RIMORPHIS – Demo #1

River Morphology Information System

1st Annual Stakeholder Workshop

May 12 & 19, 2021

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IOWA

NSF

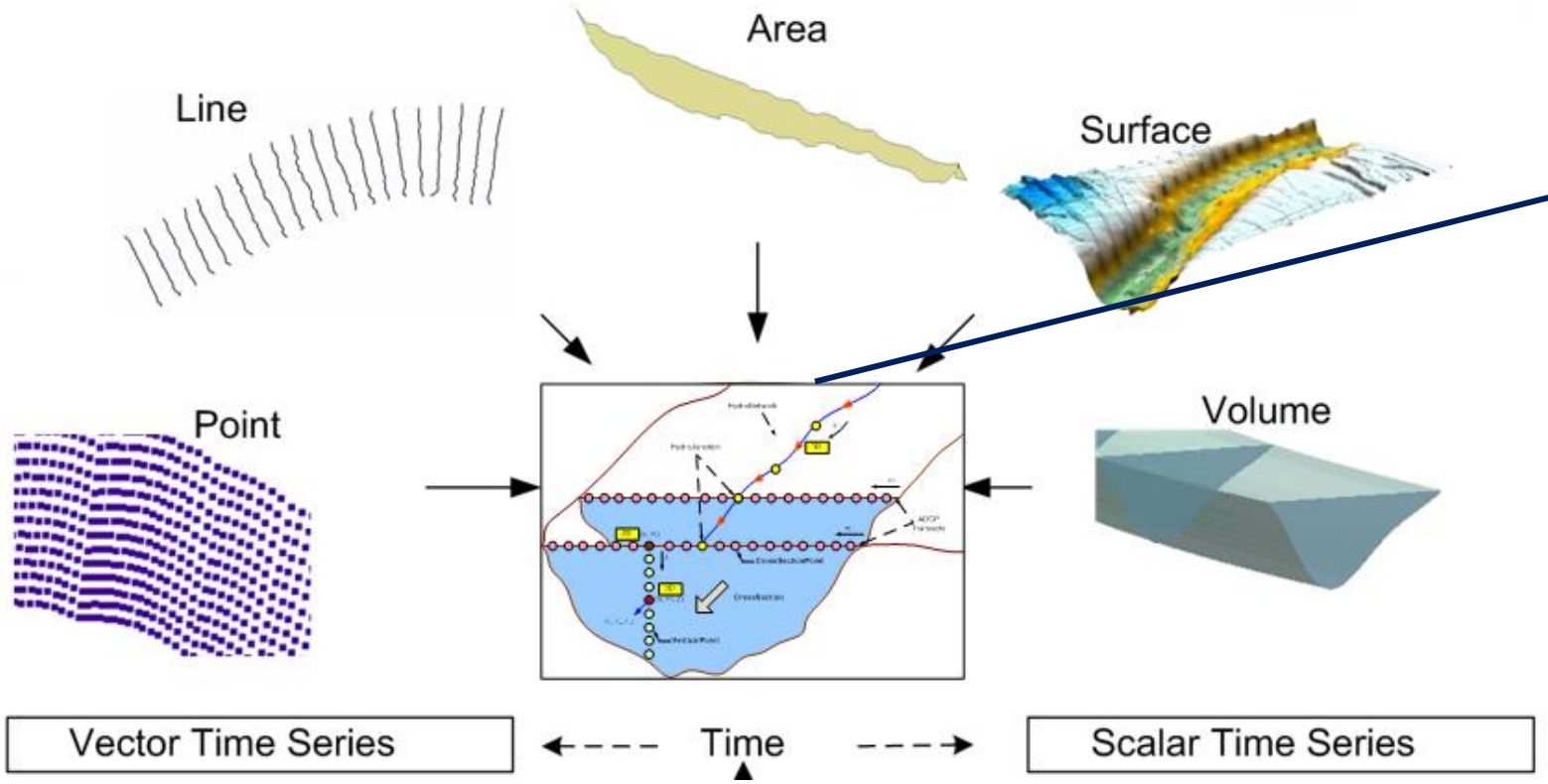
DEMO #1: WEB-GIS PLATFORM

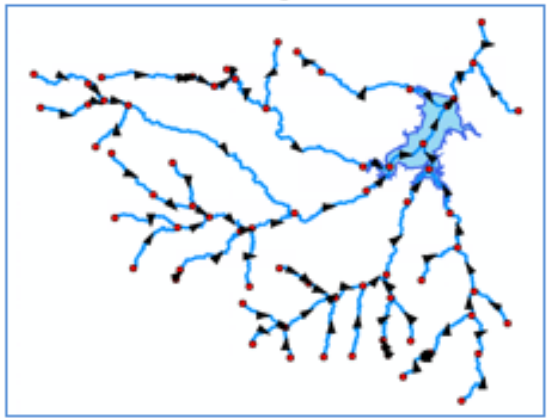
FOR DATA DISCOVERY OVER SPATIO-TEMPORAL SCALES

RIMORPHIS Demo #1: Data Discovery

Background: from Arc River to RIMORPHIS

Arc River 1.0: Developed at University of Iowa (2004- 2005)
for ingesting, processing, and visualizing ADCP data



