

# NATURAL RESOURCES – SUMMARY OF EXISTING BASELINE INFORMATION

PHASE I TECHNICAL MEMORANDUM

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*Prepared for:*

Maine Department  
of Transportation



Maine Turnpike Authority



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## Acronyms and Abbreviations

ACOE	U.S. Army Corps of Engineers
BwH	Beginning with Habitat
CYCCS	Central York County Connections Study
DWA	Deer wintering areas
ESA	Endangered Species Act
ESRI	Environmental Systems Research Institute, developer of Geographic Information Systems (GIS)
EH	Essential Habitat
EFH	Essential Fish Habitat
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Mapping
FRA	Federal Railroad Administration
GIS	Geographic Information Systems
HM	The U.S. Army Corps of Engineers (ACOE) Highway Methodology
LEDPA	Least environmentally damaging practicable alternative
MaineDEP	Maine Department of Environmental Protection
MaineDOT	Maine Department of Transportation
MBPL	Maine Bureau of Parks and Lands
MDIFW	Maine Department of Inland Fisheries and Wildlife
MDMR	Maine Department of Marine Resources
MEDHHS	Maine Department of Health and Human Services
MEDOC	Maine Department of Conservation
MEDWP	Drinking Water Program
MEGIS	Maine Office of Geographic Information Systems
MEGS	Maine Geological Survey
MEMA	Maine Emergency Management Agency
MEPUC	Maine Public Utilities Commission
MESCB	Maine Emergency Services Communications Bureau
MNAP	Maine Natural Areas Program
MTA	Maine Turnpike Authority
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NRCS	Natural Resource Conservation Service
NRPA	Natural Resources Protection Act
NWI	National Wetland Inventory
PB	Parsons Brinckerhoff
RTE	Rare, Threatened and Endangered Species
SPO	Maine State Planning Office
USDOA	U.S. Department of Agriculture
USFS	U.S. Forest Service.
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WMA	Wildlife Management Area
WSS	Wetlands of Special Significance





## INTRODUCTION

The Central York County Connections Study (CYCCS) is developing strategies to improve connectivity between central York County and the major transportation corridors along the coast (the Maine Turnpike and Route 1). The study is guided by a Purpose and Need Statement, which articulates that the study is to identify transportation and related land use strategies that enhance economic development opportunities and preserve and improve the regional transportation system. Additional information on the study, including the full Purpose and Need Statement, is available at the study website: [www.connectingyorkcounty.org](http://www.connectingyorkcounty.org).

The CYCCS Study Area includes all or some of the following ten communities (Figure 1):

- The entire Town of Sanford;
- Those areas of Ogunquit, Wells, Kennebunk and Arundel northwest of Route 1;
- Much of North Berwick, Alfred, and Lyman; and
- Portions of western Biddeford along Route 111 and southern Waterboro along US 202.

Alfred, Lyman, North Berwick, Sanford and Waterboro are located in York County's interior, and are not directly served by the Maine Turnpike or Route 1. Access to these corridors is instead provided by Route 35, Route 99, Route 111 and Route 109. In addition, US Route 202 and Route 4 link central York County communities to New Hampshire to the west. Arundel, Biddeford, Kennebunk, Ogunquit and Wells are located along the coast and linked by Route 1. Access to the Maine Turnpike is provided in Biddeford, Kennebunk and Wells.

The CYCCS is organized into four primary study phases:

- I. Organization and Background Information.
- II. Initial Investigations and Analyses.
- III. Detailed Strategy Development and Assessment.
- IV. Study Documentation.

Phases I and II involve organizing available existing conditions information and performing initial strategy development and testing. Subsequent refinement and more detailed investigation of specific strategies will occur during Phase III. This memorandum presents environmental data collected from existing resources as part of Phase I. The data collected represent those most important in corridor planning (i.e., regulated and protected resources) and are a subset of the information that would be needed to meet requirements of National Environmental Policy Act (NEPA) and the U.S. Army Corps of Engineers (ACOE) Highway Methodology (ACOE 1993) pursuant to Section 404 of the Clean Water Act. These data will be used to inform the initial strategy screening process.

Compilation of natural resource data is an ongoing process. Additional investigation of natural resources will take place during Phase III, at which time corridor strategies will become sufficiently defined to allow the study team to focus on specific locations, rather than broadly across the entire Study Area.

This memo includes three appendices. Coordination with resource agencies is compiled in Appendix A. Appendix B includes data associated with major inland water bodies (“Great ponds”); Rare, Threatened and Endangered Species (RTE); and Essential Fish Habitats (EFH). A separate Map Appendix – formatted for 11x17 printing – contains detailed maps of natural resources within the CYCCS study area.

## METHODS

To assess the natural resources within the Study Area (Figure 1), Normandeau Associates, subcontractor to Parsons Brinckerhoff (PB), compiled readily available physical and biological environmental data as shown in Table 1. Baseline data were obtained from the Maine Office of Geographic Information Systems (MEGIS). The Maine Department of Inland Fisheries and Wildlife (MDIFW) provided Geographic Information Systems (GIS) mapping layers for the individual municipalities in the Study Area through the Beginning with Habitat (BwH) program, a collaboration of federal, state, and local agencies and non-governmental organizations, which identifies and maintains a geospatial database of state- and locally-important habitat. Towns were also contacted to verify local aquifer protection areas.

Resource data were organized into a series of detailed maps, which are presented in Map Appendix. Figure Map-1 shows an index of these maps. The first map series (Map Appendix, Figures Map-2a through Map-2e) shows U.S. Fish and Wildlife (USFWS) National Wetland Inventory (NWI) maps and Natural Resource Conservation Service’s (NRCS) hydric soil mapping. NWI mapping tends to under-represent forested wetlands and wet meadows, which are more likely identified during soil mapping. Areas where these two resources overlap are considered good indicators of wetland locations. These data are also summarized in Figure 2 in the *Conclusions* section of this memorandum.

The second map series (Map Appendix, Figures Map-3a through Map-3e, and summarized in Figure 3) shows mapped resources protected or otherwise regulated by federal and state agencies. Data reviewed for this assessment included 100-Year Floodplains; RTE species and imperiled communities (which combines Rare Plant Locations and Rare or Exemplary Natural Communities as mapped by the Maine Natural Areas Program (MNAP) and threatened and endangered species and species of special concern as identified and mapped by MDIFW); Essential Habitat (EH, designated for some threatened and endangered animals); Significant Wildlife Habitat (for deer, waterfowl and wading birds, and vernal pools); and Rare Plant and Animal Locations and High Value Habitat for USFWS Priority Trust Species.

The third map series (Map Appendix, Figures Map-4a through Map-4e, and summarized in Figure 4) includes other environmental information that could be important in planning such as remediation sites, hazardous oil spills, closed landfills, wastewater treatment facilities, public water supply wells, public water supplies, aquifers, source water protection areas, Section 6f properties, and conservation lands (defined as federal, state, municipal, and non-profit-owned lands). Map Appendix, Figure Map-5 shows



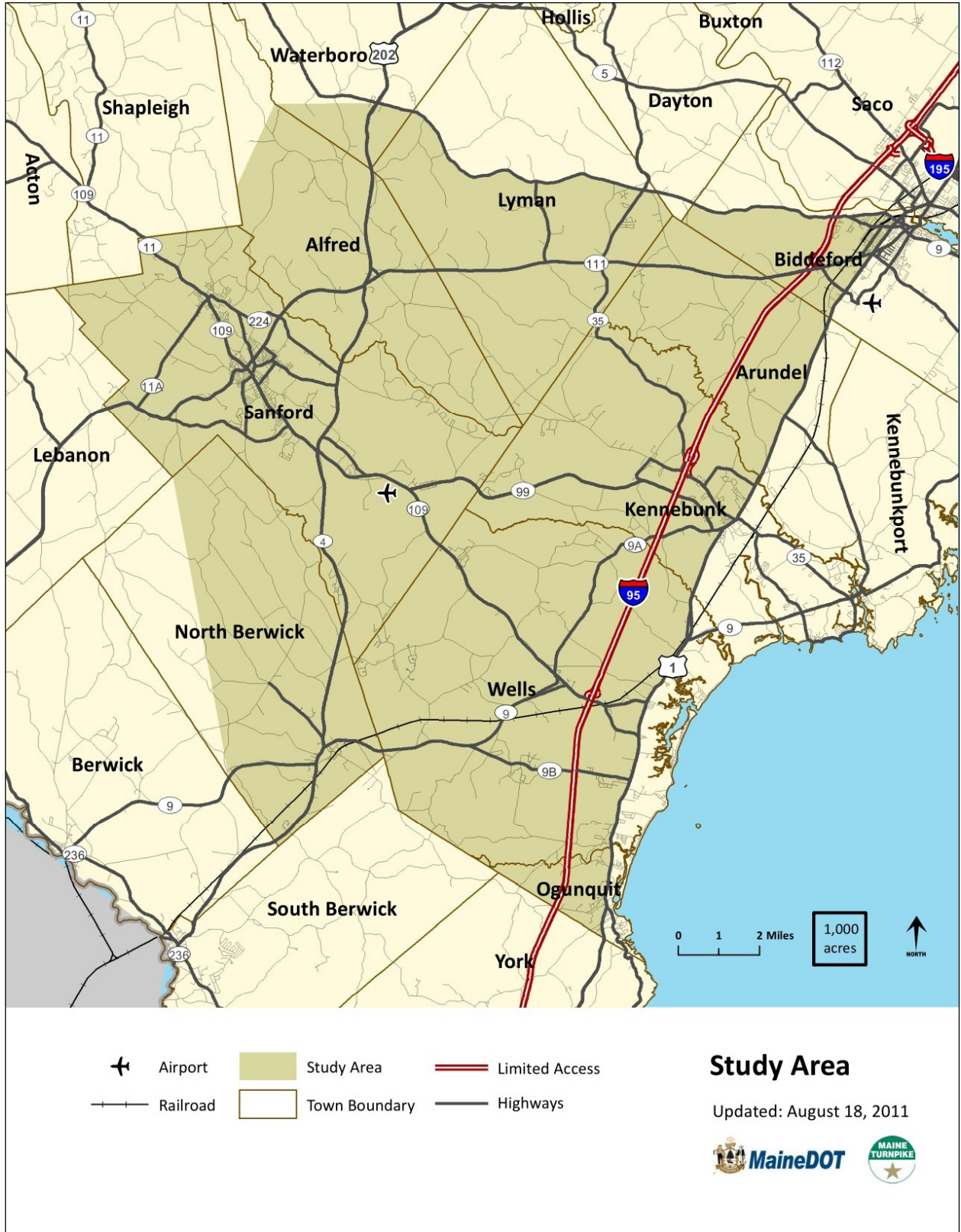


Figure 1: CYCCS Study Area



Table 1: Environmental and Data Resources Used to Develop Environmental Resource Maps

