

## SEDHYD 2023 Field Trip Descriptions

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*All field trips will be held on either Monday, May 8 or Friday, May 12, 2023. The full conference registration includes a choice of either 1 field trip, 1 full-day short course, or 2 half-day short courses. Conference attendees may register for additional field trips for an additional fee.*

## Recreational Activities “On Your Own”

### **Paddle or Biking Activities at Post-Dispatch Lake – Forest Park in St. Louis**

Recreational opportunity to experience Forest Park (City of St. Louis) by boat/water or bike/trails. Paddle boat, canoe, single and double kayak, stand-up paddle board, and bike rentals are available given a 15-minute light rail ride from the hotel and then a 15-minute walk.

**Time:** 11:00am – 6:00pm each week – Monday through Sunday

**Transportation:** [MetroLink](#) and walking

**Contact:** (314) 798-2961 – [paddleforestpark@gmail.com](mailto:paddleforestpark@gmail.com)

### **Paddle Adventure on the Mississippi River – Big Muddy Adventures**

Recreational opportunity to experience the Mississippi River whether guided or as part of a group Adventure trip. Boat or stand-up paddle board rentals are also available at Simpson Lake

**Time:** Call for details

**Transportation:** [MetroLink](#), driving, walking

**Contact:** (314) 896-4262 – [trips@2muddy.com](mailto:trips@2muddy.com)

**Instagram:** @paddlestl

**Facebook:** @2muddy

**Twitter:** @paddlestl

**FIELD TRIP:**

1. Day Tour – Taum Sauk Reservoir

**DATE & TIME:**

Monday, May 8, 2023 from 8:00 am to 4:30 pm

**DESCRIPTION:**

The following field trip will highlight the Taum Sauk pump-storage hydroelectric power plant located in Reynolds County, Missouri, that uses turbines that operate as pumps and hydraulic head generated by discharging water from an upper to a lower reservoir to produce electricity. A 55-acre upper reservoir with a 1.5-billion-gallon capacity was built on top of Proffit Mountain, approximately 760 feet above the floodplain of the East Fork Black River. At approximately 5:16 am on December 14, 2005, a 680-foot-wide section of the upper reservoir embankment [failed suddenly](#), sending water rushing down the western side of Proffit Mountain and emptying into the floodplain of East Fork Black River. Flood waters from the upper reservoir flowed downstream through Johnson's Shut-Ins State Park and into the lower reservoir of the East Fork Black River. Floods such as this present unique challenges and opportunities to analyze and document [peak-flow characteristics, flood profiles, inundation extents, and debris movement](#). This trip would reveal onsite background and discussion of the event including some hiking along the landscape within [Johnson Shut-Ins State Park](#) reflective of the 2005 failure.

**Tour Led**

U.S. Geological Survey - Central Midwest Water Science Center (USGS-CMWSC) and Missouri Department of Natural Resources (MDNR)

**Meal**

Box Lunch

**FIELD TRIP:**

2. Multi-Tour – River Systems Ecology, Research and Engineering, Regulation and Operations

**DATE & TIME:**

Monday, May 8, 2023 from 8:00 am to 4:30 pm

**DESCRIPTION:**

The following multi-tour trip begins at the [National Great Rivers Research and Education Center](#) (NGRREC), dedicated to the study of great river systems and communities that use them. The NGRREC has a function to promote the use of adaptive and sustainable management, improvement strategies, along with policy development and outreach to protect and sustain the quality of big river environments and their watersheds. A tour of the Leadership in Energy and Environmental Design (LEED) building along with discussions with NGRREC scientists. Next stop is the [U.S. Army Corps of Engineers Melvin Price Locks and Dam](#) along the Mississippi River. Mel Price Locks and Dam #26 represents the state of the art in river navigation control works, showcasing lock chambers and dam characteristics that contribute to the “stairway of water” that allows tow boats, barges, and recreational water craft sufficient water to travel from St. Louis to St. Paul (or vice versa) along the upper Mississippi River. A tour of the locks and dam infrastructure will precede a visit to the National Great Rivers Museum and eventually transition to one of the facility rooms to listen to presentations made by various agencies on topics related to research involving sediment and hydrology. The final stop on this tour will be a visit to the [Audubon Center at Riverlands \(in partnership with USACE\)](#), focused on conservation using science to protect birds and bottomland forest.

