Allegheny River Reconnaissance Site Visit and Survey Scoping Meeting

Impact Statement: Project partners from the USACE ERDC (Environmental Laboratory [EL] and Geospatial Research Laboratory [GRL]), USACE Pittsburgh District (LRP), Pennsylvania Natural Heritage Program/Western Pennsylvania Conservancy (PNHP/WPC), Allegheny National Forest (ANF), and U.S. Geological Survey (USGS) came together to visit a scenic section of the Allegheny River and discuss future remote sensing and riparian & submerged aquatic vegetation (SAV) habitat survey and mapping work.

A new research work unit led by ERDC-EL aims to evaluate and develop methods for better integrating field-based techniques with emerging remote sensing technology, in which the outcomes and products will improve ways to consistently and comprehensively document maintenance, success, or impact to terrestrial and aquatic riparian environments resulting from restoration or operational activities. The project includes a case study along the Allegheny River situated within the National Wild and Scenic River System and representing an ideal location for developing methods to characterize and map near-baseline conditions of riparian forest and SAV habitat. Protection and enhancement of riparian habitats are critical for supporting T&E species, such as federally listed freshwater mussel and rare scour vegetation communities along the Allegheny River. Additionally, SAV present throughout these aquatic systems provide indicators of ecosystem health and support unique ecological functions.

A two-day trip was held July 25-26 and included a field site visit to the case study area as well as a survey scoping meeting with project partners and local stakeholders. More specifically, Carl Nim and Andi Fitzgibbon (LRP) helped coordinate a reconnaissance boat trip on the 25th to preview riparian and SAV habitat variability and examine conditions along a stretch of the Allegheny River south of Kinzua Dam, including approximately 15 river miles between Tidioute and Tionesta, PA (Figures 1 and 2). Over twenty in-person and virtual participants joined the day-long scoping meeting on the 26th to discuss FY24 survey plans. Discussions surrounded specific data needs, sample design strategies, survey logistics, and critical habitat metrics and approaches to maximize data potential between the field and remotely sensed data. Presentations were provided by EL team members, Molly Reif (project background and remote sensing), Dr. Safra Altman and Matt Balazik (SAV methods), and Dr. Nathan Beane (riparian and forestry methods), PNHP team member, Ephraim Zimmerman (previous riparian and SAV monitoring in the case study area), as well as USGS collaborator, Eliza Gross (inland bathymetric lidar). Other ERDC project team participants included Dr. Glenn Suir (EL), Sam Jackson (EL), and Megan Maloney (GRL). The outcomes of the site visit and scoping meeting will serve as the draft survey plan, which will be further refined as additional coordination and planning are conducted in FY24. An additional outcome will include continued collaboration between the USGS and the Joint Airborne Lidar Bathymetry Technical Center of Expertise to improve inland bathymetric lidar data collection and processing in riverine environments.

Figure 1. Case study along the Allegheny River situated within the National Wild and Scenic River System.

Figure 2. Allegheny River reconnaissance boat trip (from left): Nate Welker (ANF), Carl Nim (LRP), Andi Fitzgibbon (LRP), Eric Chapman (WPC), Dr. Safra Altman (EL), Molly Reif (EL), Ephraim Zimmerman (PNHP), Eliza Gross (USGS), Kristi Dobra (LRP), Jeff Cole (USGS), John Young (USGS), Matt Balazik (EL), and photographer, Dr. Nathan Beane (EL).

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