Resource	Data Source <sup>1</sup>
100-year floodplain	Federal Emergency Management Agency (FEMA), Maine Office of Geographic Information Systems (MEGIS), Subset of York County Firm, 2002, firm.shp
Aquifers	Maine Department of Conservation (MEDOC), Maine Geological Survey (MeGS), 2009, aqfrs24
Brook Trout Streams	MDIFW 2011, BKT_Habitat (BwH 2012)
Closed landfills	Maine Department of Environmental Protection (MaineDEP), Bureau of Remediation and Waste Management, Interactive Maps and Data, Downloaded text file 11/12/2010, EGAD_Closed_Landfills_DataExport.txt
Conservation land	MEDOC Bureau of Parks and Land (BPL), Maine Department of Inland Fisheries and Wildlife (MDIFW) and State Planning Office (SPO), 2010, conserved_lands.shp; Branch Brook Aquifer Protection area from Kennebunk, Kennebunkport & Wells Water District.
Diadromous fish runs	Maine Department of Marine Resources (MDMR) 1994. acfish2
Deer wintering area	MDIFW, June 2009, DWA_output.shp (BwH)
Endangered, threatened, and species of concern (Animals)	MDIFW, 2010, ETSc_output.shp (BwH)
Endangered, threatened and rare plants; imperiled natural communities	Maine Natural Areas Program (MNAP) 2010 data provided by BwH, 2012.
Hazardous oil spills	MaineDEP, Bureau of Remediation and Waste Management, Interactive Maps and Data, Downloaded text file 11/12/2010, BRWM_Response_Spills_ExportData.txt MaineDEP, Bureau of Remediation and Waste Mgt, Interactive Maps and data,; EGAD_Site_Types- Downloaded text file 11/12/2010
Hydric soils	U.S. Department of Agriculture (DOA) , Natural Resources Conservation Service (NRCS), 2005, subset of York County Soil Survey Geographic (SSURGO) Soils, ssa_s.shp
Inland waterfowl/wading bird habitat	MDIFW, 2009, lwwh_output.shp
Lakes and ponds	U.S. Geological Survey (USGS), MEGIS, 1993, hydrop_04202006.shp
NWI wetlands	U.S. Fish and Wildlife Service (USFWS), 2010, CONUS_wet_poly
Ortho imagery	Maine_municipal_orthos WMS Service; York County 2007, published 2009/
Priority Trust Species	Bob Houston, US Fish & Wildlife Service, Gulf of Maine Program (USFWGOM), FOREST91, GRASS91, FRESH91, 2004
Public water supply	Maine Department of Health and Human Services (MEDHHS), Drinking Water Program (MEDWP), 2008, dirshed.kmz

<sup>1</sup>Data provided by Beginning with Habitat indicated as BwH. All other data from Maine Office of Geographical Information Systems unless noted otherwise.





Table 1, continued

Resource	Data Source <sup>1</sup>
Public water supply wells	MEDHHS Drinking Water Program (MEDWP), 2004, wells.shp
Railroads	Federal Railroad Administration (FRA), U.S. National Transportation Atlas Railroads, 2006, national_rr.shp
Remediation site	MaineDEP, Bureau of Remediation and Waste Management, Interactive Maps and Data, Downloaded text file 11/12/2010, BRWM_Remediation_Sites_DataExport.txt
Rivers and streams	USGS, MEGIS, 1993, hydroI_04202006.shp; Environmental Sciences Research Institute (ESRI) data and maps on DVD-ROM, 2010, dtI_riv.sdc
Road centerline	Maine Public Utilities Commission (MEPUC), Maine Emergency Services Communications Bureau (MESCB), MEGIS comp., ed., 2006, e911rds.shp, published 2008.
Section 6f Properties	Department of Conservation, current as of 3/9/2012.
Significant vernal pools with 250 ft buffer and non-significant vernal pools	MDIFW, July 2011, MEIFW_SVPBuffers_2011_07_11.shp; MEIFW_SVPCenterPts_2011_07_11.shp
Source water protection area	Maine Public Water Resource Information System, converted from KML file 06/03/2010, SWPA.shp
Town boundaries	MEGIS, 2007, Metwp24p.shp
Undeveloped habitat blocks	The Nature Conservancy in Maine, MDOC, MNAP and MDIFW, March 2009 (BwH 2009)
Wading bird colony	MDIFW, 2010, WadingBirdColony_output.shp (BwH)
Wastewater treatment facility	MaineDEP, Bureau of Land and Water Quality, Interactive Maps and Data, Downloaded text file 11/12/2010, LAWB_WWTF_Outfalls_Facilities.txt

<sup>1</sup> Data provided by Beginning with Habitat indicated as BwH. All other data from Maine Office of Geographical Information Systems unless noted otherwise.

undeveloped habitat blocks, which are relatively unbroken (crossed by few roads with little development) areas of habitat that include forest, grassland/agricultural land and wetlands (Beginning with Habitat Coalition 2003).

As part of the data gathering process, the study team requested information from the USFWS on federally-listed threatened and endangered species. National Marine Fisheries Service (NMFS) was contacted to provide information on EFH and threatened and endangered species under their jurisdiction. MDIFW was contacted to provide information for a review of their database for significant wildlife habitat and state-listed RTE animal species. MNAP was contacted for a review of their databases relative to RTE plant species. Maine Bureau of Parks and Lands (MBPL) was contacted for a list of properties that qualify as publicly owned land subject to protection under Section 6(f) of the U. S. Department of Transportation Act of 1966. Agency responses received to date are provided in Appendix A. To date, the agencies that have responded are MNAP, who provided a data layer, NMFS, and USFWS.

No information has been received on Section 6(f) properties. NMFS and MDIFW were re-contacted and provided updated information, which has been incorporated in the final document.

## RESULTS

The following provides an overview of resources regulated by Federal and State agencies as well as non-regulated resources that are considered important to the environment and character of the region. Detailed resource maps are provided in Map Appendix as noted previously. Overview maps depicting Wetlands and Hydric Soils (Figure 2), Other Regulated Resources (Figure 3), Non-Regulated Resources (Figure 4) and Conservation Lands (Figure 5) are provided in the *Conclusion* section of this memorandum.

### REGULATED RESOURCES

The following is an overview of Federal and State regulations regarding natural resources that are evaluated during the NEPA process. The ACOE regulates the placement of dredged or fill material in waters of the United States, which includes wetlands and surface waters, under Section 404 of the Clean Water Act (33 U.S.C. 1344). The ACOE also regulates under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) certain structures or work in or affecting navigable waters of the United States. MaineDEP has jurisdiction over impacts to wetlands and surface waters under the Natural Resources Protection Act (NRPA, M.R.S.A §480-A to 480-HH). USFWS has primary responsibility for listed terrestrial and freshwater organisms and their habitats under the Endangered Species Act (ESA) as well as bald eagle management under the Bald and Golden Eagle Protection Act (BGEPA, 16 U.S.C. 668-668c). The ESA directs all Federal agencies to conserve threatened and endangered species and, in consultation with the USFWS, ensure that their actions do not jeopardize the continued existence of a listed species or destroy or adversely affect designated critical habitat. The BGEPA prohibits anyone without a permit issued by the Secretary of the Interior from "taking" bald eagles, including their parts, nests, or eggs.

NMFS is responsible under the ESA, as well as the Marine Mammal Protection Act (MMPA), for protecting marine mammals and threatened and endangered marine species. MDIFW oversees the Maine Endangered Species Act, which includes listed species and Essential Habitats (EH). EH are identified and mapped by MDIFW and include roseate tern, least tern and piping plover nest sites. Additionally, USFWS regulates wildlife habitat under the Fish and Wildlife Coordination Act, which involves evaluation of impacts to fish and wildlife from water resource development projects. FEMA and MEMA regulate floodplains.

### WETLANDS

Construction of a new transportation corridor or reconstruction of an existing corridor would require an assessment of the extent of wetlands and surface waters under existing Federal and State regulations in compliance with the NEPA process. The ACOE has jurisdiction over rivers, streams, waterbodies and wetlands within the Study Area. Section 404 of the Clean Water Act (33 U.S.C. 1344), administered by the ACOE, requires that projects that impact wetlands follow the sequential process of first avoiding adverse wetland and surface water impacts, then minimizing impacts that cannot be practicably avoided and finally compensating for those impacts that cannot be further minimized. The ACOE



Highway Methodology details a process to systematically evaluate alternatives in a timely yet thorough manner (ACOE 1993).

MaineDEP has jurisdiction over wetlands and water bodies under the Natural Resources Protection Act (NRPA, 38 M.R.S.A §480-A to 480-HH). The NRPA identifies sensitive wetland areas as Wetlands of Special Significance (WSS), which include:

- Peatlands (including heaths);
- Critically imperiled or imperiled communities;
- Significant wildlife habitat;
- Locations near coastal wetland;
- Locations near GPA great ponds (GPA defined as water quality suitable for drinking water, recreation, etc., 38 M.R.S.A. §465-A. All great ponds in Maine are classified as GPA);
- At least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water;
- Wetlands subject to flooding; and
- Wetlands located within 25-feet of a river, stream or brook.

Impacts to WSS require more rigorous review and permitting than non-WSS wetlands and frequently require compensation through restoration, enhancement or preservation.

National Wetland Inventory (NWI) wetlands and hydric soils are shown in overview in Figure 2, with more detailed maps provided in Map Appendix, Figures Map-2a through Map-2e. The wetland boundaries are approximate and likely to change when wetlands are formally delineated. The maps indicate that there are numerous NWI wetlands and hydric soils throughout the Study Area.

#### *SURFACE WATERS*

Rivers, brooks, streams and waterbodies are under the jurisdiction of the ACOE and DEP. NWI wetlands also include several ponds and streams (Map Appendix, Figures Map-2a through Map-2e).

Rivers within the Study Area include:

- Mousam River, which begins at Mousam Lake in York County, flows for approximately 30 miles through the towns of Sanford and Kennebunk and into the Gulf of Maine just west of the Kennebunk River;
- Kennebunk River, approximately 15 miles long, begins at Kennebunk Pond and generally flows southeast emptying into the Gulf of Maine;
- Merriland River, approximately 4 miles long, which flows southeast through Wells to the Gulf of Maine; and
- Great Works River, approximately 27 miles long, flows south past North Berwick and meets with the tidal part of the Salmon Falls River in South Berwick.

A total of 23 Great Ponds occur within the Study Area. Great Ponds are defined by the NRPA as inland water bodies in a natural state that have a surface area in excess of 10 acres plus any inland bodies of water artificially formed or increased that have a surface area in excess of 30 acres. Great ponds are

public waters under the jurisdiction of the State of Maine. A summary table listing the great ponds is provided in Appendix B , Table B-1.

