DredgeFest Great Lakes is a symposium, field expedition, and speculative design workshop about the human manipulation of sediments. It is an encounter between government agencies, designers, theorists, academics, corporate practitioners, industry experts, students, and the public. It will be held in two Minnesota cities, Minneapolis and Duluth, from August 14 – 21, 2015.

The theme for DredgeFest Great Lakes is *Shifting Baselines*. The phrase "shifting baseline" was introduced in landscape architect Ian McHarg's famous manifesto *Design With Nature*. It has since become a key conceptual tool in environmental circles. In 1995 a paper by Daniel Pauly showed that fisheries experts tended to think in terms of the state of the environment at the beginnings of their career. Baselines shift as new generations grow up thinking that whatever they grew up with was natural, ignoring exactly how much things has already been changed before they were born.

But ‘shifting’ needn’t be a passive verb. Baselines can be shifted with care and intent. For DredgeFest Great Lakes, we propose to think both about how baselines have been shifted and how they could be shifted in the future.

DredgeFest will bring together practitioners and stakeholders from a range of groups deeply concerned about these issues and offer participants an opportunity to explore the strange current conditions and long term future of the region. This year, we are very pleased to announce that Mark Smout — of the renowned London based office Smout Allen will be leading one of the workshops. Kristi Cheramie (a landscape architecture and faculty member at the OSU) will be leading a second workshop and Matthew Spremulli (an architect from Toronto and faculty member at the University of Waterloo) and Fionn Byrne (a landscape architect and faculty member from The University of Toronto) will be leading a third.

The first DredgeFest was held in New York City on September 28 and 29, 2012. DredgeFest NYC was organized in partnership with Studio-X NYC, an arm of Columbia University's Graduate School of Architecture, Planning, and Preservation; sponsored by Arcadis, TenCate, and TWFM Ferry; and featured speakers and content from agencies including the US Army Corps of Engineers, National Park Service, Environmental Protection Agency, and New York City Economic Development Corporation. The event was covered in *The Atlantic Monthly, Wired Design, Urban Omnibus, Dredging Today, Scenario Journal, Landscape Architecture Frontiers China*, and *Landscape Architecture Magazine*. The second DredgeFest was held in Louisiana from January 11 to 17, 2014. Partners included the Robert Reich School of Landscape Architecture at Louisiana State University, the Coastal Sustainability Studio at Louisiana State University, the Center for Land Use Interpretation, Gulf Coast Public Lab, and *Scenario Journal*.

DredgeFest Great Lakes is organized by the Dredge Research Collaborative, in partnership with the University of Minnesota's School of Architecture and Department of Landscape Architecture. DredgeFest Great Lakes is supported by funding from the University of Minnesota Imagine Chair in the Arts, Design and Humanities and the University of Minnesota Imagine Special Events Fund.

For University of Minnesota students interested in Dredgefest Great Lakes, please contact Ozayr Saloojee or Vince Debritto (saloojee@umn.edu or debri001@umn.edu) for more information. Please pre-register at the Dredge Research Collaborative website to receive the special pre-registration rate.
Like the symposium at our previous events, DredgeFest Louisiana and DredgeFest NYC, the symposium at DredgeFest Great Lakes brings together a broad mix of disciplines, corporations, public agencies and organizations in live public conversation, exploring and explaining dredge. The symposium investigates the conference theme of shifting baselines across five specific topics: Freshwater Basin, Choreographing Sediments, Landscapes of Dredge, New Economies, and Participation and Engagement.

Confirmed speakers include:

- Peter Annin, author of Great Lakes Water Wars
- Jen Maigret and Maria Arquero, MAde Studio/University of Michigan
- Neeraj Bhatia, The Open Workshop/California College of the Arts.

