



OFFICE OF FISH AND WILDLIFE INFORMATION SYSTEMS

MONTHLY REPORT

January 2024

(December 16th, 2023 – January 15th, 2024)

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ADMINISTRATION

- The Office of Fish and Wildlife Information Systems (OIS) has 37 projects in progress and 0 new projects requested through the GIS Project Request Form.
- OIS represented NJFW at, and participated in, the NJDEP GIS Program Representatives Meeting
- OIS met with the Bureau of GIS regarding a potential contract for the development of a State Wildlife Action Plan database.

GIS DATA DEVELOPMENT

Shellfish Aquaculture Lease Lot Data

- OIS has finalized the official corners of the Atlantic Coast lease lots, and is working on finalizing the official corners for the Delaware Bay lease lots. This will allow corner coordinates to be pulled by NJEMS for automatic letter generation for lease holders.

Freshwater Fishing Opportunities and Access

- OIS completed a draft web map for a statewide fishing regulations application and is meeting the week of January 15 to review with the Bureau of Freshwater Fisheries and make final adjustments before publishing the data.

New Jersey Statewide Trails Dataset

- No update.

Diadromous Fish Habitat Mapping and Timing Restrictions

- OIS has finished analyzing streams by their suitability and potential presence for finfish species. OIS will continue working on analyzing streams based on their confirmed species presence.

Wildlife Management Area Boundary Alignment

- OIS staff scanned documents for eight parcels and met with BLM staff on data coordination.

Landscape Project

- OIS continues to manage the Landscape Project mapping update in coordination with ENSP.
- OIS completed modeled habitat outputs for species to be newly listed and represented in the next version of Landscape. ENSP is currently reviewing mapped habitat areas.
- The new listing rule should be proposed by the end of 2023 and public release of version 3.4 of the Landscape Maps is estimated to be in July 2024.

Hard Clam (Estuarine) Survey Mapping

- OIS is waiting for review from Bureau of Shellfisheries on the SAV dataset before publishing is complete.

Wildlife Management Area System Inventory

- OIS is working with Esri to diagnosis new issues with the hosted feature layer and the Field Maps application; potential bugs in the new ArcGIS Pro and AGOL updates.

Digitization of Law Enforcement's Marine Patrol Areas

- OIS staff completed the digitization of the law enforcement patrol areas statewide and are correcting issues identified during quality control checks before the data is included in the CAD/Flex system for law enforcement's patrol vehicles.

GIS ANALYSIS

Ocean Trawl Survey Environmental/Biological Analysis

- No update.

Habitat Change Analysis Project (HCAP)

- OIS is working with grant coordinators, DEP procurement and Rowan University to begin the next phase of this analysis.

Identifying Potential Encroachments on WMAs

- OIS has identified nearly several potential encroachments and is conducting QA/QC. OIS will also be analyzing the potential encroachments by whether they were derived from survey data or another means.

CARTOGRAPHIC PRODUCTION

Marine Patrol Areas Map

- OIS provided a final draft of the Patrol Assignments to the northern region.

WEB MAP/APP PRODUCTION

Wildlife Management Area Explorer

- Updates were made to reflect newly closed or restricted areas on WMAs

Shared Wildlife Health Information System (SWHIS)

- OIS staff continues to collaborate with Office of Fish & Wildlife Health and Forensics, Wildlife Futures Program (WFP) at UPenn and the Timmons Group on the development of SWHIS and a feature service that will include wildlife health events, including animal morbidity and mortality information.

Turkey Permit Sales and Harvests Dashboard

- OIS has updated the dashboard to include 2023 Fall Harvest and Permit data.

Northeast Regional Conservation Priorities web application

- A web map application of [Northeast Regional Habitat Conservation Priorities in NJ](#) was published, updated and added to the [NJFW website](#).
- New Jersey (NJ) Fish and Wildlife extracted the NJ specific portions of several Northeast Regional GIS datasets (Nature's Network, University of Massachusetts Designing Sustainable Landscapes and The Nature Conservancy) to make it easier to integrate these regional datasets into state-level conservation planning initiatives for the purpose of identifying regional conservation priorities within, and in proximity to, NJ's Wildlife Management Area System. The App includes the following layers:

- **Lentic (Lake & Pond) Cores.** Lentic core areas represent the most intact lakes and ponds in the NJ that, if protected will continue to support a broad diversity of aquatic species and the ecosystems on which they depend.
- **Lotic (River & Stream Cores).** Lotic core areas represent intact, well-connected rivers and stream reaches in NJ that, if protected as part of stream networks and watersheds, will continue to support a broad diversity of aquatic species and the ecosystems on which they depend.
- **Terrestrial & Wetland Core Network.** Represents a set of terrestrial core areas and the connectors between them. In combination with the aquatic core areas, they spatially represent the ecological network designed to provide strategic guidance for conserving natural areas, and components of biodiversity that they support within NJ.
- **Habitat Condition for Imperiled Species.** Locations expected to be the most efficient conservation solution protecting the highest concentrations of imperiled species in NJ.
- **Connectivity & Climate Flow.** Represents resilient examples with all the characteristic physical environments of the region while maximizing the amount of diversity contained within in them and the natural flow that connects them. By building the network around the natural pathways that allow species populations to shift and then identifying representative resilient sites situated within those pathways, the network is specifically configured to sustain biological diversity while allowing nature to adapt and change.
- **Recognized Biodiversity Value.** Includes lands recognized for biodiversity values including those from ecoregional-based conservation planning efforts, state-based conservation planning analyses, lands secured from conversion to development under protected GAP1 or GAP 2 level management for nature conservation, and in some area's additional known locations of biodiversity elements and high-quality examples of those settings that were not well represented in the existing studies.
- **Resilient Sites (Terrestrial & Coastal).** Areas with high resilience represent natural strongholds for biodiversity because they contain many microclimates in highly connected areas which create climate options for species allowing them to persist.
- **Northeast Regional Marsh Migration Zones.** Represents the undeveloped land available for marsh migration in response to sea level rise and identifies marshes in highest quality ecological condition that may be targets for conservation.
- **Designing Sustainable Landscapes (DSL) Index of Ecological Integrity (IEI).** An ecosystem-based, landscape ecological approach for quantitatively evaluating the relative ecological integrity, and thus the biodiversity conservation value of every raster cell over varying extents (e.g., watershed, ecoregion, state) across NJ.

Fishing and Hunting License Agent Locator web application

- Updates were made to license agents.

GPS/FIELD DATA COLLECTION

sUAS Deer Surveys

- OIS has partnered with Warren County Community College (WCCC) to test and research drone methods to survey deer using thermal sensors with the goal of estimating local population densities.
- OIS conducted a site inspection with WCCC at Pequest Wildlife Management Area and plans to fly at the conclusion of hunting season prior to leaf out.

GIS TECHNICAL GUIDANCE

- OIS continues to offer GIS guidance and data for a new Bureau of Law Enforcement CAD system.
- Updates and corrections were made to the OIS website, <https://dep.nj.gov/njfw/destinations/maps/>.
- OIS staff responded to internal and external inquiries regarding various datasets and applications, including Landscape Project and the Hunting & Trapping Explorer.