### *VERNAL POOLS*

Federal and State regulations provide additional protection to certain types of wetlands referred to as vernal pools. Federal criteria define a vernal pool as “a temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet or outlet and no viable populations of predatory fish (ACOE 2010). Vernal pools may offer habitat to obligate vernal pool species such as wood frogs, spotted salamanders, blue spotted salamanders, and fairy shrimp. The Federal definition is similar to Maine’s except that non-natural (i.e., human-created) pools are included in the federal definition and would include vernal pools considered non-significant by MDIFW. The Federal regulations require that impacts to vernal pools and the vernal pool management area (the area within a 750 foot radius from the pool edge) be minimized to the maximum extent practicable. Federal regulations consider all vernal pool types in a similar manner. The ACOE reviews vernal pools on a case-by-case basis and has the discretionary authority to give higher consideration for protection to natural, undisturbed vernal pools compared to manmade vernal pools (e.g., skidder ruts) based on the presence of conditions allowing for breeding success. During Phase III of the study, field surveys will be conducted to further identify vernal pools within proposed new corridors (if necessary).

Maine NRPA Chapter 335, Significant Wildlife Habitat, defines a vernal pool as a “natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer.” Significant vernal pools are vernal pools that have been identified by MDIFW as meeting specific criteria for the presence of breeding obligate vernal pool species and are more highly protected. The Chapter 335 definition includes critical terrestrial habitat within a 250-foot radius of a significant vernal pool.

Map Appendix, Figures Map-3a through Map-3e show significant and non-significant vernal pools with 250 ft buffers, as mapped by MDIFW, as of July 2011. The 250 foot buffer on non-significant vernal pools has been accepted by the ACOE for initial assessments. Vernal pool mapping is continuously updated as new data are entered from other projects in the Study Area and will be updated during the next phases of the study. A limited number of significant and non-significant vernal pools have been identified to date by other projects in Ogunquit, Kennebunk, North Berwick, and Wells (Appendix Figures A3a-e).

### *THREATENED AND ENDANGERED SPECIES*

Section 7 of the Endangered Species Act (ESA) requires that for any project in which there is a federal action that “may affect” listed species or their critical habitat, the action agency must consult with either the USFWS or NMFS. One federally-listed species, Atlantic salmon Gulf of Maine (GOM) Distinct Population Segment (DPS), has no critical habitat within the Study Area (NOAA 2010, Colligan 2012, Appendix A). The USFWS response (Appendix A) indicates that there are “no federally threatened or endangered species under the jurisdiction” of the USFWS. Other protected species noted in the USFWS response include New England cottontail rabbit (*Sylvilagus transitionalis*), which is a candidate for





federal listing. New England cottontail is listed as an endangered species by MDIFW (New England cottontail habitat is shown on Map Appendix, Figures Map-3a through Map-3e). USFWS also notes that occasional, transient bald eagles may occur in the general Study Area. The bald eagle was removed from the federal threatened list on August 9, 2008 and is now protected under the BGEPA and the Migratory Bird Treaty Act and reviewed under the 2007 National Bald Eagle Management Guidelines. No bald eagle nest sites have been mapped within the Study Area based on MDIFW Essential Habitat (EH) 2009 mapping and the USFWS review (Appendix A).

The NMFS response indicates that migrating shortnose sturgeon may utilize the Kennebunk and Mousam Rivers within the study area (Colligan 2012, Appendix A). It is unlikely that shortnose sturgeon will pass through the lower-most dam of the Mousam River. The dams on the Great Works River make it unlikely that shortnose sturgeon could move upstream of North Berwick. A dam on Branch Brook makes it unlikely that shortnose sturgeon could migrate west of US Route 1 past Drakes Island. The dam at Hobbs Pond probably prevents shortnose sturgeon movement upstream of the Merriland River beyond Maine Route 9A. In summary, it is unlikely that shortnose sturgeon will occur west of US Route 1 in York County.

The NMFS response further states that as a listed species and/or critical habitat are not likely to be present in the action area, a consultation, pursuant to Section 7 of the ESA is not likely to be necessary. If there is potential for a listed species or critical habitat to be affected by the project, then the lead Federal agency, or their designated non-Federal representative, would be responsible for determining whether a proposed action is likely to affect listed species. The lead Federal agency would then submit their determination of effects, along with justification for the determination and a request for concurrence, to the attention of the Section 7 Coordinator, NMFS.

On February 6, 2012, NMFS published new rules in the Federal Register listing Atlantic Sturgeon as threatened in the Gulf of Maine (GOM) Distinct Population Segment (DPS). Based on currently available information, Atlantic sturgeon may be present in the lower reaches of any of the rivers within the Study Area. It is likely that Critical Habitat will be designated for Atlantic Sturgeon in the future in tidal waters of the Study Area.

The Maine Endangered Species Act designates mapped Essential Habitats for species listed as endangered or threatened. A review of the data layers determined that there are no mapped Essential Habitats for least terns, roseate terns, or piping plovers within the Study Area.

A summary of state listed RTE animal and plant species that have the potential to occur within the Study Area based on data layers provided by Beginning with Habitat is provided in Appendix B, Table B-2. A total of 14 state-listed threatened and endangered animal species have been documented within the Study Area. These include two reptiles (Northern black Racer, ribbon snake,); two butterflies (Hessell's Hairstreak and Spicebush Swallowtail); two dragonflies (Ringed Boghaunter and Arrowhead Spiketail); two moths (Barrens Chaetagnaea and Broad Sallow); five birds (Common Moorhen, Least Bittern, Saltmarsh Sharp-Tailed Sparrow, Upland Sandpiper and Grasshopper Sparrow) and one mammal, New England Cottontail. Some of the occurrences are clustered in the Kennebunk Plains Wildlife

Management Area and Massabesic Experimental Forest as well as the Sanford Airport. Blanding's Turtle, wood turtle and spotted turtle have been listed by BwH within either the Mt. Agamenticus or Kennebunk Plains/Wells Focus Areas. A total of thirty-two endangered, threatened, and rare plant species occur throughout the Study Area, along with fourteen imperiled natural communities.

### *WILDLIFE HABITAT*

Under NRPA Chapter 335, Significant Wildlife Habitat includes: endangered or threatened species habitats; high and moderate valued deer wintering areas (DWA) and travel corridors; critical spawning and nursery areas for Atlantic salmon; vernal pools; MDIFW-mapped moderate and high value inland waterfowl/wading bird habitats and MDIFW mapped shorebird nesting, feeding and staging areas. Figure 3 and Map Appendix, Figures Map-3a through Map-3e, show significant habitats within the Study Area. Inland Waterfowl/Wading Bird habitats are scattered throughout the Study Area. Generally, these areas are associated with brooks or rivers. One wading bird colony has been identified in the Town of Arundel along Ward Brook, which feeds into the Kennebunk River.

DWA are found throughout the area, including several large DWAs located in Lyman and Sanford just north of the Mousam River. All of the DWA have been rated as indeterminate, requiring a review by MDIFW.

There are no MDIFW mapped shorebird nesting, feeding, staging areas, or tidal wading bird habitats within the Study Area.

A number of areas designated for endangered, threatened and species of concern occur through the Study Area, including high value habitat for USFWS Priority Trust Species. The summary figures show the top 25% forested, freshwater and grassland high value habitats mapped by the USFWS Gulf of Maine Coastal Program (GMCP). All the species included in the GMCP habitat analysis regularly inhabit the Gulf of Maine watershed and meet one or more of the following criteria (USFWS 2007):

- Federally endangered, threatened and candidate species,
- Migratory birds, diadromous and estuarine fish that are declining nationwide,
- Migratory birds, diadromous and estuarine fish that are threatened or endangered in two of the three states in the Gulf of Maine watershed, or
- Other birds that have been identified as species of concern by the North American Waterfowl Management Plan, the U.S. Shorebird Conservation Plan, the Colonial Waterbird Plan and Partners in Flight.

### *FISHERIES*

In 2006, Legislative protection (Maine Legislature 2006) was extended to native brook trout populations (Bonney 2009). Any proposal to stock waters containing native brook trout requires review and consent from the Maine Legislature's Fish and Wildlife Committee. Two wild brook trout (*Salvelinus fontinalis*) waters were identified by MDIFW within the project area, Coldwater Pond and Kennebunk Plains Pond (Map Appendix, Figures Map-3a through Map-3e). A wild brook trout fishery is defined by MDIFW as a body of water that has not been directly stocked with brook trout in the previous 25 years. Stream stocking is practiced most intensively within the MDIFW region that encompasses the Study Area. Of the 337 mapped streams within the Study Area, 278 (82%) are mapped as brook trout habitat



by MDIFW. In comparison, data noted in the MDIFW *2009 Not Stocked Since 1983 Brook Trout List*, indicates that there are 250 wild brook trout lakes and ponds within the entire state (GKG Projects 2010). Brook trout habitat losses accelerate with increased rates of development and often are permanent (Bonney 2009). Loss of habitat connectivity occurs from improperly placed/sized culverts at road crossings that limit fish passage.

There are no anadromous/catadromous fish runs identified by MDIFW in the Study Area. DMR indicated that there are likely American eel, alewife, blueback herring, American shad, sea lamprey and possibly striped bass within the Study Area, with a low likelihood for Atlantic sturgeon, shortnose sturgeon and Atlantic salmon. These species are likely to occur in the Ogunquit, Wehannet, Merriland, Mousam and Kennebunk rivers (Appendix A. Wipplehauser 2011).

There are no Essential Fish Habitat (EFH) species in freshwater habitats within the Study Area (Chiarella 2011, Appendix A). EFH Species and lifestages within tidally influenced areas are listed in Appendix B, Table B-3.

#### *FLOODPLAINS*

Executive Order 11988, Floodplain Management, requires that all federally-funded projects determine whether a proposed project will occur in a floodplain and to consider alternatives to avoid adverse effects and incompatible development in floodplains. The 100-year floodplains of streams and rivers were identified within the Study Area based on Flood Insurance Rate Mapping (FIRM) completed by the Federal Emergency Management Agency (FEMA). The 100-year floodplains are generally associated with areas directly adjacent to rivers and some of the larger brooks. Floodplains are shown on Figure 3 and Map Appendix, Figures Map-3a through Map-3e.

#### *OTHER RESOURCES*

Figure 4 and Map Appendix, Figures Map-4a through Map-4e depict other natural resources within the Study Area. These resources could be adversely affected by highway construction or create engineering challenges in the design process.

