## § 5.6 (d)(3)(vii) Rare, Threatened, and Endangered Species

***(vii) Rare, threatened and endangered species. A description of any listed rare, threatened and endangered, candidate, or special status species that may be present in the project vicinity. Components of this description must include:***

The rare, threatened, and endangered species that are present in the project area are listed in this section and referenced in comments provided by some regulatory agencies which will be included in Appendix HMC-06.

Based on a preliminary assessment, the proposed project will not have an impact on rare, threatened, and endangered species that are present in the project area. Construction activities will have increase noise levels within a limited and localized area.

### 3.1.4 Endangered, Threatened and Special Status Species

The federal Endangered Species Act of 1973 (ESA) (16 U.S.C. § 1531 et seq.) conserves the ecosystems on which endangered and threatened species depend. Species are protected under the ESA as either endangered or threatened. Endangered means a species is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future. The NMFS, which is responsible for marine species, and the USFWS, which is responsible for terrestrial and freshwater species, jointly administer the law.

Federal agencies are required by Section 7 of the ESA to ensure that any actions authorized, funded, or carried out by the agency do not jeopardize the continued existence of a federally-listed endangered or threatened species or result in the destruction or adverse modification of the designated critical habitat of a federally-listed species. The federal action agency is required to consult with the USFWS and/or NMFS to determine whether federally-listed endangered or threatened species or designated critical habitat are found in the vicinity of the proposed Project, and to determine the proposed action's potential effects on those species or critical habitats.

The Maine State Legislature enacted the Maine Endangered Species Act (MESA) in 1975. In 1986, Maine's first list of 23 Endangered and Threatened species was adopted. After MDIFW reviewed

the status of many of Maine's wildlife species in the mid-1990s, 20 new species were added to the list in 1997. Currently, 49 species of fish and wildlife are listed as Endangered or Threatened in Maine, either under MESA, the U.S. Endangered Species Act (ESA), or both (MDIFW, 2005).

Quoddy Bay consulted with federal and state resource agencies to determine if any federally-listed or state-listed endangered or threatened species (including federal and state species of special concern) or their designated critical habitats occur in the Project area. Agencies contacted by Quoddy Bay include the MDIFW, USFWS, NOAA Fisheries, and MNAP (Meehan, 2006; Bard, 2006; Russell, 2006; Ross, 2006). Contacts included written correspondence (letters and email), telephone discussions, group meetings, and field visits. Copies of all relevant agency correspondence are included in Appendix 3-A.

In addition Steve Crawford of the Passamaquoddy Tribe, provided information to Quoddy Bay in 2006 on resource concerns of the Passamaquoddy Tribe, that included the identification of additional federal and state listed species, that were not provided by MDIFW, USFWS, NOAA Fisheries. It is Quoddy Bay's intent to address those species identified by Crawford within this Resource Report, but only Federally listed species identified by the USFWS and NOAA Fisheries will be addressed in the Biological Evaluation provided in Appendix 3-J. Quoddy Bay has prepared the Biological Evaluation in a manner to support the FERC in its consultation with federal agencies under the requirements of the Section 7 Endangered Species Act.

Table 3.1.4-1 provides a summary of the federal- and state-listed species occurring within the vicinity of the Quoddy Bay LNG Project. Information in the table includes the approximate location of the species and the federal- and state-listing status. A description of the federal- and state-listed species occurring within the vicinity of the LNG Terminal Facilities is described below. Federal and state-listed terrestrial species or species of special concern that may be present along the Sendout Pipeline are described in Section 3.2.4. The bald eagle, which may occur throughout the entire Project area, is described in Section 3.2.4.

