

## **Supporting Wetland Stewardship Through Collaborative Monitoring and Shared Data Systems**

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Wetlands are dynamic and critical systems, but the information program managers rely on to steward them is a patchwork that further complicates defensible avenues to protection and conservation. Across the country, wetland inventories and datasets vary widely in update frequency, resolution, and scale, making it difficult to consistently track progress and share insights across boundaries.

To help address this shared challenge and enable more effective, on-the-ground management, the Center for Geospatial Solutions, with support from the Water Foundation, is developing a publicly accessible national wetland monitoring system designed to support collaborative wetland stewardship.

The system uses a novel, physically-informed AI approach to produce high resolution (5-meter), temporally accurate information on wetland extent, jurisdictional status, and seasonal change. It is designed to complement – not replace — existing inventories and field-based expertise by providing foundational wetland data with efficient and repeatable methods that are rooted in ecological reality. Results not only improve visibility into where wetlands are, but also highlight opportunities to protect and restore high value landscapes.

Ongoing partnerships with state and federal agencies, conservation organizations, academic researchers, and private-sector practitioners help ensure alignment with real-world program needs and workflows. Initial pilots, beginning in Virginia and expanding across the United States, are designed to capture the full range of wetland characteristics across ecoregions and directly inform technical design and application, with a focus on supporting prioritization of protected landscapes, restoration planning, and cross-jurisdictional policy coordination.

This presentation will share early lessons from the project's development, including insights into building a data infrastructure that supports professional judgement and field science. By centering shared understanding and collaboration, the project aims to strengthen the wetland community of practice and contribute to more effective, coordinated efforts to protect and restore America's diverse and dynamic wetland landscapes.