#### *WATER RESOURCES*

A number of aquifers are found throughout the Study Area. Public water supply areas and public water supply wells, found throughout the Study Area, are protected by the MaineDEP State Drinking Water Program, as part of the Federal Safe Drinking Water Act (42 U.S.C. 300 f et seq.; 6939b; 15 U.S.C. 1261 et seq.). Some locations within the Study Area have been identified for historic hazardous oil spills and remediation sites, which falls under the jurisdiction of MaineDEP Bureau of Remediation and Waste Management. Two wastewater treatment facilities are located in North Berwick, whose operation is governed by MaineDEP Bureau of Land and Water Quality. One closed landfill is located in the Town of Wells, which falls under Maine's Landfill Closure and Remediation Program 38 MRSA §1310-C et. seq., implemented by MaineDEP Bureau of Remediation and Waste Management.

A summary of watersheds and lakes most at risk from development and watersheds identified by MaineDEP as nonpoint source priority watersheds are summarized in Table 2. These watersheds and lakes fall under the jurisdiction of the Stormwater Management statute (38 M.R.S.A §420-D), which

requires projects to manage stormwater to protect surface waters. The Maine Department of Transportation (MaineDOT) and Maine Turnpike Authority (MTA) are obligated under a Memorandum of Agreement with the MaineDEP to comply with NRPA Chapter 500, Stormwater Management, standards, which includes a written plan. If major additions of impervious surface are proposed, the project would need to provide a stormwater analysis and storm water management plan.

Table 2: Watersheds and Lakes Most at Risk and Nonpoint Source Priority Watersheds<sup>1</sup>

Watersheds and Lakes Most at Risk	Town
Bauneg Beg Pond	Sanford
Deering Pond	Sanford
Ell Pond	Sanford
Estes Lake	Sanford
Nonpoint Source Priority Watersheds (Town)	Type Of Impairment Or Public Water Supply
Branch Brook (Sanford, Arundel, Kennebunk)	Public water supply
Great Works River (Sanford, North Berwick, Berwick)	Low dissolved oxygen
Kennebunk River (Kennebunk, Arundel, Kennebunkport)	Sediment, nutrients, bacteria
Mousam River (Sanford, Arundel, Kennebunk)	Sediment, nutrients, bacteria

<sup>1</sup>Source: MaineDEP Nonpoint Source Priority watersheds List, 10-15-98 and Chapter 502, Direct Watersheds of waterbodies most at risk from development.

#### DESIGNATED CONSERVATION AREAS

The Study Area overlaps two Biophysical Regions, Gulf of Maine Coastal Plain and Gulf of Maine Coastal Lowland (McMahon 1998). The Gulf of Maine Coastal Plain contains the largest concentration of glaciofluvial deposits in the state (McMahon 1990). This region includes a transition zone from warm temperate to cool temperate and boreal vegetation. The Gulf of Maine Coastal Lowland parallels the Gulf of Maine in a 20-mile wide band. The Atlantic coastal plain reaches its eastern extent just north of the Study Area. Ecosystems that reach their northern limit include the sandplain grasslands and oak hickory forests. The largest coastal pitch pine community in Maine occurs in Kennebunk and Wells.

Designated Conservation Areas within the Study Area include areas under federal, state, town or non-profit ownership. These areas are depicted along with other resources on Figure 4 and Map Appendix, Figures Map-4a through Map-4e, and additionally called out separately in Figure 5. The two largest are the Kennebunk Plains Wildlife Management Area (WMA) and the Massabesic Experimental Forest. The Kennebunk Plains WMA, which is managed by MDIFW, is a 3,200-acre protected sandplain grassland community, a state-listed critically-imperiled natural community and home to rare animals, (including reptiles such as the black racer, a state-listed species) and plants. It is the largest example of this type of ecosystem in the New England Region (SPO 2010) and combined with the Wells Barrens is one of the top-priority conservation areas in the state of Maine. Other critically-imperiled natural communities (pitch pine-heath barrens and pitch pine-scrub oak barrens) also occur in the area (MNAP 2010a). The Massabesic Experimental Forest, a 3,700-acre area located in Alfred and Lyman, is owned by the U.S. Forest Service (USFS). Tree stands within the forest consist of a mixture of pine and hardwoods, including northern red oak (USFS 2010). An imperiled natural community, Atlantic White Cedar Swamp,



is found in the area. The Forest provides habitats for several state-listed endangered species such as Blanding's and spotted turtles (MNAP 2010 b,c).

Other designated Conservation Areas include:

- Mt. Agamenticus Hilton Easement;
- Mt. Agamenticus Wildlife Management Area;
- Mt. Agamenticus Preserve;
- The Heath in Wells;
- Kennebunk Forest;
- Wells Barren, which is home to the state-listed Black Racer; and
- Hansen Farm.

The Sanford Ponds area, while not a Conservation Area, is a designated focus area by the Maine Natural Areas program (MNAP 2010d).

#### *SECTION 6(F) RESOURCES*

Section 6(f) of the Federal Land and Water Conservation Fund (LWCF) Act of 1964 provides financial assistance for the acquisition and development of public lands to create parks and open spaces; protect wilderness, wetlands and refuges; preserve wildlife habitat; and enhance recreational opportunities. Lands acquired or improved with these funds are subject to Federal regulations administered by the US Department of the Interior (USDOI). Pursuant to these regulations, any land subject to Section 6(f) cannot be "converted" to another use for purposes inconsistent with the Act without the approval of the USDOI and without being replaced with other land that is of equal use and value to the land proposed for conversion.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users (SAFETEA-LU), the successor to the Intermodal Surface Transportation Efficiency Act (ISTEA), transfers a percentage of gasoline taxes paid on non-highway recreational use in off-highway vehicles from the Highway Trust Fund into the Recreational Trails Program for trail development, improvement and maintenance. The State of Maine has agreed to take part in the Recreational Trails Program (RTP) under the Federal Highway Administration (FHWA), the federal agency that administers at the national level.

The Bureau of Public Lands data base identified 17 sites under the LWCF and 3 sites under the RTP. These sites are shown on Figure 4 and Map Appendix, Figures Map-4a through Map-4e. A summary of the sites is provided in the Appendix B, Table B-4.

#### *UNDEVELOPED HABITAT BLOCKS*

BwH has mapped undeveloped habitat blocks within the region based on 2003 to 2006 aerial imagery (Map Appendix, Figure Map-5). These blocks are at least 100 acres in size and are considered to offer the best opportunity for conservation of relatively undisturbed blocks of habitat. These areas have not been broken by roads and contain relatively little development. The general land use/landcover is provided for use in initial assessments of these areas. Landcover categories summarized in Map

Appendix, Figure Map-5 include forest areas and other areas, which include agricultural lands, exposed rock, gravel pits, etc. Large blocks of undeveloped land may provide habitat for animals with large home ranges such as black bear, bobcat, fisher and moose as well as species that are sensitive to human disturbance such as upland sandpipers and wood thrushes.

## CONCLUSIONS

Natural resource maps for the Study Area were prepared using available information and data sources. This information can be used in the consideration of environmental conditions during the Phase II strategy screening process. Once a smaller range of more detailed strategies are developed in Phase III of this study, this information will be used to compare in greater depth the environmental impacts for each strategy. A reconnaissance-level field review will be conducted at that time to help refine and further detail the information. Site-specific information will be needed before any project moves into the NEPA and permitting phase. One or more strategies evaluated in this study may be advanced in the future project development process.

The Study Area has extensive areas of wetlands and hydric soils. Wetlands, which include vernal pools, and stream crossings are the most highly protected and highly analyzed resources by the agencies (Figure 2). According to the ACOE / U.S. Environmental Protection Agency (EPA) Memorandum of Agreement on Mitigation (US ACOE and US EPA 1990), projects should strive for no overall net loss of wetland functions and values; wetland impacts are to be avoided and minimized to the extent possible, with compensation required for unavoidable impacts. The ACOE Highway Methodology (HM) integrates the ACOE's permit process with the NEPA process. During Phase I of the HM process, the ACOE will need to sign off on the Basic Project Purpose and the range of reasonable alternatives, which will be identified during Phase II of this study. Wetlands and other natural resource impacts will be considered in the initial screening. In Phase II of the HM process, the ACOE will identify the least environmentally damaging practicable alternative (LEDPA). The ACOE will only grant a permit for the LEDPA.

In addition, undeveloped habitat blocks, important for wildlife, are present throughout the Study Area. There are a number of imperiled natural communities (as defined by MNAP), some of which support threatened or endangered species or species of concern (Figure 3). Concentrations of endangered, threatened and species of concern have been documented along the southern boundary and within the central to northwest portion of the Study Area. These include the Massabesic Experimental Forest, Kennebunk Plains WMA and Wells Barrens.