### 3.1.4.1 Marine Fish

#### 3.1.4.1.1 Atlantic Salmon

One protected species, the Atlantic salmon (*Salmo salar*), occurs within waterbodies crossed by the proposed Quoddy Bay LNG Project. The Gulf of Maine Distinct Population Segment (DPS) of Atlantic salmon was federally-listed as endangered under the Endangered Species Act (ESA) on November 17, 2000 (50 CFR 17.224). The DPS (see Figure 3.1.4-1) comprises all naturally reproducing remnant populations of Atlantic salmon from the Kennebec River downstream of the former Edwards Dam site located in Augusta north to the mouth of the St. Croix River. Also, the Penobscot River and its tributaries downstream from the Bangor Dam site are included in the DPS range. The following watersheds comprise the core of the DPS: Sheepscot River; Ducktrap River; Cove Brook; Narraguagus River; Pleasant River; Machias River; East Machias River; and Dennys River (65 FR 69459). At this time there are a number of streams in these watersheds that support populations of Atlantic salmon. While a portion of the range for this species includes some of the waterbodies crossed by the proposed Sendout Pipeline, for ease of presentation, Quoddy Bay is presenting all the information on this species in this section and in Appendix 3-J.

Several factors have led to listing of Atlantic salmon in the Gulf of Maine DPS. Factors include: critically low numbers of adult returns; continued low marine survival rates; excessive/unregulated water withdrawals; several factors that may affect quality of freshwater habitat; continuation of the Greenland

commercial fishery; threat of disease; increased possibility of predation due to low numbers of returning adults and increases in some predators; and current aquaculture practices (NMFS and USFWS, 2005).

In November 2005 a federal recovery plan, *Final Recovery Plan for the Gulf of Maine Distinct Population Segment of Atlantic Salmon,* was completed (NMFS and USFWS, 2005). Populations found in eight watersheds that are described above are the initial focus. Focus areas of action to aid in stopping and reversing downward population trends in the remnant eight wild populations include the following:

- Restoration and protection of freshwater and estuarine habitat;
- minimization of potential for takes in freshwater, estuarine, and marine fisheries;
- reduction of competition and predation on all life stages of Atlantic salmon;
- reduction of risks from commercial aquaculture operations;
- supplementation of wild populations with hatchery-reared DPS salmon;
- conservation of genetic integrity of the DPS;
- assessment of stock status of key life stages;
- promotion of salmon recovery by increasing government and public awareness; and,
- assessment of effectiveness of recovery actions and then revision as appropriate.

Although there have been continued efforts, the DPS adult returns still decline and populations remain at historic lows. Approximately 60 to 113 adults were reported to return to the eight listed river watersheds in 2004 (MASC, 2004; NMFS and USFWS, 2005).

#### 3.1.4.1.2 Shortnose Sturgeon (*Acipenser brevirostrum*)

Steve Crawford of the Passamaquoddy Tribe indicated that the shortnose sturgeon is a federally listed species with the potential of occurring in the Project area (Crawford 2006). However, Quoddy Bay consultation with the USFWS, NMFS and MDMR did not identify this species as a species of concern for the project. The shortnose sturgeon has been listed as endangered throughout its range by the ESA since March 1967. In December 1998 a federal recovery plan, *Final Recovery Plan for the Shortnose Sturgeon*, was completed (NMFS 1998a). This species was listed as a species of special concern in Canada in 1980. There is no recovery plan in Canada; however the Canadian Department of Fisheries and Oceans has a management team for this species (COSEWIC, 2005).

### 3.1.4.2 Marine Mammals

This section provides information on those marine mammals known to traverse or occasionally visit the waters in the proposed Project area that are listed as Endangered or Threatened under the ESA. The ESA provides for the conservation of species that are Endangered or Threatened throughout all or a significant portion of their range, and the conservation of the ecosystems on which they depend. The ESA requires federal agencies to consult with the USFWS/NMFS to ensure any action they authorize or permit, fund, or implement will not likely jeopardize the continued existence of a listed species or result in destruction or adverse modification of designated critical habitat.

Correspondence with NOAA Fisheries (Colosi, 2006) indicated that six species of whales listed as endangered under the ESA may be periodically present in the Project vicinity. A description of the distribution, biology, habitat use, and abundance in the proposed Project vicinity and existing threats to these populations is described below. Additional details on the occurrence of these species are provided in the Biological Evaluation (Appendix 3-J).