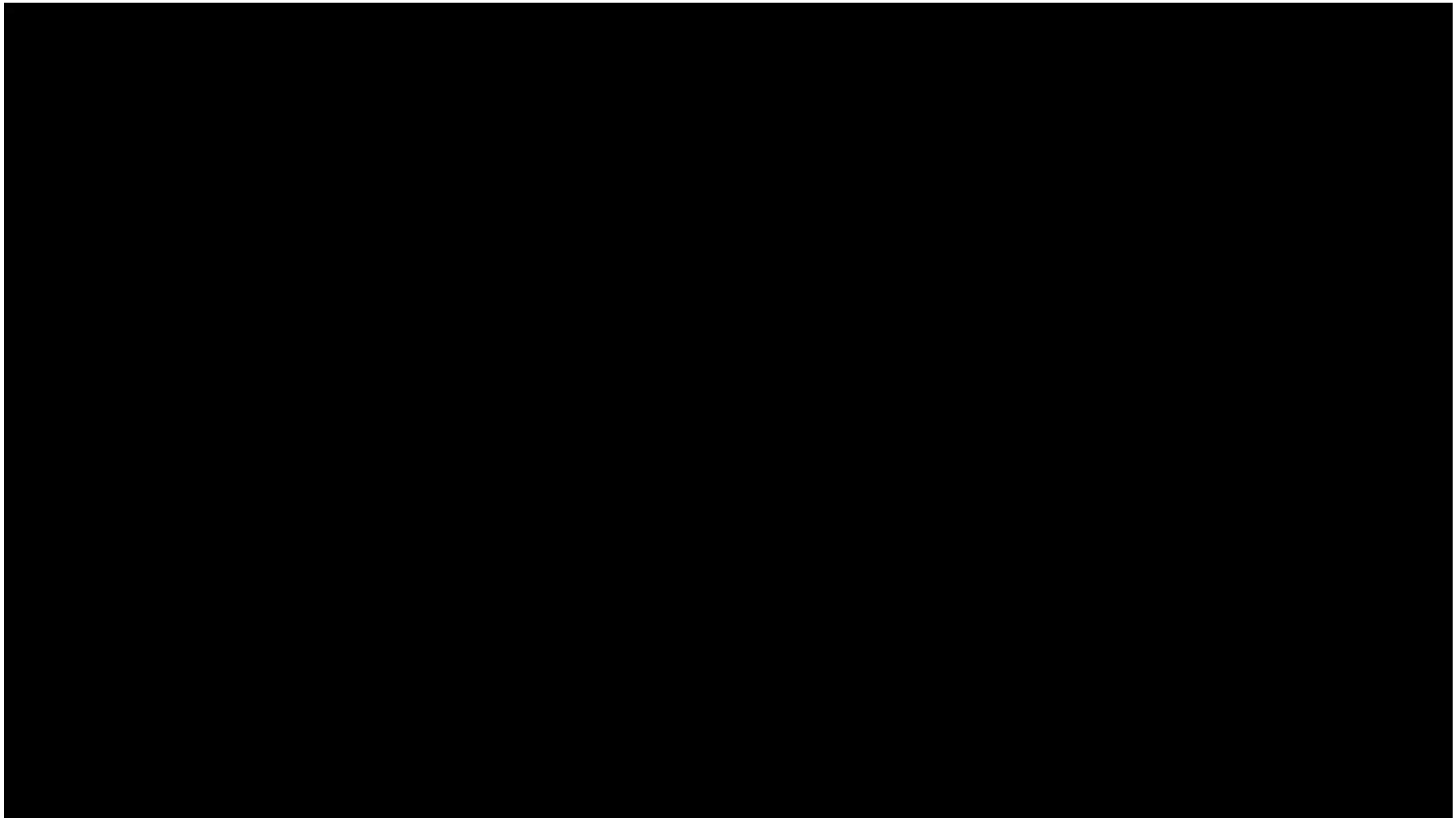


Arc River 2.0

(Dankook University, since 2019)

Kim, D., Muste, M. and Merwade, V. (2015). "A GIS-based Relational Data Model for Multidimensional Representation of River Hydrodynamics and Morphodynamics," Environmental Modelling & Software 65, pp. 79-93