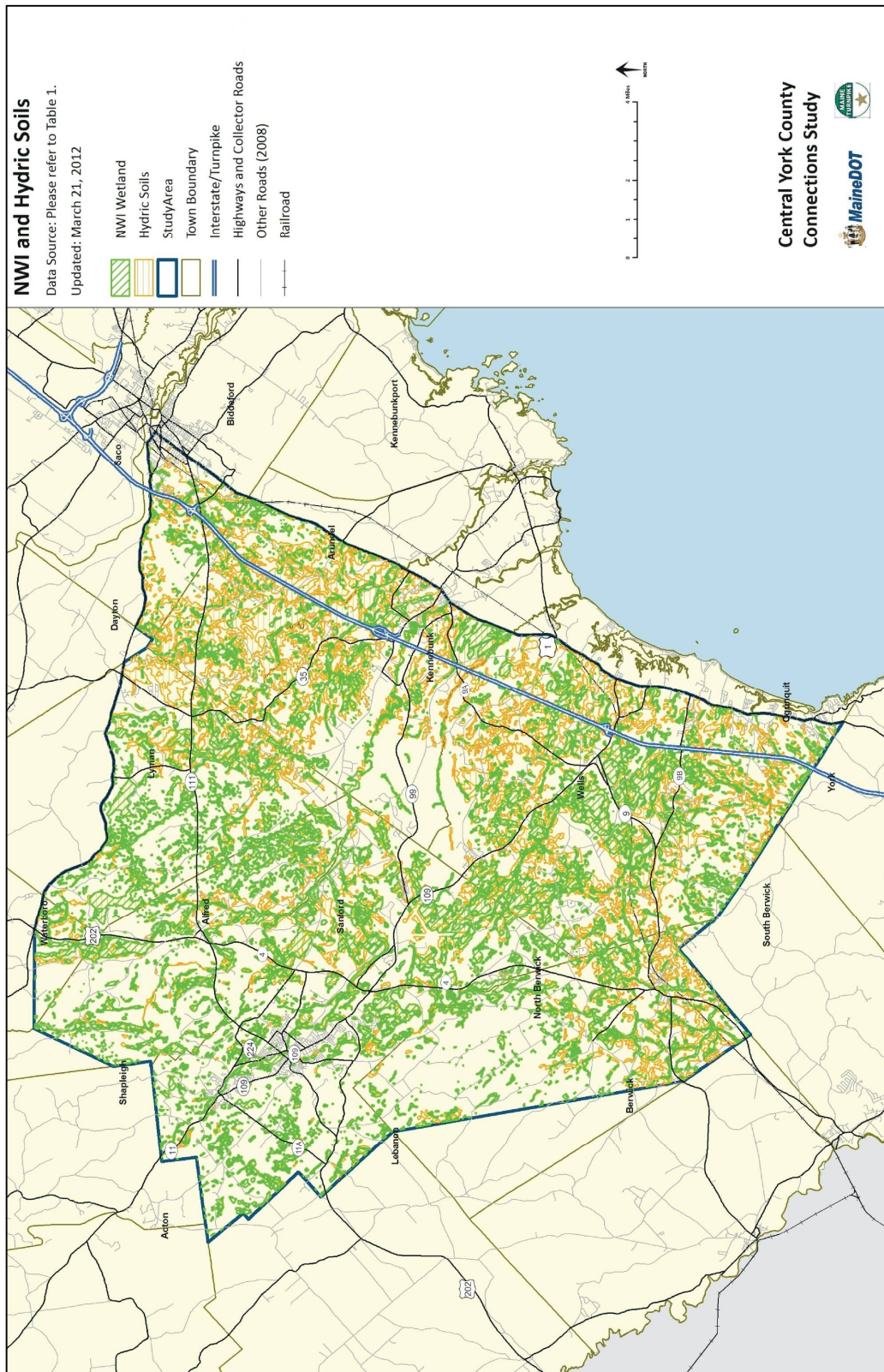


Figure 2: Overview of Wetlands and Hydric Soils in the Study Area

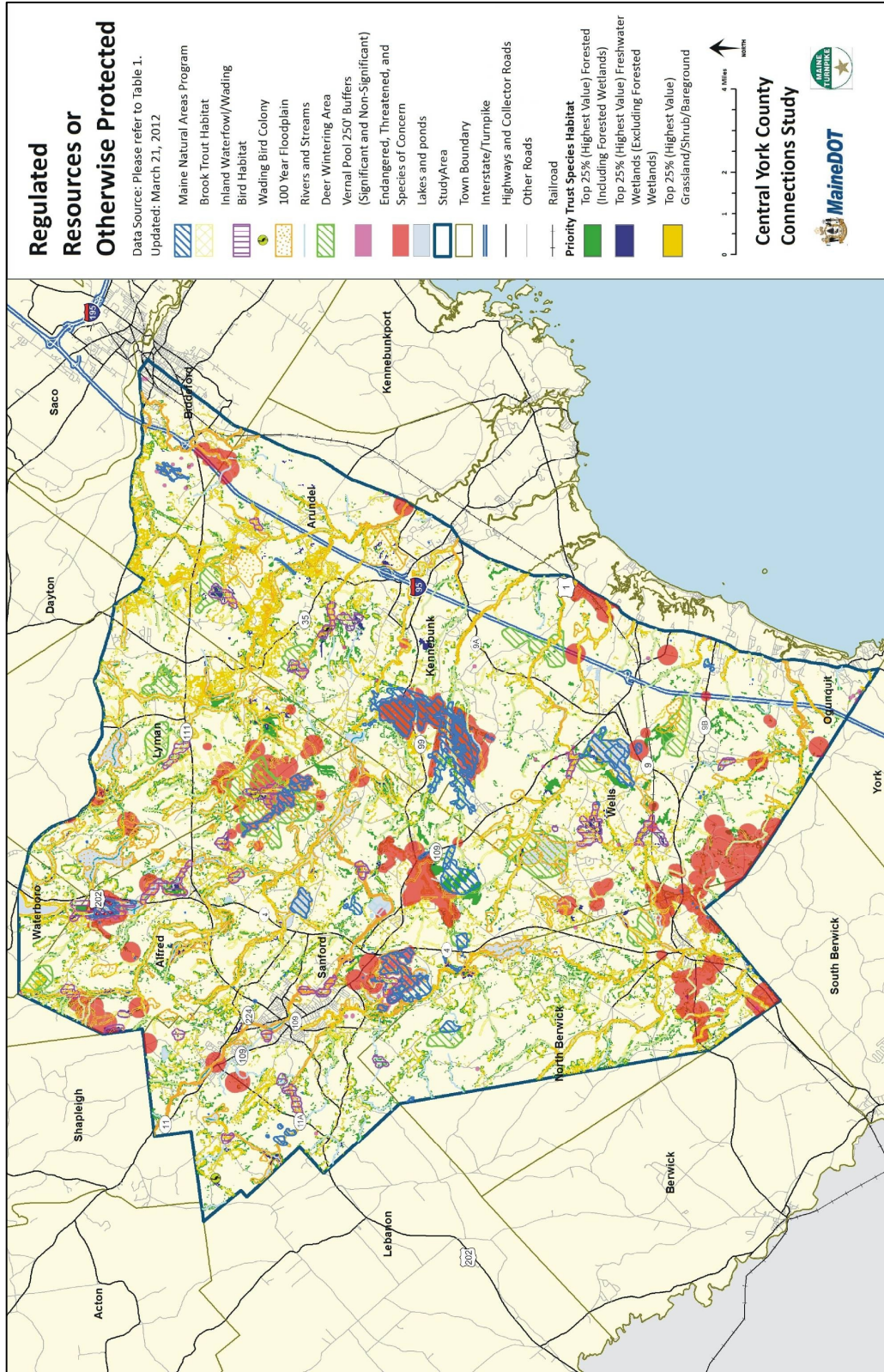


Figure 3: Overview of Regulated and Otherwise Protected Resources in the Study Area