#### 3.1.4.3 Marine Reptiles

This section provides information on those sea turtles known to traverse or occasionally visit the waters in the proposed Project area that are listed as Endangered or Threatened under the ESA. The ESA provides for the conservation of species that are Endangered or Threatened throughout all or a significant portion of their range, and the conservation of the ecosystems on which they depend. The ESA requires federal agencies to consult with the USFWS/NMFS to ensure any action they authorize or permit, fund, or implement will not likely jeopardize the continued existence of a listed species or result in destruction or adverse modification of designated critical habitat. Correspondence with NOAA Fisheries (Colosi, 2006) indicated that one species of sea turtle listed as Endangered under the ESA the leatherback sea turtle, may be periodically present in the Project vicinity. A description of the distribution, biology, habitat use, and abundance in the proposed Project vicinity and existing threats to this species is presented below. Information on the loggerhead sea turtle, listed as Threatened under the ESA, is also included as this species may occur as north as Nova Scotia under certain conditions. Additional details on the occurrence of these species are provided in the Biological Evaluation (3-J). Three species of sea turtles (green sea turtle, hawksbill sea turtle, and Kemp's ridley sea turtle) that are listed as Endangered/Threatened under the ESA are not addressed here as they are extremely uncommon in the proposed Project area.

#### 3.1.4.4 Coastal and Marine Avifauna

Steve Crawford of the Passamaquoddy Tribe, provided information to Quoddy Bay in 2006 on resource concerns of the Passamaquoddy Tribe, that included the identification of several listed marine bird species as threatened or endangered under the federal or state of Maine, within the LNG Terminal facility vicinity. Species identified by Crawford that are listed as endangered included, roseate tern (federal), least tern, golden eagle, American pipit and peregrine falcon. The only avian species listed at the LNG terminal site that the USFWS identified are transient bald eagles, which are discussed in Section 3.2.4. The least tern is a very rare visitor as there is no appropriate habitat in the project area (Famous 2006), the golden eagle is a rare migrant and winter visitor only and the American pipit is listed as endangered as a breeder only and pipits in the project area are migrants (Famous, 2006). The peregrine falcon breeds in more interior portions of Maine, and would be infrequent in the project area.

Species listed as threatened included the bald eagle (federal), razorbill, Atlantic puffin, Harlequin duck and Arctic tern. Correspondence from the USFWS regarding the Project area did not include a similar list of species (USFWS, 2006). MDIFW (Tudor, 2000) lists the status and occurrence of shorebirds birds in the state which includes piping plover as endangered. However, there is no appropriate piping plover habitat in the project area (Famous, 2006), Quoddy Bay has included the species identified by Crawford but not by federal agencies, in our overall assessment of the Project within this Resource Report, but have not included them within the Biological Evaluation in 3-J.

##### 3.1.4.4.1 Federally Listed Species

###### 3.1.4.4.1.1 Roseate Tern (Endangered)

The roseate tern (*Sterna dougallii*) is a medium-sized marine tern weighing about 3.5 oz (100g), with a wingspan of 27.6 inches (70 cm). It is pale in color with a black-capped head, and an exceptionally long, deeply forked, white tail. The underside of an adult roseate tern is white with a tinge of pink that gives the bird its name. At birth, their legs and feet are black but as they mature they turn orange. The color of the bill changes over the course of the year. During the incubation period the bill develops an orange-red base. It then turns black around the time the young fledge (Cormons, 1976).

#### 3.1.4.4.2 State Listed Species

##### 3.1.4.4.2.1 Roseate Tern (Endangered)

(See Section 3.1.4.4.1.1 above for species description.)

##### 3.1.4.4.2.2 Piping plover (Endangered)

(See Section 3.1.4.4.1.2 above for species description.)

