

# Protecting and Restoring Urban Wetlands for Community Benefits



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# ASWM's Urban Wetlands Project

**Goal: identify ways to enhance, protect and restore wetlands within and surrounding urban areas to maximize economic, ecological and social benefits for those urban communities.**

## **Focus Areas:**

- How Wetland Program Plans and the Core Elements Framework can support urban wetland management
- How geospatial mapping and prioritization tools can inform urban land use decision making
- Innovative funding, financing, and incentive programs for nature-based projects

## Project Components

- Develop national workgroup
- Strategic Guide summarizing findings
- Integrated Mapping Workshop series
- Webinar series
- Recommendations for enhancements to CEF

# Defining Urban Wetland and Other Key Terms

- ▶ Urban Wetland – Wetlands within and immediately adjacent to populated areas, including cities and towns, that provide economic, ecological and social benefits for those communities. Urban wetlands may be naturally occurring or created.
- ▶ Green Infrastructure – Intentionally designed systems that mimic natural functions to achieve specific desired outcomes but may provide co-benefits. Examples include green roofs, rain gardens, bioswales, and rainwater harvesting systems.
- ▶ Natural Infrastructure – Natural ecosystems, such as wetlands and floodplains, that provide desirable outcomes, including floodwater attenuation, storm surge protection, nutrient reduction, or increased natural habitat and provides multiple co-benefits.

**Gray Infrastructure**

**Green Infrastructure**

**Natural Infrastructure**



# Value of Urban Wetlands

## Urban Wetland Ecological Services

- Reduce flooding
- Reduce urban heat island effect
- Manage stormwater
- Filter water
- Groundwater recharge
- Plant and animal habitat
- Recreation and outdoor learning
- Mental health benefits
- Economic



Credit: U.S. Fish and Wildlife Service, Ian Shive

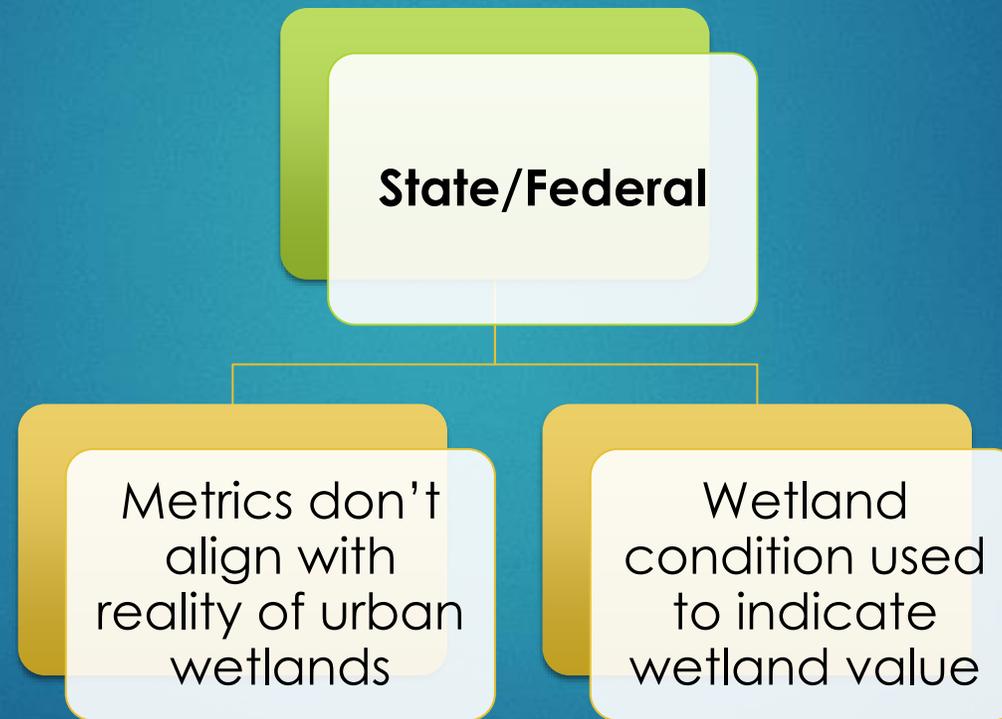
# Barriers Facing Urban Wetlands

## Urban Wetland Condition

- ▶ Small
- ▶ Hydrologically isolated
- ▶ Pollution
- ▶ Invasive species
- ▶ Surrounding land use practices
- ▶ Land availability
- ▶ Land value



# Barriers Facing Urban Wetlands



# Barriers Facing Urban Wetlands



## Barriers Facing Urban Wetlands

- ▶ Urban communities are more likely to lose their wetland resources to development or degradation while rural wetlands are more likely to be protected and restored.