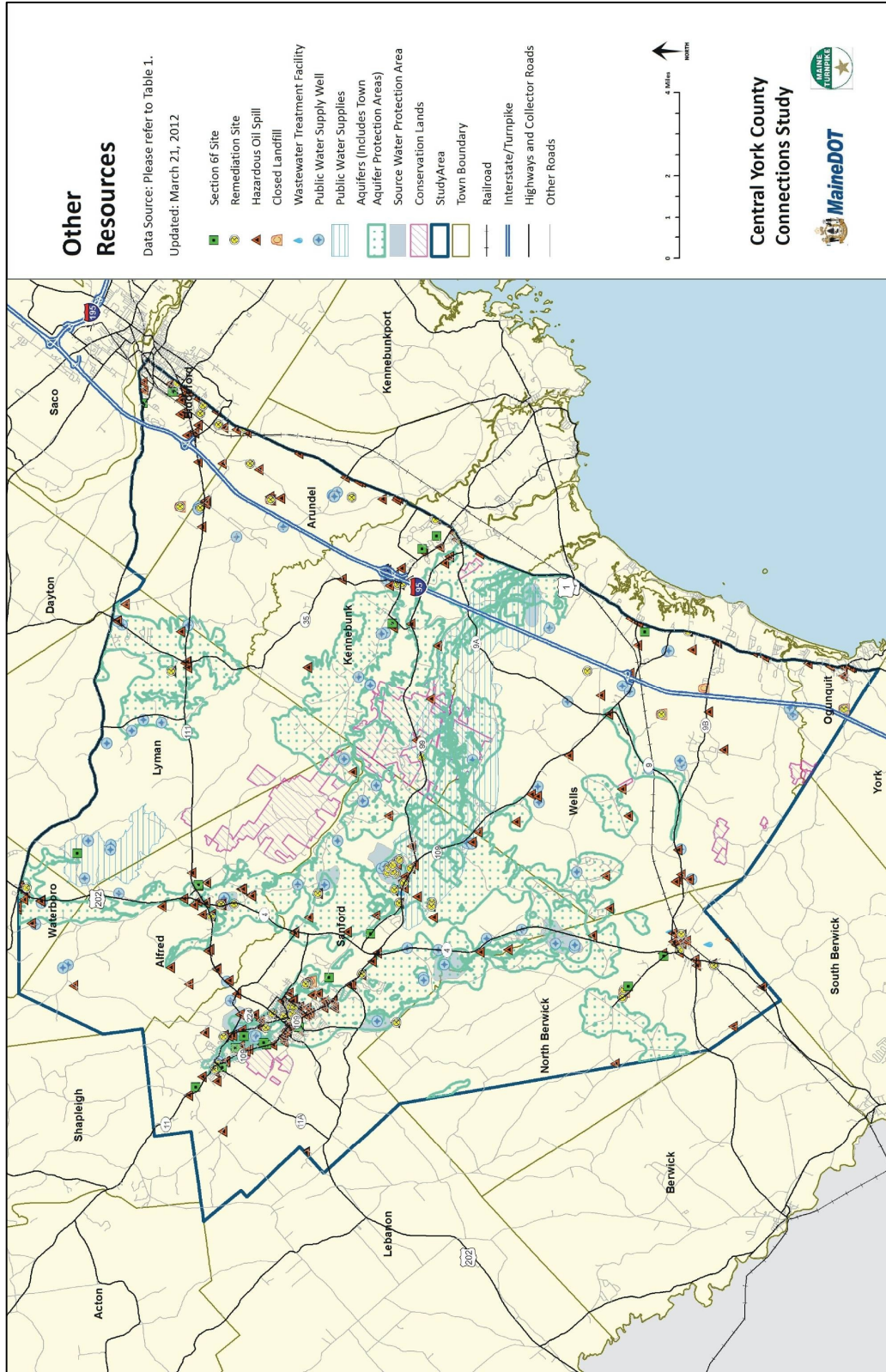


Figure 4: Overview of Other Resources in the Study Area

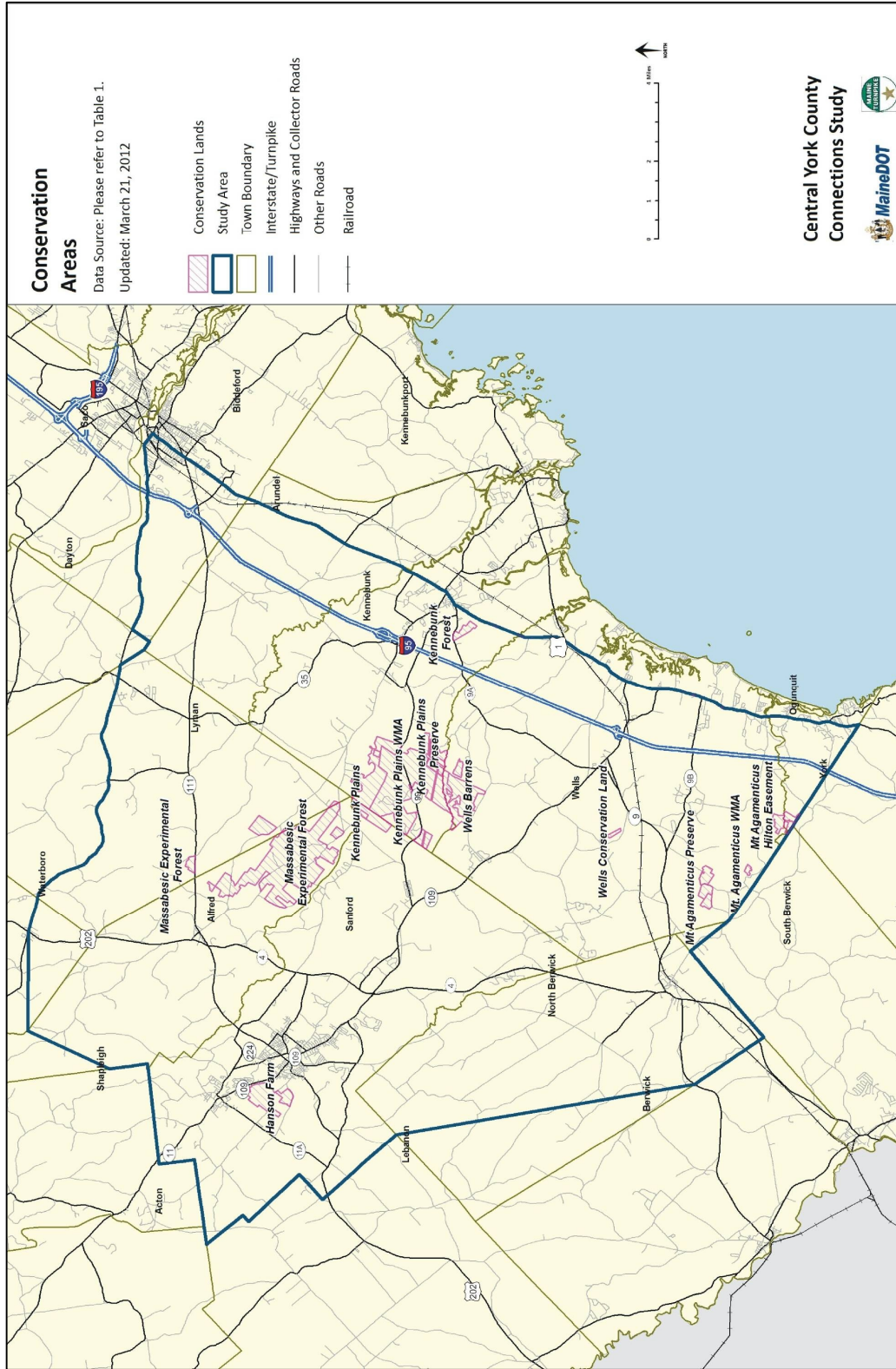


Figure 5: Conservation Areas in the Study Area



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# MAP APPENDIX

SEE SEPARATE DOCUMENT FOR 11 x 17 MAP APPENDIX





# APPENDIX A

## AGENCY RESPONSES







**NORMANDEAU ASSOCIATES, INC.**

8 Fundy Rd. Road  
Falmouth ME, 04105  
(207)797-7717  
(207)797-7761 (Fax)

September 27, 2011

Dear Mr. Colosi,

We did not receive a reply from you so are re-initiating our contact. Could you please provide us information on EFH or endangered species in the project area that are under your jurisdiction?

Thank you.

Marcia Bowen

*Marcia Bowen*

December 9, 2010

Peter Colosi  
National Marine Fisheries Service  
55 Great Republic Drive  
Gloucester, MA 01930

RE: Central York County Connections, Maine DOT Project No. 16315.00; Normandeau Project # 21889.000

Dear Mr. Colosi:

Normandeau Associates is under contract to Parsons Brinkerhoff to complete a natural resource review for the proposed Central York County Connections Study, Maine DOT project number 16315. The study area includes portions of the following ten communities and is shown on the attached map:

- The entire Town of Sanford,
- Those areas of Ogunquit, Wells, Kennebunk and Arundel northwest of Rte 1,
- Much of North Berwick, Alfred, and Lyman, and
- Portions of western Biddeford along Rte 111 and southern Waterboro along US 202.

The study will evaluate corridors that could improve connectivity from areas throughout the study area to the Maine Turnpike.

In order to avoid and minimize potential impacts to natural resources, we respectfully request that you review your files for information on any Essential Fish Habitat and endangered and threatened marine species, and that are under your jurisdiction.

Should you have any questions, please feel free to contact me at (207) 797-7717, or at [lkoch@normandeau.com](mailto:lkoch@normandeau.com). Thank you for your assistance.

Sincerely,  
NORMANDEAU ASSOCIATES INC.

---

Lewes, DE	Bedford, NH, Corporate	Haverstraw, NY	Aiken, SC	Wenatchee, WA
Falmouth, ME Falmouth, MA	Hampton, NH Westmoreland, NH	Drumore, PA Stowe, PA	Stevenson, WA Vancouver, WA	Verona, WI

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SEP 30 2011

**From:** [Lou Chiarella](#)  
**To:** [Marcia Bowen](#);  
**cc:** [Julie Crocker](#);  
**Subject:** Re: Request for information  
**Date:** Thursday, December 15, 2011 8:53:18 AM

---

Marcia,  
The rivers that you indicate in your letter are not EFH for Atlantic salmon. However, if the activities will occur in tidally influenced areas of the rivers then there would be EFH for other species. The list of species can be found at <http://www.nero.noaa.gov/hcd/index2a.htm>

In addition to EFH we are concerned with impacts to other species under the Fish and Wildlife Coordination Act and as such you should evaluate the potential impacts on diadromous species.

My office is not involved in providing information on protected species so I would suggest that you contact Julie Crocker in our Protected Resources Division for that information.

Lou Chiarella  
New England Field Office Supervisor  
for Habitat Conservation  
National Marine Fisheries Service  
55 Great Republic Drive  
Gloucester, MA 01930  
978-281-9277

On Wed, Dec 14, 2011 at 4:21 PM, Marcia Bowen  
<[mbowen@normandeau.com](mailto:mbowen@normandeau.com)> wrote:

Dear Mr. Chiarella,

I have attached a request for information for a project area in southern Maine. The project area does not include any marine or estuarine areas per se, but does include several rivers. The EFH website isn't too clear on what should be included in this case. I'd appreciate knowing what EFH and



FWPA species should be considered. Thank you.

Marcia

**Marcia Bowen**

*Normandeau Associates Inc.*

8 Fundy Rd. Falmouth ME 04105

[207-518-6766](tel:207-518-6766)

[207 233 2054](tel:207-233-2054) cell phone

---

Please consider the environment before printing this e-mail.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
 NATIONAL MARINE FISHERIES SERVICE  
 NORTHEAST REGION  
 55 Great Republic Drive  
 Gloucester, MA 01930-2290

### RESPONSE TO INFORMATION REQUEST

This standard form is provided in response to your request for information regarding the presence and distribution of essential fish habitat (EFH) and fishery resources in the vicinity of your proposed action.

#### **Essential Fish Habitat**

A complete list of species and life stages for which EFH has been designated can be found on the National Marine Fisheries Service (NMFS) Habitat Conservation Division website at: <http://www.nero.noaa.ro/doc/webintro.html>. The website also contains information on descriptions of EFH for each species, guidance on the EFH consultation process including EFH assessments, and information relevant to other NMFS mandates.

The Magnuson-Stevens Fisheries Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA) require federal agencies to consult with the NMFS on their proposed activities. Insofar as a project involves EFH, this process is guided by the requirements of our EFH regulations at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in this consultation procedure.

The required contents of an EFH assessment include: 1) a description of the action; 2) an analysis of the potential adverse effects of the action on EFH and the managed species; 3) the federal agency's conclusion regarding the effects of the action on EFH; and 4) proposed mitigation, if applicable. Other information that should be contained in the EFH assessment, if appropriate, includes: 1) the results of on-site inspections to evaluate the habitat and site-specific effects; 2) the views of recognized experts on the habitat or the species that may be affected; 3) a review of pertinent literature and related information; and 4) an analysis of alternatives to the action that could avoid or minimize the adverse effects on EFH. Upon submittal of an EFH assessment by the federal action agency, the NMFS will provide conservation recommendations for the proposed project, as necessary.

#### **Protected Species**

Information regarding the Endangered Species Act or Marine Mammal Protection Act will be provided under separate cover from the NMFS Protected Resources Division. Questions regarding Endangered Species Act Section 7 consultations should be directed to Julie Crocker, [Julie.Crocker@noaa.gov](mailto:Julie.Crocker@noaa.gov), 978-281-9300 x 6530.

#### **Additional Information**

Should you require additional information regarding EFH or FWCA consultations, please contact Lou Chiarella, New England Field Office Supervisor for Habitat Conservation, [Lou.Chiarella@noaa.gov](mailto:Lou.Chiarella@noaa.gov), 978-281-9277.







**From:** [Julie Crocker](#)  
**To:** [Marcia Bowen](#);  
**cc:** [Jeff Murphy](#);  
**Subject:** Re: Central York County  
**Date:** Thursday, December 15, 2011 9:54:32 AM

---

Hi Marcia -

I am forwarding your request to our Orono, Maine office.

Julie

On Wed, Dec 14, 2011 at 4:24 PM, Marcia Bowen  
<[mbowen@normandeau.com](mailto:mbowen@normandeau.com)> wrote:

Dear Ms. Crocker,

I am inquiring about protected resources for a broad-scale transportation project in southern Maine (see attached letter). The project does not include coastal areas per se but does include several rivers. I'd appreciate any information on species to be considered. Thank you.

Marcia

**Marcia Bowen**

*Normandeau Associates Inc.*

**8 Fundy Rd. Falmouth ME 04105**

**[207-518-6766](tel:207-518-6766)**

**[207 233 2054](tel:207-233-2054) cell phone**

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Please consider the environment before printing this e-mail.

--

Julie Crocker  
Protected Resources Division  
Northeast Regional Office  
National Marine Fisheries Service  
55 Great Republic Drive  
Gloucester, MA 01930

MARCH 29, 2012

*Natural Resources – Phase I Tech Memo*



**From:** [Swan, Brian](#)  
**To:** [Marcia Bowen](#);  
**cc:** [Wippelhauser, Gail](#);  
**Subject:** RE: natural resources in Sanford et al.  
**Date:** Monday, December 19, 2011 2:37:15 PM

---

Hi Gail,

Could you please respond to Marcia?

Thanks,  
Brian

---

**From:** Marcia Bowen [mailto:[mbowen@normandeau.com](mailto:mbowen@normandeau.com)]  
**Sent:** Wednesday, December 14, 2011 2:42 PM  
**To:** Swan, Brian  
**Subject:** RE: natural resources in Sanford et al.

