WATER INSTITUTE

SAINT LOUIS UNIVERSITY

Amanda Cox, Ph.D., P.E.

Director, WATER Institute

Associate Professor, Civil Engineering

Overview

- Water Access, Technology, Environment and Resources (WATER) Institute
- Water innovation to serve humanity
- Launched in June 2020 through Big Ideas competition in SLU Research
- Institute is comprised of:
  - Leadership team of director and 2 associate directors
  - 8 Primary Investigators from the College of Arts and Science, College for Public Health and Social Justice, and Parks College of Engineering, Aviation and Technology
  - 13 Associated Investigators from across SLU, SIUE, Missouri American Water, and growing
  - Developing an external Executive Advisory Council

Research Areas

Water in the Built Environment

- Improving water infrastructure to secure water supplies and address key societal needs

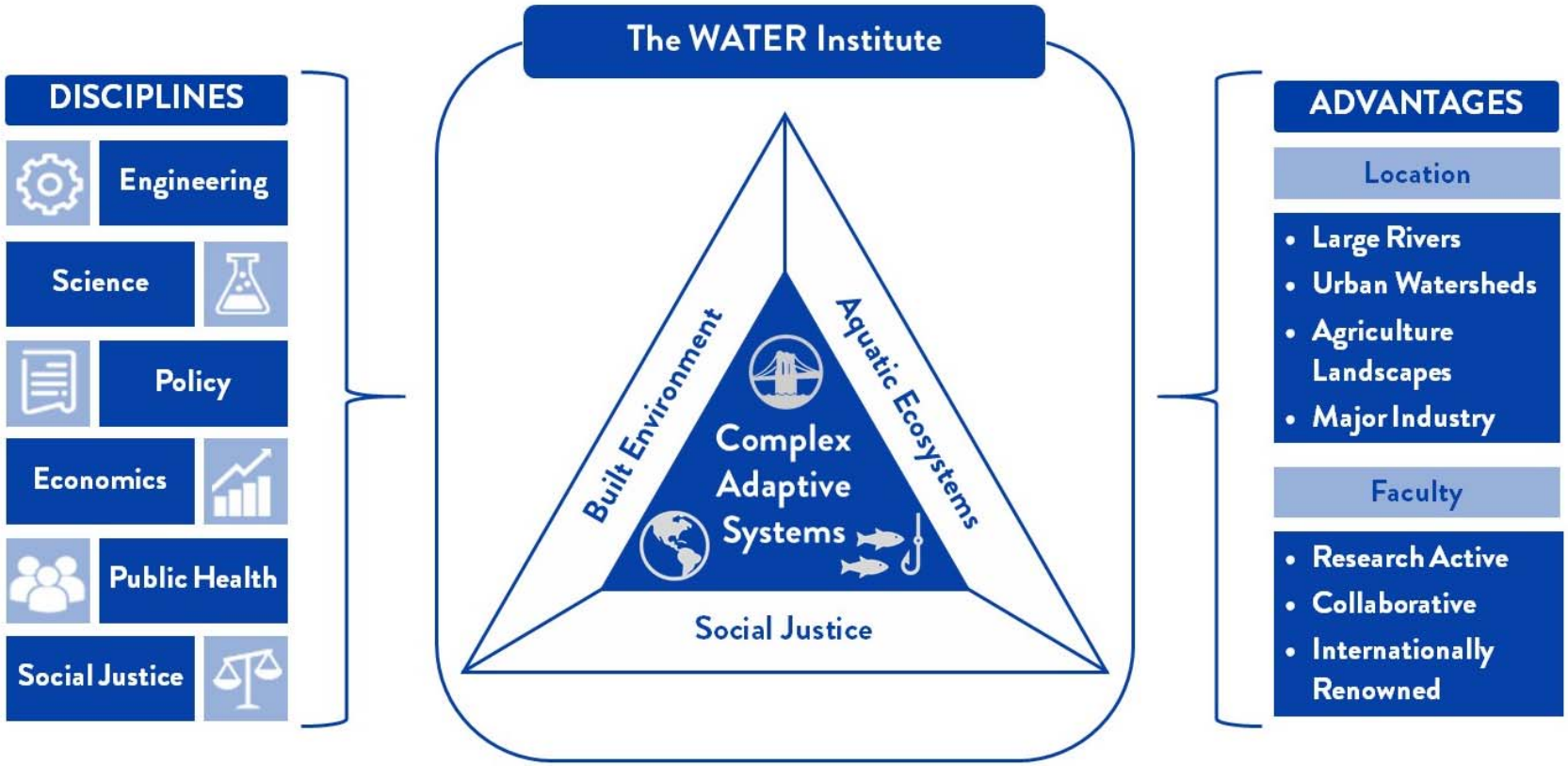
Aquatic Ecosystems

