



## OFFICE OF FISH AND WILDLIFE INFORMATION SYSTEMS

### MONTHLY REPORT

**May 2023**  
**(April 16<sup>th</sup>, 2023 – May 15<sup>th</sup>, 2023)**

Patrick Woerner, Geographic Information Systems Specialist  
Kevin Blythe, Geographic Information Systems Specialist  
Brian Henderson, Geographic Information Systems Specialist  
Molly VanWieren, Geographic Information Systems Specialist

Temporary/Seasonal Employees: Joseph DeCeglia

### ADMINISTRATION

- The Office of Fish and Wildlife Information Systems (OIS) has 36 projects in progress and one new project requested through the GIS Project Request Form.
- OIS participated in the [35<sup>th</sup> Annual Mapping Contest](#) and Molly VanWieren won first place in the Thematic Map category for her map on the [Wildlife Management Area System](#) that showcases NJFW's [Wildlife Management Area Explorer](#) web app.
- OIS staff attended the 78<sup>th</sup> Annual Northeast Fish & Wildlife Conference, held in Hersey PA and met with UPenn Wildlife Futures Program (WFP) staff regarding development of the Shared Wildlife Health Information System (SWHIS).
- OIS entered a contract with UPenn Wildlife Futures Program (WFP) to develop a dynamic mapping service derived from New Jersey's SWHIS data for tracking and analysis of disease morbidity and mortality events.
- OIS is in the process of drafting up a sUAS (drone) flight operations manual (FOM) for its drone program.
- The NJFW GIS Program Representative attended a meeting of Esri representatives hosted by NJDEP BGIS in order to develop recommendations for easier, faster and more effective use of GIS.

### GIS DATA DEVELOPMENT

#### **Shellfish Aquaculture Lease Lot Data**

- Data updates were made to reflect the most recent state the lease lot and lease holder information in NJDEP Enterprise layers.

### **Fishing Opportunities and Access**

- OIS will complete a sample fishing regulations app to share with Bureau of Freshwater Fisheries for review. OIS developed a pilot comprised of 7 HUC11s spanning southern Hunterdon Co. to southwestern Monmouth Co. A subset of stream segments was related to tables of general regulations, waterbody-specific regulations, and species size, season, and creel limits to demonstrate how a statewide app might work and serve as a point of discussion for any necessary changes.

### **Diadromous Fish Habitat Mapping and Timing Restrictions**

- OIS is developing pilot data to show timing restrictions and potential presence of various diadromous fish species.

### **Wildlife Management Area Boundary Alignment**

- OIS staff mapped the boundaries of 42 parcels.

### **Landscape Project**

- OIS has reached out to ENSP regarding species occurrence data and related information for use in a Landscape Project update.

### **Hard Clam (Estuarine) Survey Mapping**

- OIS staff received new edits to the data, so those changes are being made and then staff will begin the Enterprise data publication process.

### **Wildlife Management Area System Inventory**

- OIS staff is developing a dashboard for BLM to track activities by type, month, WMA, etc. for BLM reporting purposes.
- OIS provided data to Esri staff to test a script that pulls related habitat patch data into ArcGIS Dashboard filters, but there are significant delays in load time. It was determined that a schema change to accommodate such filters, and load data more timely manner, will be necessary.

## **GIS ANALYSIS**

### **Ocean Trawl Survey Environmental/Biological Analysis**

- OIS met with BFF to discuss the next phase of Ocean Trawl mapping. Based on similar mapping projects by Rutgers and NOAA, OIS is developing an inverse distance weighting (IDW) method to map species distributions.

### **Summer flounder distribution by size and sex**

- No update.

### **Habitat Change Analysis Project (HCAP)**

- OIS provided management mapping and infographics related to the change of successional habitat over time on NJFW and NJPF lands.

### **Mapping and Assessing Tidal Marsh Condition Via Multispectral Imaging**

- OIS continues to work with BGIS and Science and Research on analyzing multispectral drone imagery from Great Bay Boulevard WMA and Forsythe Wildlife Refuge. Staff are conducting accuracy assessments of their classifications for each of the zones

### **Greenwood Forest WMA Monitoring Project**

- Imagery analysis for the Greenwood Forest WMA sites will be completed once OIS completes the imagery analysis of sites at Great Bay Boulevard WMA and Forsythe NWR.

## **CARTOGRAPHIC PRODUCTION**

### **WMA Wall Map**

- A thematic map of the [WMA System](#) and WMA Explorer was developed for entry in the 35th annual NJDEP GIS Mapping Contest.

### **Bear Incidence Distribution Maps**

- OIS is currently working on geocoding bear incidents by incident type for development of a series of maps to be used by NJDEP's Division of Sustainable Waste Management.

## **WEB MAP/APP PRODUCTION**

### **Hunting & Trapping Explorer**

- Data updates were made to the License Agents web app.

### **Wildlife Management Area Explorer**

- Several data updates were made to infrastructure assets and information on closures.

### **Saltwater Fishing Explorer**

- Minor updates were made.

## **Marine Resources GeoHub**

- OIS staff received new data that was uploaded to the Marine Resources Geohub.

## **Conservation Focal Area Application**

- No updates

## **Upland Gamebird Survey**

- This survey has been published and is [publicly available](#).
- OIS staff has created an Upland Gamebird Dashboard to show all records that are submitted through the survey.

## **Upland Gamebird Dashboard**

- OIS staff has created an internal dashboard to show all records that are submitted through the [Upland Gamebird Survey](#).

## **Furbearer Species Sighting Survey**

- This survey has been published and is [publicly available](#).

## **Furbearer Species Sighting Dashboard**

- OIS staff has created an internal dashboard to show all records that are submitted through the [Furbearer Species Sighting Survey](#)
- OIS staff is working with Wildlife Management to incorporate data from the ‘Wildlife Tracker’ into the Furbearer Sighting data.

## **WMA Activity Dashboard**

- OIS staff is working on developing the dashboard for tracking management activities on a per patch basis.

## **Freshwater Fishing Explorer**

- OIS updated the [Trout Stocked Waters of NJ](#) application to reflect stocking changes due to flooding on the Passaic and Middle Brook.

## **Marine Protected Species Dashboard**

- OIS has created an internal dashboard to show all records that are submitted through the [Marine Protected Species Survey](#).

## **NE Regional Conservation Priorities Experience**

- A “final” version of the Experience has been completed, but due to limitations that exist with Experiences OIS is looking into whether it would be more appropriate to release this as a web application now and replace it in the future with an Experience once ESRI has added in more of the features that Experiences currently lack.

### **Public Comment Form for Waterloo Road Amphibian Crossing Project**

- Made minor changes to a comment form used by ENSP after an earlier meeting to receive final public comments at a meeting to be held May 18<sup>th</sup>. Comments received will be passed on to ENSP as well as the consultant assisting with the meeting.

### **Lenape Farms Story Map**

- OIS met with Stockton University to collaborate on a Story Map highlighting land management projects and activities.

### **GIS TECHNICAL GUIDANCE**

- OIS staff responded to internal and external inquiries regarding various datasets and applications, including Landscape Project and the Hunting & Trapping Explorer.
- OIS staff continues to work with Bureau of Shellfisheries regarding their collaboration with Rutgers in a project developing a GIS-based tool for spatial planning and management of shellfish aquaculture in New Jersey.
- OIS staff continued working with I&E to revise the Fish and Wildlife website so the apps we create are easier for the public to find as well as to replace links to google maps with links that lead to our mapping apps.