2019-20 RESEARCH & MANAGEMENT REPORT

Habitat Conservation & Management

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Maine Department of Inland Fisheries and Wildlife protects and manages Maine's fish and wildlife and their habitats, promotes Maine's outdoor heritage, and safely connects people with nature through responsible recreation, sport, and science.

Habitat Conservation & Management

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» Game Species Conservation & Management

» Regional Wildlife Management

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» Non-Game Mammals Conservation & Management

» Beginning with Habitat Updates

» Bird Conservation & Management

» Reptile, Amphibian, and Invertebrate Conservation & Management

Compiled and edited by Diana Harper and Lauren McPherson

Maine Department of Inland Fisheries & Wildlife

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HABITAT CONSERVATION & MANAGEMENT

What We Do

Habitat Group creates and maintains the Wildlife Division's database of wildlife observations and habitats. We provide this data to municipalities and organizations for numerous purposes including regulatory reviews, oil spill planning, species management, conservation planning, and education, and we also develop custom applications to make the data available to Department staff, other state agencies, conservation partners, and the public.

Each of these uses requires a different type of data, and often it's just a portion of what we have available. For example, regulatory maps are political/social compromises – they include only about half of the habitat in Maine and are based on legal definitions. In the regulatory world, an area is either regulated or unregulated, so while a habitat may in reality evolve or exist on a gradient, the maps remain black and white.

By contrast, oil spill response, species management, and conservation planning efforts focus on relative values, which vary with environmental gradients, proximity to other habitats, disturbances, and other elements of the landscape.

On a day-to-day basis, we provide a range of technical support, primarily with mapping and wildlife/habitat databases, but also with general network and server issues. Unlike other Wildlife Research and Assessment Section (WRAS) groups, which often work on numerous, specific projects with a beginning and an end, much of Habitat Group's work involves maintaining, enhancing, and creating new ways to leverage existing data sets.

MEET THE HABITAT GROUP

Donald Katnik, Ph.D.
Habitat Group Leader/Oil Spill Response Coordinator

Supervises Group activities and coordinates habitat-related projects with other Department staff and other state and federal agencies. Coordinates oil spill response planning efforts for the Department, including training, identifying and prioritizing sensitive areas, and developing spill response plans. Represents the Department in Natural Resource Damage Assessments.

Jason Czapiga
GIS Coordinator

Maintains the Department's Habitat Mapping Application used for permit reviews and the vernal pool database. Develops and maintains databases to track species permitting and Species of Greatest Conservation Need in the State Wildlife Action Plan. Represents the Department's GIS needs on the state GIS Council. Oversees GIS needs within the Habitat Group. Provides assistance to Department staff on a wide range of technical issues and data needs.

Amy Meehan
Wildlife Biologist and GIS Specialist

Collects wildlife habitat data from regional wildlife biologists and others. Creates and maintains computer databases. Conducts field inventories of wildlife habitat and provides Geographic Information Systems (GIS) support for a variety of projects.

MaryEllen Wickett, Ph.D.
Wildlife Biologist and Senior Programmer Analyst

Creates and maintains customized applications and tools for accessing and using the Department's fish and wildlife habitat data both within and outside the agency. Creates, analyzes, and maintains wildlife, habitat, and harvest databases. Provides technical support and habitat data analyses for landscape planning efforts and development of species' habitat models.

Becca Settele
Wildlife Biologist

Assists with creating and maintaining databases of wildlife observations and habitats, particularly significant wildlife habitats. This includes mapping wildlife observations and habitats based on mapping protocols developed with species specialists. Aids in vernal pool review and entry. Assists the Department's Environmental Review program with reviewing project applications filed under state, federal, and local regulatory jurisdictions. Coordinates project reviews among Department staff to ensure consistency with the Department's objectives.

New Interactive Story on Maine's Bald Eagle Recovery

Amy Meehan

Most people are aware of the near extinction of the Bald Eagle in North America, mainly from by-products of the pesticide DDT that thinned their eggs' shells. But how many people know what was done to recover the population?

The Bald Eagle was removed from the Federal Endangered Species list in 2007 and from Maine's Endangered Species list in 2009. The Maine Department of Inland Fisheries and Wildlife completed its last statewide aerial survey of Bald Eagle nests in 2018, and we are happy to report that the state now boasts 734 nesting pairs of eagles, up from a low of 21 nesting pairs in 1967.