- Protecting aquatic ecosystems and improving local and global efforts at ecological restoration

Social Justice

- Developing clean water access at home and around the world

Interdisciplinary Approach

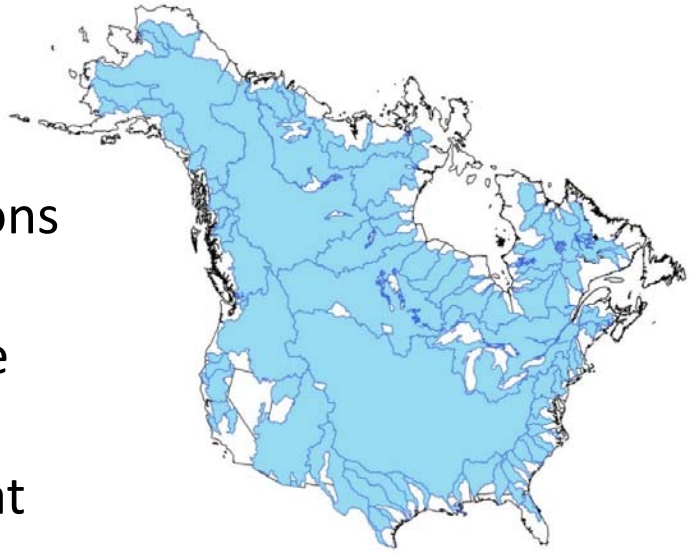


Active Research Projects

- Project funded by the National Science Foundation to Dr. Jason Knouft in the Department of Biology
- Collaborative effort between Saint Louis University, Tulane University, and Indiana University
- Develop data set of current and future streamflow and water temperature estimates across the United States and Canada to enhance conservation and management of freshwater systems in a changing climate

HydroClim

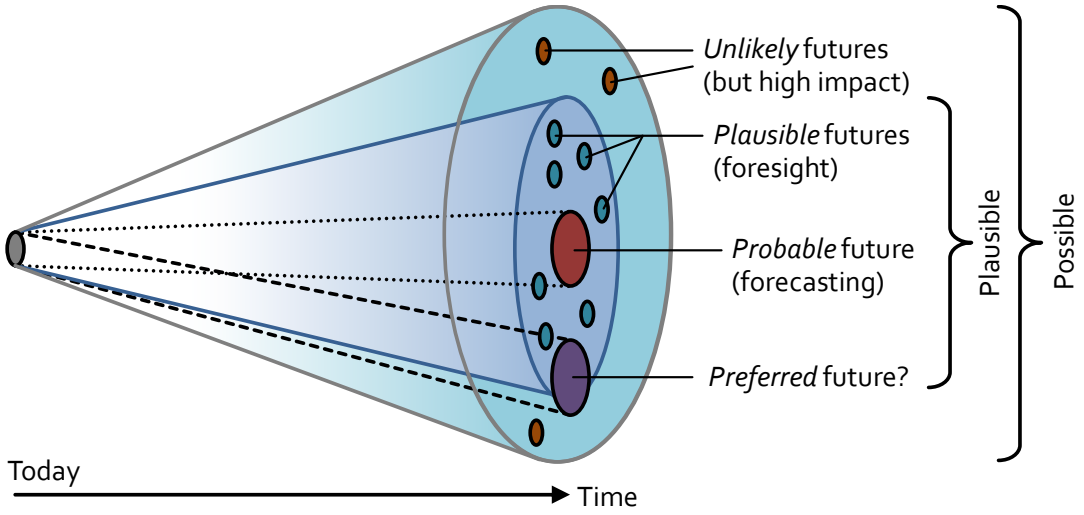
- Monthly discharge and water temperature from 1950 – 2099
- SWAT hydrologic model
- Based on 39 Global Climate Model projections
- Data generated at the stream segment scale
- Model outputs provided online in GIS format



