On Madison Street. This parking location is most convenient for the remainder of the daytime activities.