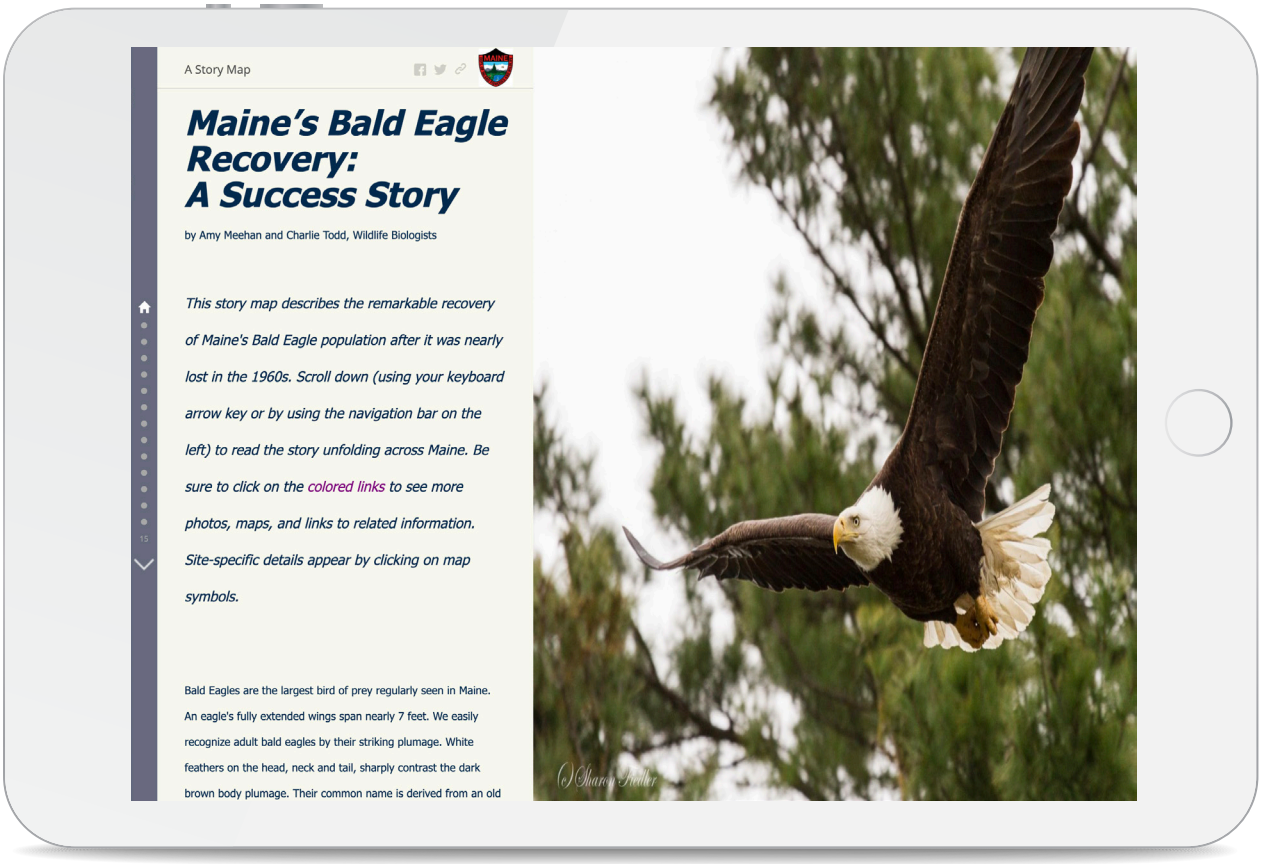
Maine citizens enthusiastically supported recovery efforts and became part of the solution – not just bringing the eagle back "from the brink," but also safeguarding bald eagle habitat into the future through land donations, bargain sales, conservation easements, and cooperative agreements. This is the story a new MDIFW map application endeavors to tell, in a fun and interactive way!

To do so, we used a new storytelling software called Story Maps, which allows you to blend spatial data (including custom maps) with background information, context, and entertaining content like photos, videos, and more.

The Bald Eagle Story Map tells the remarkable story of the eagle's recovery in Maine and how it was accomplished, with fun anecdotes along the way including Maine's oldest eagle, eagle nests with triplets and even quadruplets (!), Maine's largest eagle nest, and the story of an eagle who liked to wander far from home (over 980 miles!).

Colored links lead to further information, photos, graphs, and maps. This is a great resource for schools, teachers, and anyone with an interest in Maine's wildlife resources.

To view Maine's Bald Eagle Recovery Story Map, visit the link below — and be sure to scroll all the way to the end to see an animated version of the recovery!
https://arcg.is/1eCTG5



Oiled Wildlife Response Program

Don Katnik

The Oiled Wildlife Response Program, one of the Department's lesser-known programs, involves preparing for and responding to oil spills that impact wildlife.

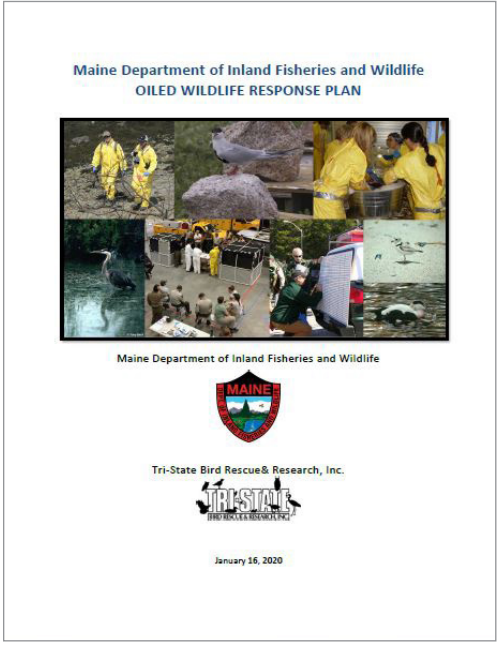
A lot of petroleum is moved by tanker ships, and it quickly spreads on water if accidentally released. Birds, especially those that live near water (shorebirds, wading birds, and waterfowl), are particularly vulnerable to these spills, as a very small amount of petroleum can damage their feathers, destroying their natural waterproofing and quickly leading to hypothermia.