FRAME – Future River Analysis and Management Evaluation Tool – Hybrid Model

Unique Features:

- Hybrid model – simplified 1-D hydraulic/sediment transport model with geomorphic rules for channel evolution
- Forecasting – variable inputs for riverbed material and sequencing of annual flow conditions
- Evaluates an ensemble of 'plausible futures'



US Army Corps of Engineers
Engineer Research and Development Center

UNIVERSITY OF PORTSMOUTH

The University of Nottingham

MENDROP

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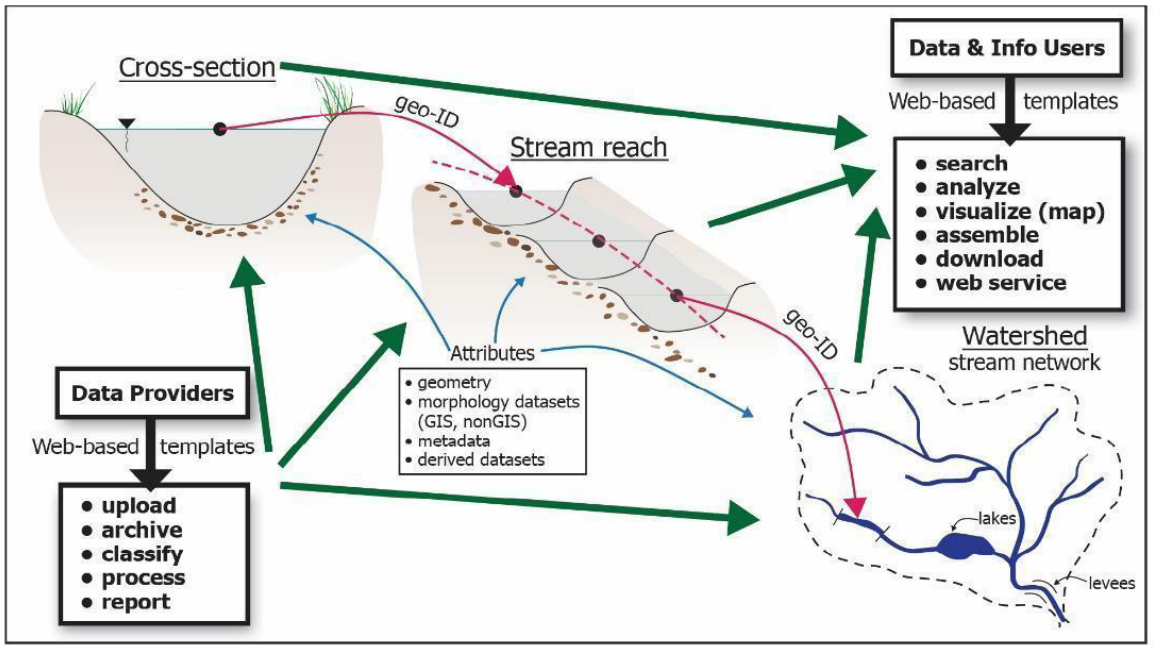
River Morphology Data and Analysis Tools (RiverMorph): A Web Platform for Enabling River Morphology Research

- Advance river morphology research through easy availability, accessibility and reusability of river morphology data
- National scale repository of river morphology data
- Socio-economic benefits through better flood modeling and river morpho-dynamic forecasting



SLU Summit for WATER

- Virtual one-day conference
  - March 22
  - No registration cost
- Keynote speaker on the topic of hydroinformatics
- Presentations from WATER Institute primary investigators
- Panel discussion on regional water resource priorities and research needs

Questions?

- Thank you!
- Contact: amanda.cox@slu.edu
- Stay Connected:
  - Website: slu.edu/water
  - Email: water@slu.edu
  - Facebook: facebook.com/sluwater
  - Twitter: @slu_water