A cadre of local and international designers, including Mark Smout of Smout Allen (Bartlett SoA, UK), Kristie Cheramie (The Ohio State University), Matthew Spremulli (Waterloo, CA), and Fionn Byrne (University of Toronto, CA/incoming Kiley Fellow at the Harvard GSD) will join the Dredge Research Collaborative to lead fast-paced, intensive, and speculative small-group design workshops.

Every workshop registration includes admission to the symposium, workshop week (August 16 – 21 with access to design studio facilities at UMN), and space on the public tour in Duluth, Monday August 17.

In general, the workshops are open to all interested participants, including both student and professional communities.

This guided tour of dredge landscapes in Duluth is ticketed, open to the general public, and led by the Dredge Research Collaborative with local experts from both the City of Duluth and the Duluth Port Authority. In addition to including both bus and boat rides to visit sites, the tour will conclude with a waterfront reception.

The current schedule of sites:

**Bus**
- Erie Pier: Dredge material processing and confinement
- Atlas Cement: Dredge material re-use for stormwater management

**Boat**
- Pier B/Slip 2: Hotel and habitat creation
- 21st Ave: Dredge material use for shallow water vegetation establishment
- 41th Ave/Grassy point: Habitat Construction and Public Access
- Kingsbury Bay: Habitat Creation
- Knowlton Creek/Tallas Island: Habitat creation/recreational development

To pre-register for DredgeFest Great Lakes, please go to http://dredgeresearchcollaborative.org/dredgefest/tickets/
WORKSHOP 1 ADAPTIVE DEVICES
Mark Smout
Principal, Smout/Allen; Bartlett School of Architecture, London, England

The sedimentary landscapes of the Great Lakes Basin are shaped and instrumentalized by a panoply of technologies, from the small and humble, such as silt fences, turbidity curtains, and sand bags, to the large and impressive, including dredgers, installations of geotubes, and carefully-engineered levees. These technologies are deployed for a wide array of purposes including navigation, ecological restoration, and land reclamation.

This workshop will engage the landscape-making potential of these devices through speculative designs. The workshop will explore these devices as dynamically adaptive architectural objects—shifting with sediment, responding to material behavior—and consider the potential of near-future technological change—including sensing, monitoring, automation, and robotics—to reshape human influence within sedimentary processes. Design is introduced into the dredge cycle in a more substantive manner as a primary response to contemporary and future conditions.

MARK SMOUT is a principal at Smout Allen and is a Senior Lecturer at the Bartlett School of Architecture, University College London. His work, conducted with partner Laura Allen, takes two routes, architectural competitions, where the particular rigor of the competition brief, site and program provide the basis for new investigations, and conceptual design projects which test out the agenda and methodology of the design research practice. Smout Allen focuses on the dynamic relationship between the natural and the man made and how this can be revealed to enhance the experience of the architectural landscape. Smout received his Bachelor of Arts from University of North London and his Diploma of Architecture from University College London.
In May 1966, the U.S. Army Engineer Waterways Experiment Station published "Miscellaneous Paper No. 2-821" which opens with the following statement:

"The findings in this report are not to be construed as an official Department of the Army position unless so designated by other authorized documents."

The report details a two-year effort to design, build and test a hydraulic model of a 2.8-mile section of the St. Clair River. It outlines strategies for slowing the discharge rate of Lake Huron without compromising the river’s operational capacity within the Great Lakes freight navigation network. This fixed-bed model, which significantly extended studies began by the Army Corps in the 1930s, was constructed at an undistorted scale of 1:60 and allowed the Corps to simultaneously measure flow dynamics, water-surface elevations and velocity while also testing navigability for weighted-down freighters. Unlike other models being used by the Corps at that time, this model foregrounded the need to simulate use as much as engineered controls and hydrologic behavior.