# A Case for Local Action

- ▶ Urban ecology has value to local communities even if the ecological condition isn't ideal
- ▶ Urban ecology can't be measured and assessed by the same metrics as rural ecology
- ▶ Greater recognition of wetland function, functional uplift, and relative value within the local watershed
- ▶ Goals and expectations in urban setting need to reflect limitations
- ▶ Benefits of urban wetlands most likely to be felt at the local level

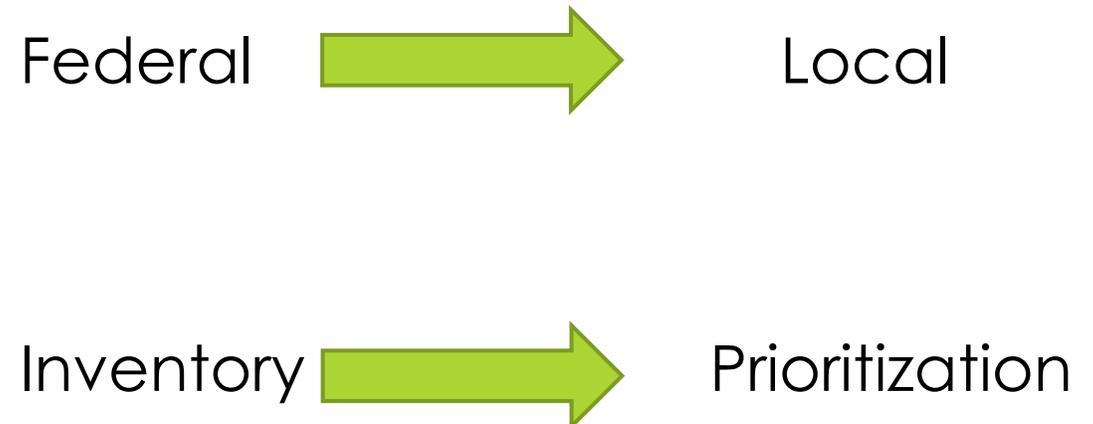


# Mapping, Assessment, & Prioritization

## Benefits

- Educate community on natural resource presence and value
- Inform regulated community
- Steer development
- Facilitate permitting processes
- Improve restoration and protection siting decisions
- Supports more accurate cost-benefit analysis