Hi Brian, I am trying to finalize the natural resources report for this project and DOT is why no information from DMR on diadromous fish has been included in the report . Could you ask her if she could provide information for this project? I've included our last letter to you.

Thank you.  
Marcia

---

**From:** Swan, Brian [mailto:[Brian.Swan@maine.gov](mailto:Brian.Swan@maine.gov)]  
**Sent:** Thursday, October 06, 2011 1:11 PM  
**To:** Marcia Bowen  
**Subject:** natural resources in Sanford et al.

Hi Marcia,

I forwarded your request for information on natural resources in Sanford, Ogunquit, Wells, Kennebunk, Arundel, North Berwick, Alfred, Lyman, Biddeford, and Waterboro to Gail Wippelhauser since it appears that diadromous fish would be the primary resource of concern to DMR for DOT projects.

My apologies for not getting back to you on this previously.

Things are pretty good with me, thank you for asking. I hope all is well with you.

Please note my new address.





Brian

*Brian M. Swan  
Environmental Coordinator  
Maine Dept. of Marine Resources  
Marine Resources Laboratory  
P.O. Box 8, 194 McKown Point Road  
West Boothbay Harbor, Maine 04575-008  
Phone: (207) 633-9510  
Fax: (207) 633-9579  
Email: [brian.swan@maine.gov](mailto:brian.swan@maine.gov)*

---

Please consider the environment before printing this e-mail.

From: Wippelhauser, Gail [<mailto:Gail.Wippelhauser@maine.gov>]  
Sent: Tuesday, December 27, 2011 1:29 PM  
To: Marcia Bowen  
Cc: Swan, Brian  
Subject: RE: natural resources in Sanford et al.

Brian typically calls me about or sends me info requests for diadromous fishes – but don't know what happened with this one. He sent these attachments to me on 12/19, but I thought I was missing something. Without knowing specific sites, there are likely American eel, alewife, blueback herring, American shad, sea lamprey; possibly striped bass; and a real small chance of Atlantic sturgeon, shortnose sturgeon, and Atlantic salmon in the study area. These fish would be in the Ogunquit, Wehannet, Merriland, Mousam, and Kennebunk rivers – which appear to be the only ones that extend west of I95.

Gail Wippelhauser, Ph. D.  
Marine Resources Scientist  
Maine Department of Marine Resources  
#172 State House Station  
Augusta, ME 04333

Phone: 207-624-6349 Fax: 207-624-6501  
email: [gail.wippelhauser@maine.gov](mailto:gail.wippelhauser@maine.gov)

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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Maine Field Office – Ecological Services  
 17 Godfrey Drive, Suite #2  
 Orono, ME 04473  
 (207) 866-3344 Fax: (207) 866-3351



FWS/Region 5/ES/MEFO

December 27, 2010

Leah Koch  
 Normandeau Associates  
 8 Fundy Road  
 Falmouth, ME 04105

Dear Ms. Koch:

Thank you for your letter dated December 9, 2010, requesting information or recommendations from the U.S. Fish and Wildlife Service (Service). This letter provides the Service's response pursuant to Section 7 of the Endangered Species Act (ESA), as amended (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d, 54 Stat. 250), and the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667d).

**Project Name/Location:** Central York County Connections Study

**Log Number:** 53411-2011-SL-0076

#### **Federally Listed Species**

Based on the information currently available to us, no federally threatened or endangered species under the jurisdiction of the Service are known to occur in the project area. Accordingly, no further action is required under Section 7 of the ESA, unless: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by the identified action.

#### **Other protected species**

The New England cottontail rabbit (*Sylvilagus transitionalis*), a candidate for federal listing could occur on your project area. New England cottontail was officially listed as a candidate species for federal listing on September 12, 2006 (71 FR 53756). Thus, the New England cottontail will likely be federally listed in the future. At this time, the New England cottontail is afforded no protection under the Federal ESA. However, we strongly encourage you to consider this species in your project planning. This species uses old field and scrub shrub habitats. We encourage you to conduct surveys to determine the presence of this species or its habitat on the project area.

The New England cottontail is listed as an endangered species by Maine Inland Fisheries and Wildlife. We encourage you to contact MDIFW's Mammal Group (John Depue, Maine Inland Fisheries and Wildlife, 650 State St., Bangor, ME 04401 Phone: 207 941-4473 or Scott Lindsay, Maine Inland Fisheries and Wildlife, Region A, RR 1, 358 Shaker Road, Gray, ME 04039 Phone:207 657-2345) for more information.

### **Other Protected Species**

Occasional, transient bald eagles may occur in the general project area. The bald eagle was removed from the federal threatened list on August 9, 2007 and is now protected from take under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. "Take" means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb. The term "disturb" under the Bald and Golden Eagle Protection Act was recently defined within a final rule published in the Federal Register on June 5, 2007 (72 FR 31332). "Disturb" means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle; 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior; or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

Further information on bald eagle delisting and their protection can be found at <http://www.fws.gov/migratorybirds/baldeagle.htm>.

Please consult with our new national bald eagle guidelines, which can found at <http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>. These Guidelines are voluntary and were prepared to help landowners, land managers and others meet the intent of the Eagle Act and avoid disturbing bald eagles. If you believe this project will result in taking or disturbing bald or golden eagles, please contact our office for further guidance. We encourage early and frequent consultations to avoid take of eagles.

We have not reviewed this project for state-threatened and endangered wildlife, wildlife species of special concern, and significant wildlife habitats protected under the Maine Natural Resources Protection Act. We recommend that you contact the Maine Department of Inland Fisheries and Wildlife:

Steve Timpano  
Maine Department of Inland Fisheries and Wildlife  
284 State St.  
State House Station 41  
Augusta, ME 04333-0041  
Phone: 207 287-5258

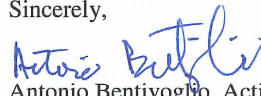
We also recommend that you contact the Maine Natural Areas Program for additional information on state-threatened and endangered plant species, plant species of special concern, and rare natural communities:



Lisa St. Hilaire  
Maine Natural Areas Program  
Department of Conservation  
93 State House Station  
Augusta, ME 04333  
Phone: 207 287-8046

If you have any questions about this project, please contact Mark McCollough, endangered species biologist, at (207) 827-5938 ext.12.

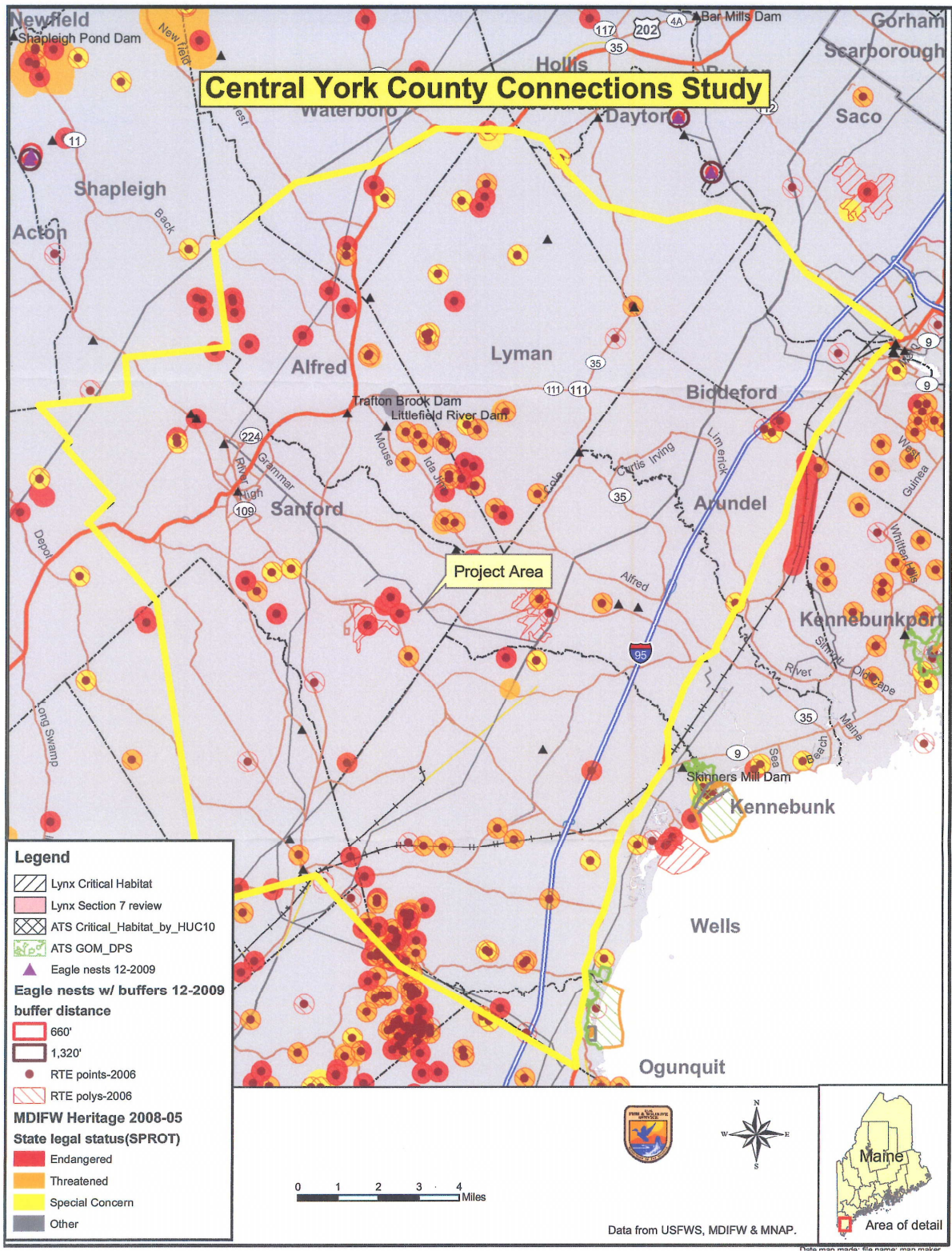
Sincerely,



Antonio Bentivoglio, Acting Field Supervisor  
Maine Field Office

Enclosure







UNITED STATES DEPARTMENT OF COMMERCE  
 National Oceanic and Atmospheric Administration  
 NATIONAL MARINE FISHERIES SERVICE  
 NORTHEAST REGION  
 55 Great Republic Drive  
 Gloucester, MA 01930-2276

JAN 23 2012

Marcia Bowen  
 Project Officer  
 Normandeau Associates, Inc.  
 8 Fundy Road  
 Falmouth, Maine 04105

RE: Central York County Connections, Maine DOT Project No. 1631500

Dear Ms. Bowen:

Your December 14, 2011, letter requested information on the presence of federally listed species in central York County, Maine under the jurisdiction of NOAA's National Marine Fisheries Service (NMFS). It is our understanding that you are evaluating potential transportation corridors in that area on behalf of the Maine Department of Transportation. The specific area under consideration is west of US Route 1, encompassing the towns of Biddeford, Lyman, Alfred, Sanford, North Berwick, Ogunquit, and Kennebunk, Maine. Coastal rivers and tributaries that may support listed species in that area include the Kennebunk, Mousam, Great Works, Merriland, Webhannet, Littlefield, Ogunquit Rivers, and Branch Brook. Excluded from review is the Saco River as your request delineated areas only west and south of Biddeford along ME Route 111.