Not surprisingly, the study was authorized amidst record low levels on Lake Huron, a reactionary effort rather than a projective vision for a dynamic system. Also not surprising: the entire project, including plans for implementation, was abruptly abandoned when levels appeared to bounce back. This workshop will explore the history of modeling and simulation efforts relative to the St. Clair River, the 40-mile long strait tasked with draining Lakes Michigan and Huron. As a point of departure, participants will look at the criteria used by the Corps in 1933, 1966 and 1972 to simulate the dynamics at the heavily impacted headwaters. From there we will jump to 1999, when the widened and deepened St. Clair saw lake levels once again plummet, lowered by almost two feet and where the levels currently average. The workshop will use hybrid techniques (analog drawing, digital projection, kinetic modeling) to confront the challenges of simulation, scale, material, and time.

KRISTI CHERAMIE is an associate professor at Ohio State University's Austin E. Knowlton School of Architecture and chair of undergraduate studies in landscape architecture. Her work tracks patterns of adaptability and transformation in the landscape, particularly efforts aimed at mitigating or eliminating change. She has received numerous awards and fellowships, including the J. K. Branner Traveling Fellowship in support of her master’s thesis at the University of California, Berkeley and EDRA Place Research Awards in 2008 and 2011 for work on rural landscapes in central California and coastal Louisiana. In 2011, with support from the National Endowment for the Arts, she led an interdisciplinary team in the documentation of Louisiana coastal communities compromised by land loss, sea level rise and competing industrial interests. Her work has been presented and published in a range of peer-reviewed venues internationally including JOLA, Places, ACSA, ACSP, CELA, and EDRA. Currently Kristi is leading one of three finalist teams in Future Ground, an international design competition hosted by the Van Alen Institute. Her team is developing long-range, flexible design and policy strategies for vacant land in New Orleans, transforming abandoned landscapes into resources for the current and future city.
The Interface Scale workshop asks participants to examine the potential of dredging activities as an opportunity for designers to create new landscape forms, functions, and experiences. Participants will be challenged to explore methods of producing and maximizing variability in form and especially pattern making using dredging/sediment-depositing techniques while focusing on 'lakeshores' as an explicit site of interface. Participants will work in teams to develop patterns: one architect paired with one landscape architect. Through patterning one can test local variability against regional order while addressing edge conditions. Participants will be encouraged to work between digital (parametric/generative and formal complexity) and physical media (dredge: soil, sand, clay, rock, water) and will have to test, experiment and accept new challenges. As with a variety of software, parametric tools allow for rapid iteration, precise measured control and testable outputs. Physical materials, on the other hand, deny the same level of precision, and are limited in the forms they can produce. Studying both together will assist participants in manipulating their pattern and evaluate its scale and performance towards a target ecological goal. Simultaneously, participants will also be required to consider their formal operations as producing a cultural artifact with qualitative readings and programmatic potentials.

The goal of the workshop is to develop an iterative design workflow with dredge/sediment-depositing techniques informed by the sensibilities of both landscape and architecture, and produce representation that reflects evolutionary design decisions.

**FIONN BYRNE** is a full-time instructor, teaching landscape/building architecture students at the John H. Daniels Faculty of Architecture, Landscape, and Design at the University of Toronto and the University of Waterloo School of Architecture in Cambridge. He holds a Master of Landscape Architecture from the University of Toronto, where he also completed his Bachelor of Physical Education and Health. His research and design interests depart from the convergence of technology and ecology; he is most intrigued by how velocity and information interact with biological systems. Byrne is also the founder of the Office of Pedonic Operations.

**MATTHEW SPREMULLI** is a full-time instructor, teaching architectural design students at the University of Waterloo School of Architecture in Cambridge. He holds a Master of Architecture from the University of Toronto, where he also completed his Honours Bachelor of Arts. His research and design interests also explore the intersection between technology and ecology; focusing on how digitally created/fabricated geometry will interact within ecological systems. Alongside pursuing scholarship on digitally-oriented, ecologically-informed design methodology, Spremulli brings expertise in digital fabrication, artefact production, visualization and exhibition design. Spremulli also provides professional consultation on digital-fabrication and digital-design workflows.