##### 3.1.4.4.2.3 Golden eagle (Endangered)

The golden eagle (*Aquila chyrsaetos*) is the largest predatory bird in North America, growing up to 70 to 84 cm long and with a wingspan of 185 to 220 cm wide (Kirschbaum and Ivory, 2002). Migrating and wintering birds probably come from Quebec and the Maritimes. Females tend to be larger then males, however they both look the same. They are mostly brown except for a golden tint on the head and back of the neck. The bill is black, while the feet, which are feathered all the way down to the toes, are yellow. Juveniles have a wide white band on the tail and light patches on the tip of the wings. They do not develop adult plumage until 4 to 6 years of age. Their average flying speed is 28-32 mph, however in a dive they can reach 200 mph (Kirschbaum and Ivory, 2002).

The golden eagle can be found in Eurasia, northern Africa and North America. The majority of the birds in North America are found in the western half of the continent, although there are small numbers in eastern Canada and the eastern United Sates. They can be found in a wide range of habitats including open country, prairies, the tundra, and mountainous regions. Some populations are sedentary, while others will migrate. The northern populations tend to migrate to regions that are farther south than the southern breeding populations (Natureserve, 2006b). For migratory populations, they arrive in breeding territories between February and mid-April. They build their nest on rock ledges or high in trees and they will re-use nests from previous years along with building alternative nests. A clutch of 1 to 4 eggs is laid between late March and early April. The female does the majority of incubation, however

both parents care for the hatchlings. Older eaglets will kill younger and weaker ones. Juveniles will not breed until they have attained adult plumage, which can be between 4 and 7 years of age. Breeding adults form monogamous relationships (Kirschbaum and Ivory, 2002).

They hunt for their food either soaring in the air or perched. Golden eagles may hunt in cooperative groups when food is plentiful. They mainly prey on small mammals such as rabbits and squirrels. They will also eat insects, snakes and carrion. If needed, they can fast for many days (Kirschbaum and Ivory, 2002).

This bird is protected under the Bald Eagle Protection Act of 1962, and for the most part populations are stable. However, in Maine, New Hampshire and New York, the golden eagle is recognized as an endangered species (Kirschbaum and Ivory, 2002). There has been no evidence of nesting golden eagles in Maine since 1999 (Todd, 2005). There have been increasing numbers spotted migrating along the Atlantic flyway. If potential habitats are protected and maintained, there is the possibility that golden eagles could return to Maine (Todd, 2005).

#### 3.1.4.4.2.4 Peregrine falcon (Endangered)

The Peregrine Falcon (*Falco peregrinus*) is found worldwide and is considered one of the most widespread terrestrial vertebrate species (Dewey and Potter, 2002). They have long pointed wings and a short tail, which are characteristic of all falcons. They have dark slate colored wings and back, while their breasts are pale and their faces are white with a black stripe on each cheek. Younger birds are darker and browner in color. Color also varies with location. Artic subspecies tend to be pale, while in the northwestern part of North America they are very dark (Natureserve, 2006c). They average between 41 to 51 cm long and their wingspan is 91 to 112 cm wide. Females are larger than males (Dewey and Potter, 2002).

Northern nesting populations migrate farther distances then maritime, mid-latitude or southern hemisphere populations. They will nest up in Alaska, Canada and other areas of northern North America. They arrive in northern breeding regions in late April to early May (Natureserve, 2006c). These areas include tundra, seacoast, moorlands forested regions and anyplace with rocky cliffs. Peregrine Falcons form monogamous relationships and will use the same nest in successive years. The female will lay her eggs around mid-May with 2 to 6 eggs in a clutch. If a clutch is lost due to bad weather, they will lay a new clutch at an alternative nest. Both parents will incubate the eggs and care for the young (Natureserve, 2006c). The young become completely independent at the onset of migration between late August and September down to areas of South America including Argentina and Chile. It takes three years for the young to reach physical and sexual maturity (Dewey and Potter, 2002).

The Peregrine Falcon will hunt mainly from a perch with a high vantage point and will only take flight once they have spotted their prey. They feed primarily on birds including pigeons, shorebirds, waterfowl, small songbirds and mourning doves. They will eat small reptiles and mammals. They will hunt up to several kilometers from their nesting sight (Dewey and Potter, 2002).