## Data Scale and Complexity



# Mapping, Assessment, & Prioritization

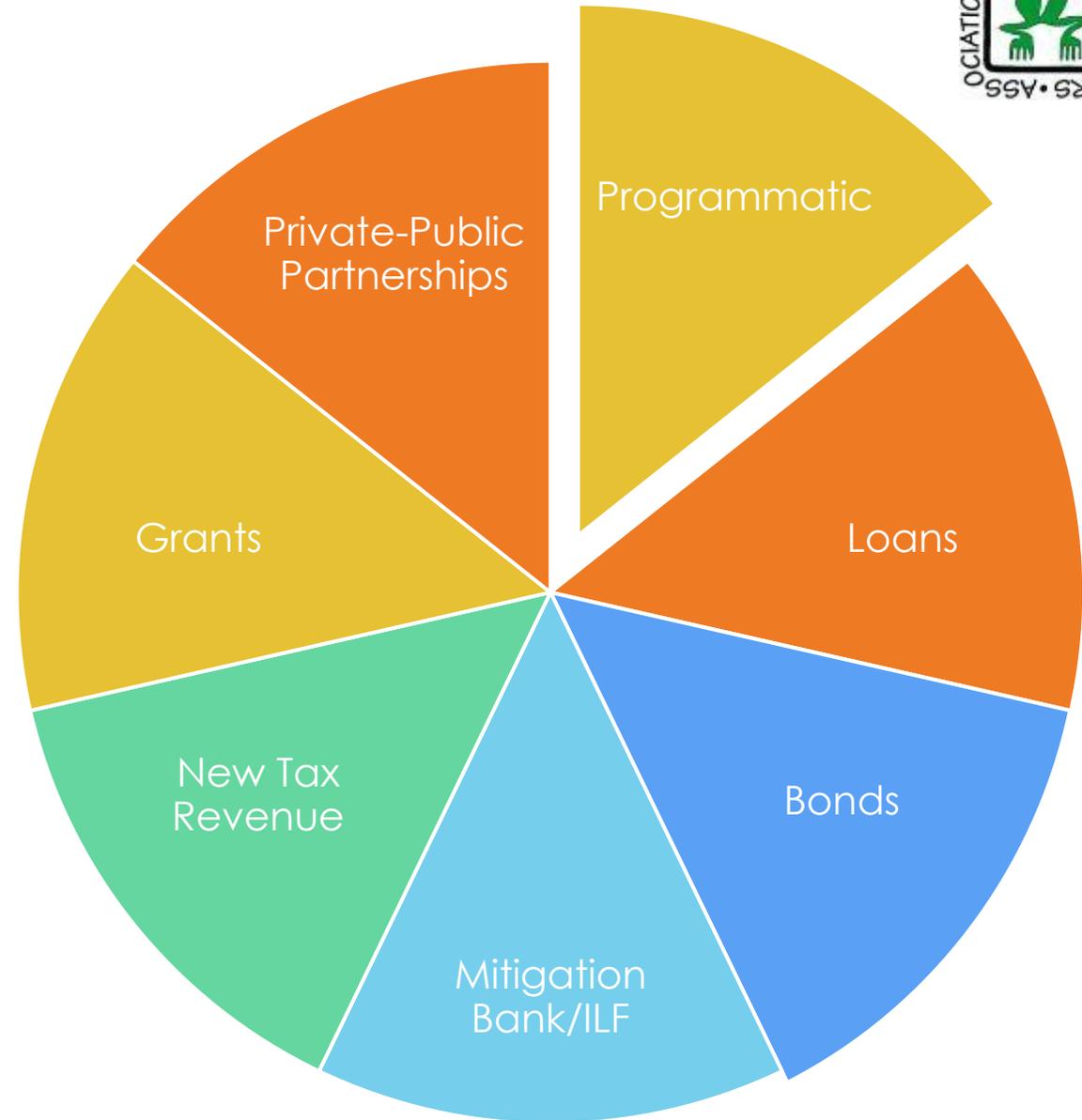
## Recommendations

- ▶ Work with local partners to identify priority functions
- ▶ Work with state/federal partners directly for technical and funding support
- ▶ Integrate with related efforts such as stormwater management, planning and development, parks departments, etc.,
- ▶ Consider prioritizing functions that impact human health and well-being
- ▶ Harness people power through citizen science and partnerships with private and non-profit entities.