DEMO Web-GIS Platform



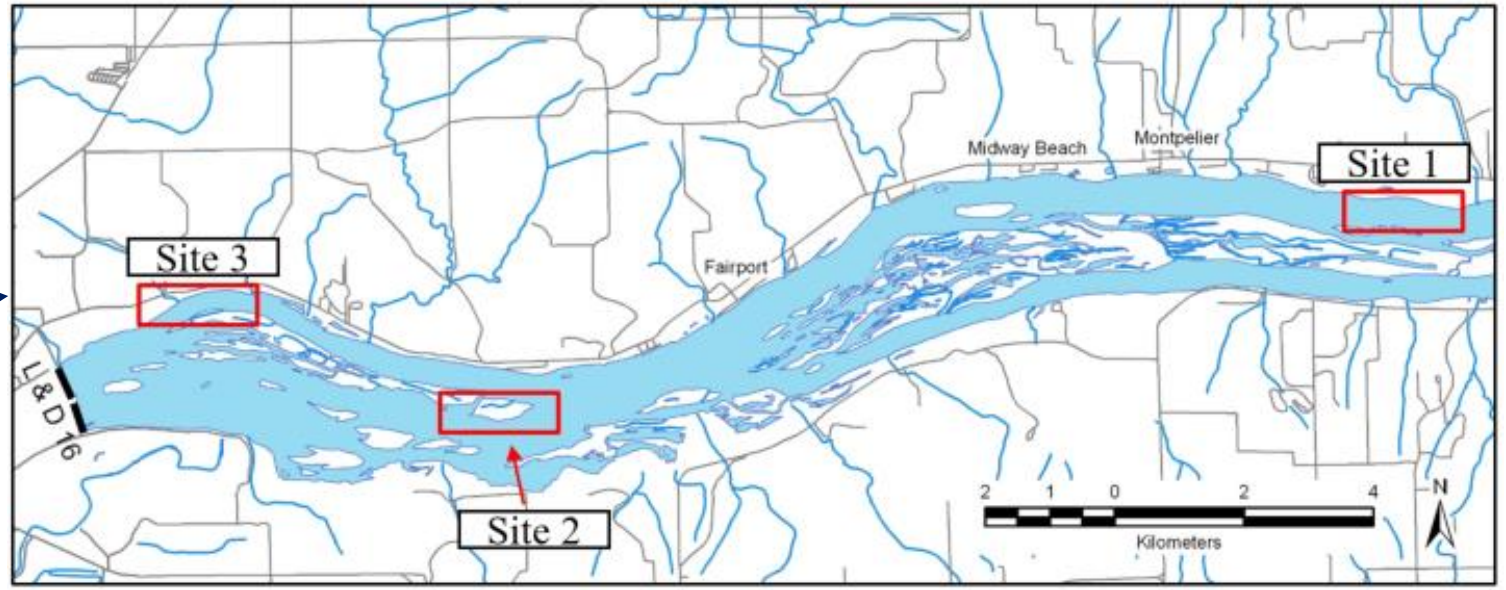
RIMORPHIS Demo #1: Data Discovery

Comment on data availability:

Example: ADCP data collected in Upper Mississippi River Basin (UMRB) by USACE Rock Island District

