



# Updating the National Wetland Inventory Database for Puerto Rico

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Updating the National Wetlands Inventory in US Territories  
National Association of Wetland Managers

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# Agenda

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- Who we are
- Project objectives
- Data Sources
- Methodology
- Project Status
- Relevance and Next Steps





# Project Objectives

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Updating the National Wetland Inventory Database for Puerto Rico using the latest available imagery and ancillary data. Following the NWI standards.



# Data Sources

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## Imagery

- ✓ PR 2021-2023 USDA aerial imagery (60cm)

## Ancillary Data

- ✓ National Wetland Inventory (NWI)
- ✓ NOAA Coastal Change Analysis Program (CCAP)
- ✓ EPA PR-WRR Potential Wetlands
- ✓ Topography and soil (hydric) maps
- ✓ Vegetation types and geology
- ✓ Forest cover maps and hydrography





# Data Sources (Leveraged)

## CariCOOS (NOAA) Coastal wetland classifications

- Landcover (~1Km inland)
- Based on CCAP classes
- Segmentation and supervised classification
- PR 2021-2023 USDA aerial imagery



Class_name	
	Estuarine Forested Wetland
	Estuarine Scrub/Shrub Wetland
	Estuarine Emergent Wetland
	Estuarine Shallow Water
	Palustrine Forested Wetland
	Palustrine Scrub/Shrub Wetland
	Palustrine Emergent Wetland (Persistent)
	Mix Forest
	Dry/Decay Forest Wetland
	Herbaceous
	Barren Land
	Shadow
	Water



# Project Schedule

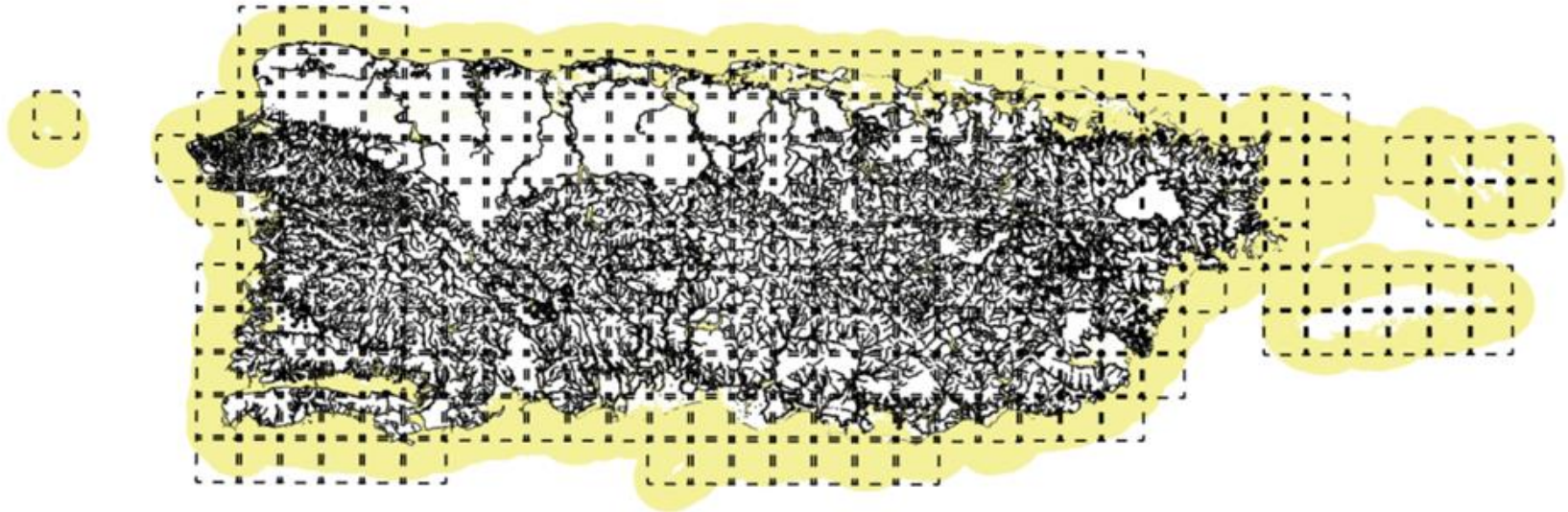
Task/months:	YR1			
	Q1	Q2	Q3	Q4
Initial meetings DNER-hiring protocols	■			
WorkPlan with DNER and Stakeholders	■	■		
Imagery Acquisition and Processing	■	■		
NWI GIS Database and Ancillary Data for Wetland Classification			■	■
Classification of Wetlands			■	■
Field Validation of NWI			■	■
DNER Subject-matter Experts and Stakeholder Validation of NWI Dataset (Meetings)				■
NWI Quality Assurance			■	■
Final NWI dataset				
Progress Report (Quarterly and Final)	■	■	■	■

# Current Project Status

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Acquisition of aerial imagery, ancillary NWI datasets, and tools

- Aerial imagery and ancillary data
- Baseline NWI GDB dataset for PR (FWS)
- NWI QA/QC tools in ArcGIS Pro





# Current Project Status

## Initial Delineations and Field Validations

- Initial delineation (QA/QC) of procedures
- Notes and field validations



ArcGIS® Field Maps

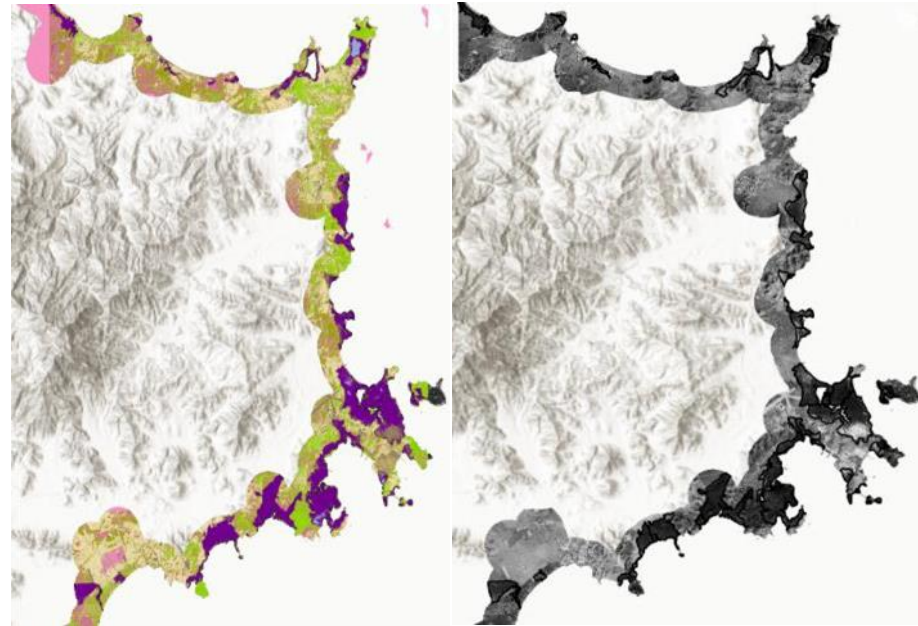
Field Maps Validation:  
subject matter experts,  
pictures, drone surveys

# Relevance of this project

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## Baseline data for current and future wetland projects

- Estimating Historic Changes in Wetland Coverage for Puerto Rico and the US Virgin Islands using Aerial Imagery
- Developing a Wetland Program Plan for Coastal Wetlands in Puerto Rico (UPR-A EPA funded)





Thank you!



More information on [www.gisemc.com](http://www.gisemc.com)