# Funding and Financing Options



# Policy Tools

Local Regulatory Controls

Market Mechanisms

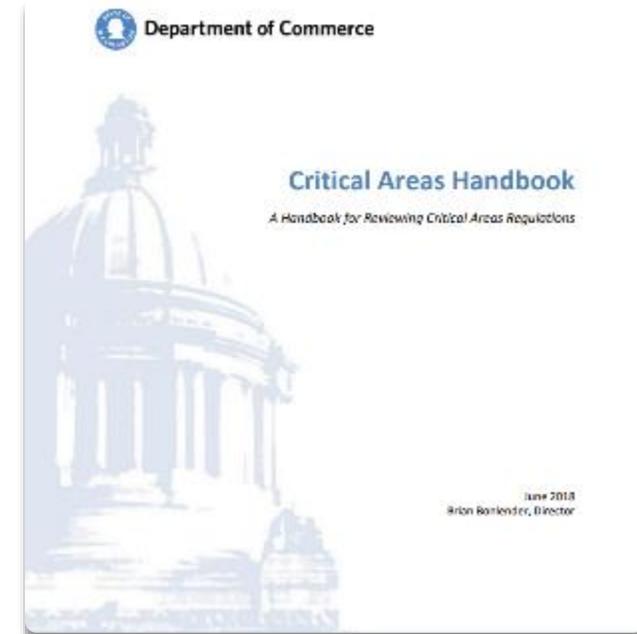
Buyout Programs

Transfer/Purchase of  
Development Rights



# Washington Growth Management Act

- ▶ Requires cities and counties to adopt regulations that protect critical areas including wetlands.
- ▶ State agencies provide handbooks, guidance materials, and other training and education opportunities to support wetland regulators implementing GMA.
- ▶ WA Ecology guidance documents recommend that cities and counties developing a wetland inventory and apply the A-B-C approach in CAO language.
  - ▶ Avoid
  - ▶ Buffer
  - ▶ Compensate



# Massachusetts Wetland Protection Act

- ▶ Still engages local community in wetland protection but different approach.
- ▶ Local conservation commission boards implement state regulations with oversight from MassDEP.
- ▶ Over 100 communities have adopted local wetland protection bylaws in addition to state and federal protections



Credit: Massachusetts Conservation Commission

# Superior, WI Special Area Management Plan

- ▶ Special Area Management Plans (SAMP) are a component of the Coastal Zone Management Act. Adopted by ordinance
- ▶ Superior SAMP allows the city to issue General Permits for activities requiring section 404 and WI Water Quality Certification permits with oversight from Army Corps and state.
- ▶ General Permit process significantly more efficient than standard permitting process.
- ▶ Combined with city-wide wetland functional assessment method.
- ▶ High priority wetlands not eligible under SAMP General Permit.
- ▶ Creates incentive for development to avoid priority wetlands due to longer permitting process.



# Recommendations: State

- Develop and share educational material on the value of local wetland protection.
- Develop and share educational material on the limitations of state and federal wetland protections.
- Lower the barrier to implementation with guidance documents and/or model ordinances.
- Create or highlight incentives for communities that adopt local controls.
- Encourage local controls that are at least as stringent as state and federal protections.



# Recommendations: Local

- Understand enabling authority to enact local controls.
- Incorporate wetland protections into broader comprehensive planning process.
- Seek input from local stakeholders to determine why wetland protection is important for your community. Tailor regulations accordingly.
- Keep ordinance language short and understandable.
- Look for opportunity to connect these measures to other programs like stormwater management, floodplain management, zoning, etc.

# Resources



- ▶ Model Ordinances for Regulation Wetlands; Riparian Habitats; Stream Buffers. Jon Kusler. Association of State Wetland Managers. 2009. [https://www.aswm.org/pdf\\_lib/model\\_ordinance\\_1209.pdf](https://www.aswm.org/pdf_lib/model_ordinance_1209.pdf)
- ▶ Planner's Guide to Wetland Buffers for Local Governments. Environmental Law Institute. 2008. [https://www.eli.org/sites/default/files/eli-pubs/d18\\_01.pdf](https://www.eli.org/sites/default/files/eli-pubs/d18_01.pdf)
- ▶ Model Wetland Conservation Ordinance: A Policy Development Tool for Wisconsin Counties, Cities, Villages, Towns, and Tribes. Brian Ohm and Kyle Magyera. Wisconsin Wetlands Association. 2016. <https://www.wisconsinwetlands.org/wp-content/uploads/2016/10/MWCO.pdf>
- ▶ Wetland and Watercourse Protection Measures. New York Department of State. 2019. [https://www.dos.ny.gov/opd/programs/resilience/2\\_Wetland%20and%20Watercourse%20Protection\\_Measures\\_All.pdf](https://www.dos.ny.gov/opd/programs/resilience/2_Wetland%20and%20Watercourse%20Protection_Measures_All.pdf)
- ▶ Update on Wetland Buffers: The State of the Science. Thomas Hruby. Washington State Department of Ecology. 2013. <https://apps.ecology.wa.gov/publications/documents/1306011.pdf>



# Thank You



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