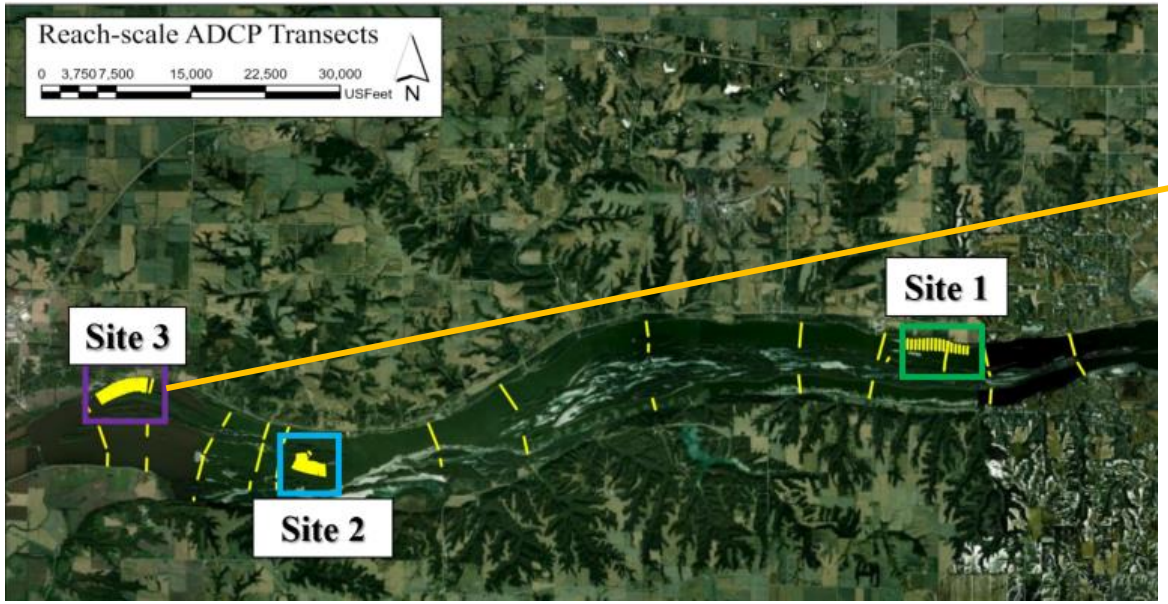


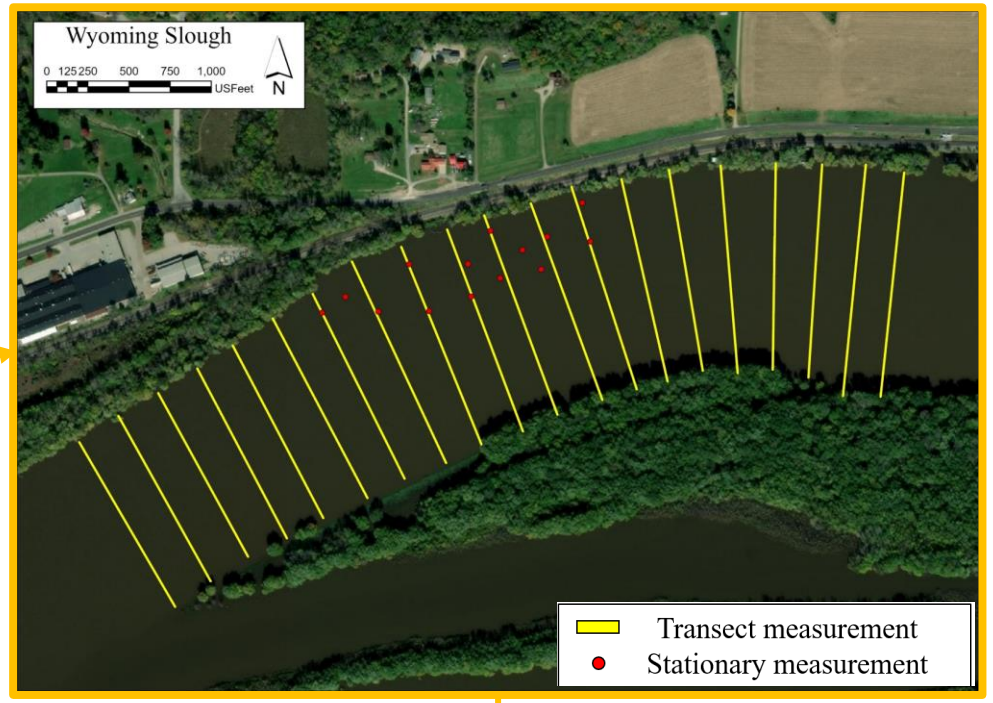
Pool 16 UMRB: fragmented ADCP surveys for fulfilling project-focused needs