In recent history the Peregrine Falcon has faced some problems. Like the bald eagle, they were greatly effect by the use of DDT. Their population numbers decreased because the shells of their eggs were so thin that many of them broke when the mother went to incubate them. However, with the help of recovery programs their numbers of increased and in the 1990's they were taken off the federal list of endangered species, after having been on it since 1969 (Dewey and Potter, 2002). They are still listed as endangered in Maine, however that is only for the breeding population, which is unlikely to be found in the project area (MDIFW, 2006a).

**3.1.4.4.2.5 Least Tern (Endangered)**

The nesting distribution of the Least tern in Maine is in southern Maine and they are likely to only occur in very low numbers as migrants in the Passamaquoddy Bay area. The Least Tern (*Sterna antillarum*) is the smallest North American Tern, growing to lengths of only 21 to 24 cm long (Natureserve, 2006c). Adults are mostly gray on top and white underneath. They have a black cap on their head and black lines running from the top of the head to the base of the bill. During the breeding season they have a white forehead, which contrasts with the black crown covering the rest of the head (NYSDEC, 2006). The feet and bill are both yellowish in color.

## § 5.6 (d)(3)(vii)(A): Threatened and Endangered Species

***(A) A list of Federal- and state-listed, or proposed to be listed, threatened and endangered species known to be present in the project vicinity;***

**Federally and State Listed Wildlife and Plant Species that Potentially Occur within the Vicinity of the Quoddy Bay LNG Project**

| Species | Habitat Type in Proximity to Construction ROW | Federal Status | State Status |
|---|---|---|---|
| Golden Eagle *(Aquila chrysaetos)* | Potential migrant along Coast | None | Endangered |
| Peregrine Falcon *(Falco peregrinus)* | Terrestrial | None | Endangered (breeding population only) |
| Piping Plover *(Charadrius melodus)* | Shorebird | Threatened | Endangered |
| American Pipit *(Anthus rubescens)* | Rare migrant along Coast | None | Endangered (breeding population only) |
| **Plants** | | | |
| Showy Lady's-Slipper *(Cypripedium reginae)* | Near Sawtelle Heath | None | Special Concern Species |
| Swamp Fly-Honeysuckle *(Lonicera oblongifolia)* | Near Sawtelle Heath | None | Special Concern Species |
| Swamp Birch *(Betula pumila)* | (To be completed with field data Summer 2006) | None | Special Concern Species |
| Sparse-flowered sedge *(Carex tenuiflora)* | (To be completed with field data Summer 2006) | None | Special Concern Species |
| Bog Bedstraw *(Galium labradoricum)* | (To be completed with field data Summer 2006) | None | Special Concern Species |
| Vasey Rush *(Juncus vaseyi)* | (To be completed with field data Summer 2006) | None | Endangered |

**TABLE HMC-24: LISTED, THREATENED, AND ENDANGERED SPECIES**

§ 5.6 (d)(3)(vii)(B): Habitat Requirements

***(B) Identification of habitat requirements;***

N/A

§ 5.6 (d)(3)(vii)(C): Regulatory Plans

***(C) References to any known biological opinion, status reports, or recovery plan pertaining to a listed species;***

Comments from regulatory agencies appear in Appendix HMC-06 which include references to opinions, status reports, and recovery plans.

§ 5.6 (d)(3)(vii)(D): Critical Habitats

***(D) Extent and location of any federally designated critical habitat, or other habitat for listed species in the project area; and***

A plan for Atlantic salmon has been published which includes the protection of a federally designated habitat. As previously noted, Half-Moon Cove does not have a fresh water stream which would support the migratory cycle for Atlantic salmon.

§ 5.6 (d)(3)(vii)(E): Temporal and Spatial Distribution

***(E) Temporal and spatial distribution of the listed species within the project vicinity.***

Within § 5.6 (d)(4), a proposed studies list will be provided which will include the performance, if warranted, to conduct a temporal and spatial distribution investigation of listed species at the entrance to Half-Moon Cove.