Worst-case scenario: an oil spill during an infectious disease outbreak

As with many crisis response programs, with oil spill planning we always hope for the best, but prepare for the worst. Planning ahead is key—we need to think about these potential issues now, not in the middle of a crisis, so that we can develop alternate strategies.

This year, that has meant planning for the worst-case scenario of an oil spill during this COVID-19 pandemic, with virtually all Department staff physical distancing and working from home.

We have already taken the first step, adding new Infectious Disease Guidelines to MDIFW's *Oiled Wildlife Response Plan*.



This new section steps through the possible actions we might take during a normal response and assesses what we could still do, what we could do with modifications, and what we could not do during an infectious disease outbreak like COVID-19. Most response activities fall into the do with modifications category, and include:

CONSISTENT TEAMS

Safely capturing a live animal is a challenging task that requires several people; and for that reason, our staff normally work in teams. Under current social distancing guidelines, we would have to modify how we assemble those teams. Normally, we could switch out team members as needed based on staff availability; but during an infectious disease outbreak, we would need to limit the number of different people each individual works with—so the people on a bird capture team, for example, would only work with each other throughout the response and would stay isolated from all other staff.

ADVANCED PPE PROCUREMENT

Fortunately, the use of Personal Protective Equipment (PPE) like gloves and masks is already standard practice in an oil spill response because of the hazardous nature of petroleum products. By planning ahead, we can avoid PPE procurement problems that we might otherwise face during an infectious disease outbreak.

PILOT PROTECTION

During a normal response, Game Warden Pilots and wildlife biologists conduct aerial surveys to identify oiled wildlife and groups of wildlife that might become oiled. The Department only has a few Game Warden pilots, though, and we need to protect them from infection so that they remain available for critical operations like Search & Rescue. Since there is no way to social distance in a small airplane, we would have to forego aerial oiled wildlife surveys in an infectious disease situation. We might try using drones instead, but there are limitations to the practicality of that approach. Many birds mistake drones for predators and will flee from them, which is not something we want them to do.

The next step will take place at our annual one-day oil spill response training, where we'll discuss these strategies and prepare to implement them in that "worst-case scenario" crisis we hope will never happen.

2019 Oil Spill Response Training: Focusing on the Flats

Last year's annual training for oil spill response focused on tidal flats — the areas along the Maine coast where tens of thousands of shorebirds stop to refuel during the long migration between their summer/nesting areas in Canada and the Arctic and their wintering areas in Central and South America.

Migrating shorebirds feed constantly while in Maine, and have a very limited timeframe to do so. Any disruption of that feeding time (such as an oil spill in the wrong place at the wrong time) could be catastrophic, so the Department trained for that possibility.

Through that training, we identified a need for individual *Shorebird Area Response Plans* for each of the 900 different areas in Maine used by migrating shorebirds.

In most cases, oil spill responders deployed to survey a shorebird area will have never been there. To do the best job possible, they need to know where the area is, how to get there, how to access the tidal flats, where vehicles can be parked/staged, and what types of equipment (e.g., canoe, kayak, motor boat, ATV) they can use, not to mention what species of birds they are likely to encounter.

We leveraged technology to efficiently create plans for all 900 individual areas. We created a database to store the information, maps, and photos for each area and developed a custom computer program to assemble that information into the response plan documents. After adding new information into the database, a click of a button will update all of the plans.

New Way to View Big Game Harvest Data

Amy Meehan, Jason Czapiga, MaryEllen Wickett

Ever been frustrated looking at the yearly harvest map because the numbers are so small? Have trouble reading the town names? Well, now the Maine Department of Inland Fisheries and Wildlife has a better way to display harvest information — the MDIFW Big Game Harvest Dashboard! **(Figure 1).**

When you open the dashboard, you will see a map of Maine's Wildlife Management Districts (WMDs). Boxes on the upper left will show you the cumulative (this season to date) harvest registration data for each big game species (Moose, White-tailed Deer, Wild Turkey, and Black Bear), updated daily during the season. Click on any WMD to view that same data on a local level.

You can also view historical harvest data for each species by town. Just click on the tab at the bottom of the map window for your species of interest, then zoom in on the map using your mouse wheel or the +/- buttons on the map. To avoid map clutter, town names will not appear until the map is zoomed in to a certain scale. Click on the town of interest to view its harvest totals dating back to 2005.

The PDF Big Game Harvest maps are still available here: **maine.gov/ifw/hunting-trapping/harvest-information.html**

FIGURE 1. MDIFW BIG GAME HARVEST DASHBOARD.
maine.maps.arcgis.com/apps/opsdashboard/index.html#/bd9753317d3740d78146a96f5a095985