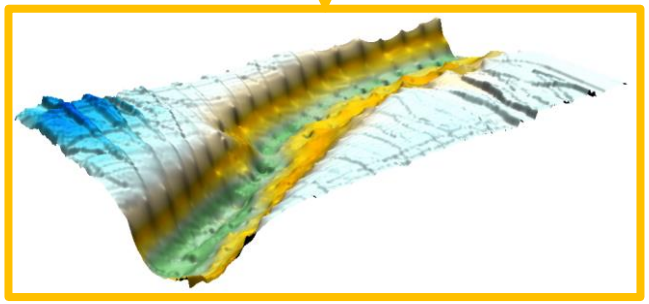


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ADCP data collected with high-density transects for detailed **ecohabitat characterization**

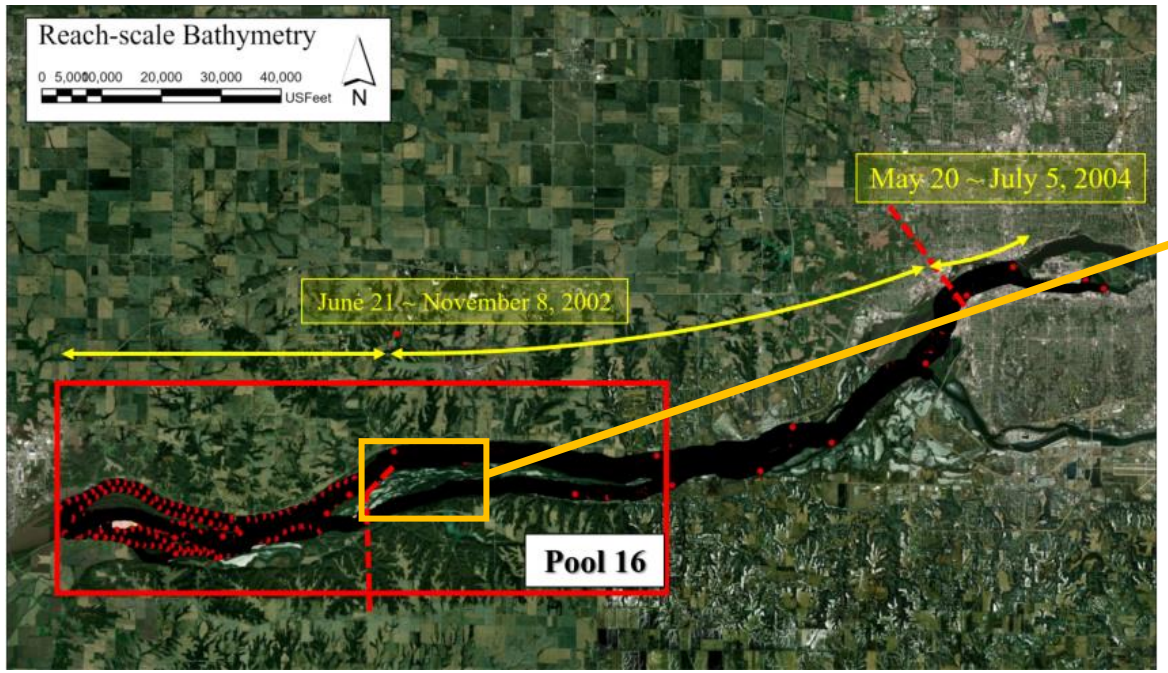






RIMORPHIS Demo #1: Data Discovery

ADCP data collected with zig-zag transecting for **bathymetry mapping**







How typical are these data densities and distributions for various ADCP repositories?

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THANK YOU !