Two species of federally endangered fish (shortnose sturgeon, *Acipenser brevirostrom*, and the Gulf of Maine (GOM) Distinct Population Segment (DPS) of Atlantic salmon, *Salmo salar*) listed under our jurisdiction occur in Maine rivers and estuaries. However, the GOM DPS of Atlantic salmon does not occur in your area of concern. As such, Atlantic salmon will not be further addressed in this letter.

Shortnose sturgeon occur along the US Atlantic coast. In Maine, shortnose sturgeon are known to occur in the Penobscot River as well as the Kennebec-Sheepscoot-Androscoggin river complex. Recent telemetry data indicate that shortnose sturgeon tagged in the Merrimack (MA), Kennebec, and Penobscot rivers undertake significant coastal migrations (Fernandes, et al., 2010). For example, a fish tagged in the Merrimack River was recently documented in the Saco River and individuals tagged in the Kennebec River have been detected in the Merrimack River and vice versa. Telemetry data also indicates that shortnose sturgeon utilize smaller coastal river systems such as the Darmariscotta, St. George, Medomak, and Passagasawakeag Rivers (Zydlowski, Kinnison & Dionne, personal communication, 2010). Based on the best available information, migrating shortnose sturgeon may be utilizing the York County rivers during inter-basin movements.





It is reasonable to expect listed shortnose sturgeon could be present in the lower portion of the Kennebunk and Mousam Rivers based on the proximity of the Saco River where shortnose sturgeon are known to occur, and on the telemetry information which demonstrates inter-basin movements of the species and utilization of smaller coastal river systems during migration. However, an acoustic receiver was installed on the Maine Route 9 bridge over the Mousam River; during the period May through December of 2011 and no tagged sturgeon were detected (Sulikowski, personal communication, 2011). No other rivers in the action area, including the Kennebunk River, are monitored for the presence of sturgeon.

There are six dams on the Mousam River northwest of US 1 between the Town of Kennebunk and the Town of Alfred. Based on what is known about sturgeon passage at dams, passage above the lowermost dam on the Mousam River is unlikely. The dams on the Great Works River make it unlikely that sturgeon could move upstream of North Berwick. Additionally, a dam on Branch Brook makes it unlikely that a sturgeon could migrate west of US1 past Drakes Island. Lastly, the dam at Hobbs Pond is likely to prevent sturgeon movement upstream in the Merriland River beyond ME Route 9A. In summary, based on the best available information, encountering a shortnose sturgeon west of US Route 1 in York County, Maine is unlikely.

As listed species and/or critical habitat are not likely to be present in the action area of this project, a consultation, pursuant to section 7 of the Endangered Species Act (ESA) of 1973, is not likely to be necessary. However, if the proposed project has the potential to affect listed species and/or critical habitat and it is being approved, permitted, funded, or carried out by a Federal agency, the lead Federal agency, or their designated non-Federal representative, is responsible for determining whether the proposed action is likely to affect listed species. The lead Federal agency should submit their determination of effects, along with justification for the determination and a request for concurrence, to the attention of the Section 7 Coordinator, NMFS, Northeast Regional Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930. After reviewing this information, we would then be able to conduct a consultation under section 7 of the ESA.

#### *Technical Assistance for Proposed Species*

On October 6, 2010, we proposed to list four Distinct Population Segments (DPS) of Atlantic sturgeon as endangered (New York Bight, Chesapeake Bay, South Atlantic, and Carolina) and one DPS as threatened (Gulf of Maine) under the ESA (see *75 Federal Register* 1872). In Maine, Atlantic sturgeon have been documented in several rivers, including: Penobscot, Kennebec, Androscoggin, and Sheepscot. The marine range of all 5 DPSs extends from Canada to Cape Canaveral, Florida. Atlantic sturgeon originating from any of the 5 DPSs could be present in Maine waters. Based on currently available information, Atlantic sturgeon may be present in the lower reaches of any of the rivers considered in your request for information.

The listing status of Atlantic sturgeon is likely to change in the near future. As such, we recommend that you obtain updated species information prior to the issuance of any environmental documents.



Should you have any questions regarding the section 7 consultation process or the species discussed in this letter, please contact Max Tritt at our Maine Field Station at (207)866-3756. We look forward to continuing to work cooperatively with you on this project and the upcoming section 7 consultation.

Sincerely,



Mary A. Colligan  
Assistant Regional Administrator  
for Protected Resources

EC: Crocker, Tritt, Murphy –F/NER3  
Chiarella – F/NER4  
Mahaney –USFWS

File Code: Sec 7 FHWA/ ME DOT  
PCTS T/NER/2011/06129



# APPENDIX B

## ADDITIONAL RESOURCES





Table B-1. Great Ponds within the Study Area

Name	Acres
Bunganut Pond	296.29
Kennebunk Pond	191.65
Unnamed	185.37
Bauneg Beg Pond	183.45
Estes Lake	174.75
Shaker Pond	109.17
Old Falls Pond	85.77
Alewife Pond	45.68
Number One Pond	41.97
Little Pond	33.41
Unnamed	31.46
Sand Pond	31.06
Unnamed	26.96
Stump Pond	26.12
Deering Pond	23.71
Littlefield Pond	21.02
Unnamed	18.90
Hobbs Pond	17.93
Old Fishing Pond	17.90
Unnamed	17.10
Unnamed	16.48
Curtis Pond	11.93

Source: U.S. Geological Survey (USGS), MEGIS, 1993, hydrop\_04202006.shp

Table B-2. Rare, Threatened and Endangered Species within Study Area<sup>1</sup>

Common Name	Scientific Name	GRANK <sup>2</sup>	SRANK <sup>3</sup>	State Protection Status <sup>4</sup>
Arrowhead Spiketail	<i>Cordulegaster obliqua</i>	G4	S1	SC
Barrens Chaetagnae	<i>Chaetagnaea tremula</i>	G5	S2S3	SC
Broad Sallow	<i>Xylotype capax</i>	G4	S3	SC
Common Moorhen	<i>Gallinula chloropus</i>	G5	S2?B	T
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	G5	S1B	E
Hessel's Hairstreak	<i>Callophrys hesseli</i>	G3G4	S1	E
Least Bittern	<i>Ixobrychus exilis</i>	G5	S2B	E
New England Cottontail	<i>Sylvilagus transitionalis</i>	G3	S2	E
Northern Black Racer	<i>Coluber constrictor constrictor</i>	G5T5	S2	E
Ribbon Snake	<i>Thamnophis sauritus</i>	G5	S3	SC
Ringed Boghaunter	<i>Williamsonia lintneri</i>	G3	S1	T
Saltmarsh Sharp-tailed Sparrow	<i>Ammodramus caudacutus</i>	G4	S3B	SC
Spicebush Swallowtail	<i>Papilio troilus</i>			SC
Upland Sandpiper	<i>Bartramia longicauda</i>	G5	S3B	T

1. Source: Beginning with Habitat.
2. GRANK (Global Rarity Rank)= G1 - Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.  
 G2-Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.  
 G3 - Globally rare (on the order of 20-100 occurrences).  
 G4 -Apparently secure globally.  
 G5 -Demonstrably secure globally. T= qualifier for population subspecies rank.
3. SRANK (State Rarity Rank): S1 - Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.  
 S2 - Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.  
 S3 - Rare in Maine (on the order of 20-100 occurrences). S4 - Apparently secure in Maine. S5 -Demonstrably secure in Maine. SH - Occurred historically in Maine, and could be rediscovered; not known to have been extirpated.  
 B= qualifier for breeding population.
4. State Protection Status: E=Endangered. T=Threatened. SC= Special Concern





Table B-3. Summary of Essential Fish Habitat (EFH) Designations

Name of Estuary/ Bay/ River: Wells Harbor, Maine

Species	Eggs <sup>1</sup>	Larvae	Juveniles	Adults	Spawning Adults
White hake ( <i>Urophycis tenuis</i> )			M,S	M,S	
Redfish ( <i>Sebastes fasciatus</i> )	n/a				
Winter flounder ( <i>Pleuronectes americanus</i> )	M,S	M,S	M,S	M,S	M,S
Yellowtail flounder ( <i>Pleuronectes ferruginea</i> )		S			
Windowpane flounder ( <i>Scopthalmus aquosus</i> )	M,S	M,S	M,S	M,S	M,S
Atlantic halibut ( <i>Hippoglossus hippoglossus</i> )	S	S	S	S	S
Atlantic sea herring ( <i>Clupea harengus</i> )		M,S	M,S	S	
Bluefish ( <i>Pomatomus saltatrix</i> )			M,S	M,S	
Long finned squid ( <i>Loligo pealei</i> )	n/a	n/a			
Short finned squid ( <i>Illex illecebrosus</i> )	n/a	n/a			
Surf clam ( <i>Spisula solidissima</i> )	n/a	n/a			
Ocean quahog ( <i>Artica islandica</i> )	n/a	n/a			
Spiny dogfish ( <i>Squalus acanthias</i> )	n/a	n/a			

1. Salinity zones: M= mixing zone from 0.5 to 0.25 ppt; S= seawater zone, greater than or equal to 25 ppt.

Source: NOAA Fisheries Service: Northeast Regional Office, <http://www.nero.noaa.gov/hcd/me13.html>, viewed on January 6, 2012.

Table B-4. Section 6f Properties<sup>1</sup>

Recreation Project	Project	State/Local Project
LWCF	Alfred Ballfield	Local
LWCF	Alfred Recreation Park	Local
LWCF	Ballfield Lighting	Local
LWCF	Ballfield, Park & Playground	Local
LWCF	Bunganunt Pond	State
LWCF	Gowen Park Field	Local
LWCF	Memorial Field Recreation Facility	Local
LWCF	Multi-Purpose Field	Local
LWCF	Park	Local
LWCF	School Park	Local
LWCF	Skateboard Park	Local
LWCF	Soccer Field	Local
LWCF	Springvale Playground Renovation	Local
LWCF	Springvale Swim Area	Local
LWCF	Tennis Courts	Local
LWCF	West Kennebunk Recreation Area	Local
LWCF	Wiggan Pond Park	Local
RTP	Rehab Trails	Local
RTP	Rehab Trails	Local
RTP	Sanford	Not noted

1. Source: Department of Conservation, March 9, 2012.