**Tour Led**

U.S. Geological Survey - Central Midwest Water Science Center (USGS-CMWSC) and U.S. Army Corps of Engineers – St. Louis District (USACE-MVS)

**Meal**

Local Restaurant

**FIELD TRIP:**

3. Big River Site Visit

**DATE & TIME:**

Monday, May 8, 2023 from 8:00 am to 12:00 pm

**DESCRIPTION:**

The following field trip is approximately 1 hour from downtown St. Louis, focusing on U.S. Army Corps of Engineers – St. Louis District (USACE-MVS) projects within the Big River basin. Project focus is implementing Engineering with Natural and Nature Based Features ([EWN-NNBF](#)) bank stabilization techniques, and general bank stabilization both direct and in-direct. Focus on EWN-NNBF features will be viewed as part of the project design and benefits.

**Tour Led**

Christopher Haring, PhD, P.G. CFM, Research Physical Scientist, River Engineering Branch, Coastal and Hydraulics Lab – Engineer Research and Development Center – U.S. Army Corps of Engineers (USACE)

**Meal**

Not provided

**FIELD TRIP:**

4. Multi-Tour – Sediment Removal Operations, Analyses, Collection and Inclusion of Maritime Safety and Protection of Natural Resources

**DATE & TIME:**

Friday, May 12, 2023 from 8:00 am to 3:00 pm

**DESCRIPTION:**

The following multi-tour trip begins at the foot of Arsenal Street in downtown St. Louis at the location of the USACE-MVS Service Base with a tour of the St. Louis District - U.S. Army Corps of Engineers oldest working dredge “Potter” built during the great depression. The dredge has been operational just over 90 years in achieving its mission of maintaining a congressionally-mandated 9-foot deep, 300-foot-wide navigation channel along the Mississippi. The tour transitions to the local ware yard and parking lot where USACE and USGS showcase equipment and collection protocols involving single- and multi-beam bathymetry surveying, sediment, and measurement of discharge. Next stop is the [Hydraulic Sediment Response](#) (Micro-modeling) lab on location that demonstrates small-scale physical models used to address a variety of problems related to shoaling and scour on inland waterways, permitting structural designs for mitigation. Finally, the tour concludes with a visit to the [Upper Mississippi River sector of the US Coast Guard](#), with emphasis toward the regulatory significance to maritime safety and protection of natural resources along the Mississippi River.

**Tour Led**

U.S. Army Corps of Engineers – St. Louis District (USACE-MVS) and U.S. Geological Survey - Central Midwest Water Science Center (USGS-CMWSC)

**Meal**

Box Lunch

**FIELD TRIP:**

5. Small Streams Site Visit

**DATE & TIME:**

Friday, May 12, 2023 from 8:00 am to 12:00 pm

**DESCRIPTION:**

The following field trip is on the Illinois side and is approximately ½ hour from downtown St. Louis, focusing on the Judy's Branch Grade Control Project that was originally part of a Planning Assistance to the States (PAS) study by the U.S. Army Corps of Engineers – St. Louis District (USACE-MVS) and Colorado State University. There are two other small stream bank stabilization projects scheduled on this site visit. Field site focus will be on grade control and bank stabilization techniques.

**Tour Led**

Christopher Haring, PhD, P.G. CFM, Research Physical Scientist, River Engineering Branch, Coastal and Hydraulics Lab – Engineer Research and Development Center– U.S. Army Corps of Engineers (USACE)

**Meal**

Not provided