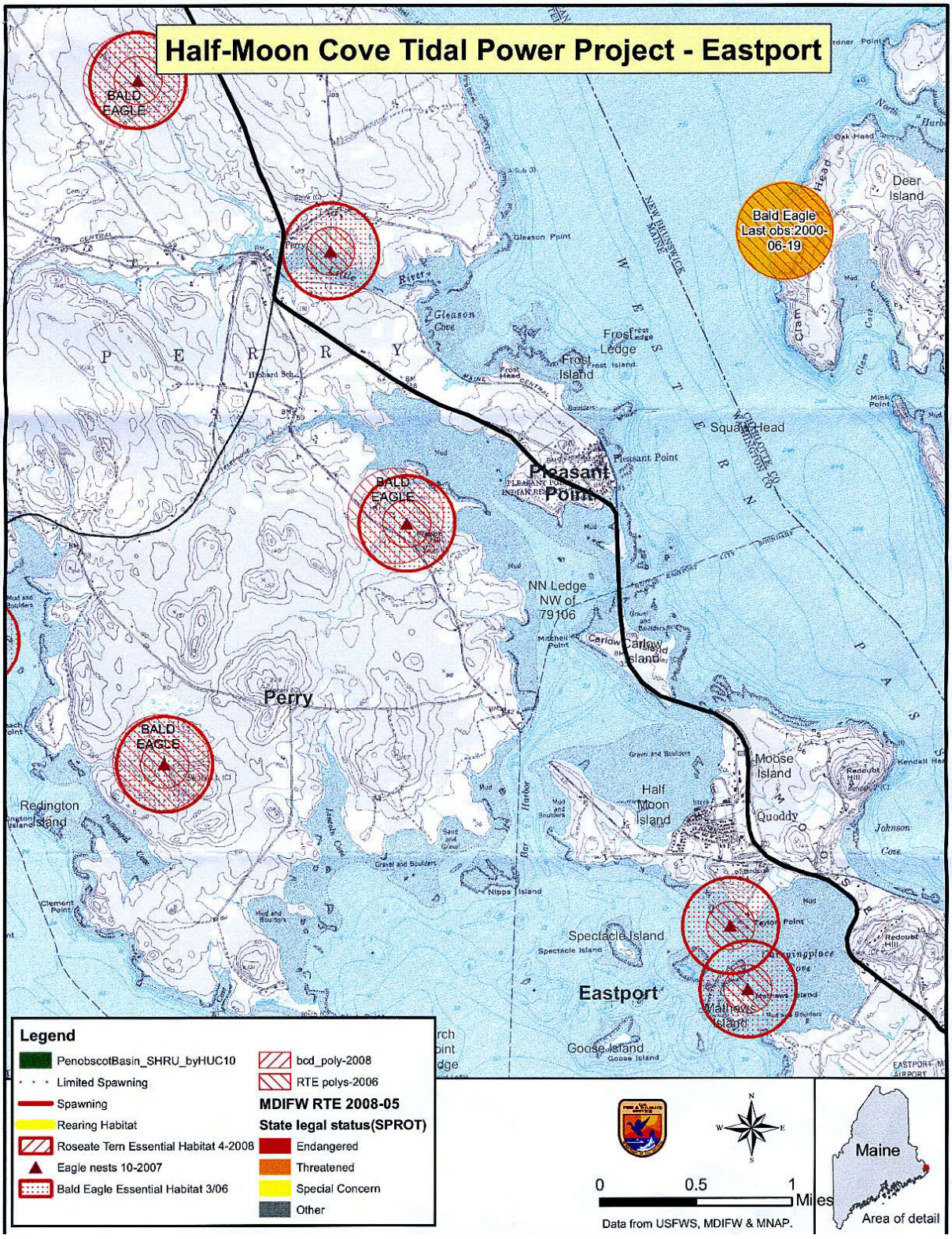


**FIGURE HMC – 25: MAINE IF&W MAP OF PROJECT AREA**