

# PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

## MERRIMACK RIVER PROJECT FERC PROJECT NO. 1893 SHORELINE MANAGEMENT PLAN

*MAY 2009*



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Of New Hampshire**

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***EXECUTIVE SUMMARY***

The Merrimack River Project (FERC Project No. 1893) is a federally licensed hydroelectric project owned and operated by Public Service Company of New Hampshire (PSNH). The Project is located on the Merrimack River in Merrimack and Hillsborough Counties, New Hampshire. On May 18, 2007 the Federal Energy Regulatory Commission (FERC) issued a new license (119 FERC ¶61,170) for the 29.9-megawatt (MW) Project. The license included a number of conditions, including license articles that PSNH must meet in order to maintain compliance with FERC regulations and license conditions. Article 407 of the project license requires PSNH to develop and file a Shoreline Management Plan (SMP) with FERC, prepared in consultation with agencies and interested parties.

FERC typically requires SMPs for projects with significant undeveloped segments of shoreline in order to assure management of shoreline use within the Project boundary. FERC's intent is that licensees develop a SMP that provides a comprehensive set of management guidelines and tools necessary to manage various shoreline uses within a Project boundary in a manner that affords protection while addressing both public access needs and project operations and maintenance.

PSNH developed a draft SMP, incorporating specific requirements identified in Article 407 for the protection of conservation lands and sensitive area such as essential eagle habitats, as well as accounting for public recreation access, federal, state, and municipal regulatory requirements and Project operations. In addition to hosting public meetings to discuss the SMP development process and contents, PSNH distributed the draft SMP to agencies and the general public for review March 2, 2009, requesting written comments be submitted within 45 days. PSNH addresses these comments as appropriate in this Final SMP which is being filed with FERC for review and approval.



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## ACRONYMS AND ABBREVIATIONS LIST

ACOE	U.S. Army Corps of Engineers
APE	Area of Potential Effects
BMP	Best Management Practice
Commission or FERC	Federal Energy Regulatory Commission
EA	Environmental Assessment
EMP	Bald Eagle Management Plan
FPA	Federal Power Act
GIS	Geographic information system
HPMP	Historic Properties Management Plan
Licensee	PSNH
msl	mean sea level
Mw	Megawatt
NHDES	New Hampshire Department of Environmental Services
NHDES Wetlands	New Hampshire Department of Environmental Services – Wetland Bureau
NHDES Shoreland	New Hampshire Department of Environmental Services – Shoreland Protection
NHDFG	New Hampshire Department of Fish and Game
NPS	Nonpoint source
OHW	Ordinary high water
PD	Project Datum
PM&E	Protection, mitigation and enhancement plans
RM	River mile, numbered from mouth to source
RTE	Rare, threatened, and endangered
SHPO	State Historic Preservation Office
SMC	Shoreline Management Classifications
SMP	Shoreline Management Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VMP	Vegetation Management Plan
USFWS	U.S. Fish and Wildlife Service

## STANDARD TERMS LIST

Allowed/Allowable	A use or activity that may occur on Project lands but for which a permit from PSNH and/or a governmental entity may be required (See permit)
Drawdown	The act of discharging of water to lower reservoir storage levels.
Flood plain	The relatively level area of land bordering a stream channel and inundated during moderate to severe floods.
FERC Form 80	FERC mechanism and form for filing periodic reviews of recreation use.
Integrated Use	Shoreline Management Classification - Shoreline areas with no known significant environmental/cultural resources or associated resource management goals that would preclude existing or future shoreline uses.
Ordinary high water	The spring high water line or the area that presents a debris or “bathtub” line along the shore.
Permit/Permitted	A form issued by PSNH or a jurisdictional agency, specifying an action or activity that may be undertaken by the holder of the permit. Permitted means that an activity or action has received a permit (see Allowed).
Project	The Merrimack River Project (FERC Project No. 1893)
Project boundary	The boundary defined in the license issued by FERC for the Project as needed for Project operations. For the Merrimack River Project, the boundary generally follows contour elevations or is identified by metes and bounds. In some cases, the boundary also encompasses additional lands to manage and protect resources ( <i>e.g.</i> , bald eagle forage habitat).
Project area	All land within the FERC Project boundary and under the jurisdiction of the FERC Project license (see Project lands).
Project lands	All land within the FERC Project boundary and under the jurisdiction of the FERC Project license (see Project area).
Project vicinity	The area extending to about five miles from the Project boundary.

Project works	All infrastructure such as dams, powerhouses, canals, etc., associated with the Project.
	As Shoreline Management Classification - Shoreline areas occupied by Project works such as dams, powerhouses, and other structures as well as any areas necessary to meet operational requirements.
Relicensing	The process of acquiring a new FERC license for an existing hydroelectric project upon expiration of the current FERC license.
Resource Management	Shoreline Management Classification - Shoreline areas designated for specific resource management, species protection and environmental purposes.
Shoreline	The area of interface between a reservoir and the land. Shoreline includes reservoir bed exposed during drawdowns.
Stakeholders	The public (both resident and non-resident), federal and state resource agencies, NGOs and other interested parties
Tailrace	Channel through which the powerhouse turbines discharges water.



# **PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**

## **MERRIMACK RIVER PROJECT FERC PROJECT NO. 1893**

### **SHORELINE MANAGEMENT PLAN**

#### ***1.0 INTRODUCTION***

The Merrimack River Project (FERC Project No. 1893) (Project) is an existing, federally licensed hydroelectric project, owned and operated by Public Service Company of New Hampshire (PSNH). The Merrimack River Project is comprised of three hydroelectric developments located on the Merrimack River in southern New Hampshire: Amoskeag, Hooksett and Garvins Falls. All three developments are located in developed areas within the towns of Bow, Pembroke, Allenstown, and Hooksett, and the cities of Manchester and Concord, New Hampshire. The Federal Energy Regulatory Commission (FERC) issued the original license for this Project on May 8, 1980. FERC issued a new license on May 18, 2007. Article 407 of the Project license requires PSNH to develop a Shoreline Management Plan (SMP). In accordance with the license requirements, this SMP for the Project includes the following:

- 1) a discussion of PSNH's purpose, goals and objectives for shoreline management
- 2) a discussion of key issues associated with shoreline management at the project and how PSNH addressed such in developing the plan.
- 3) an identification and description of land use along the project shoreline, including maps identifying the locations of land use types, a description of how these use classifications were defined and delineated, and descriptions of activities and uses that would be allowed within those classifications.
- 4) a description of allowed shoreline uses, the permit application process for these uses, and guidelines for applying for a construction permit within the project boundary.
- 5) measures to protect water, fish and wildlife during shoreline development
- 6) a description of management policies, monitoring programs and enforcement strategies.
- 7) provisions for periodically reviewing and updating the plan.
- 8) provisions for consultation with agencies and other interested entities in implementation of the plan.

- 9) provisions for coordination with the recreation plan
- 10) provisions for coordination with the Historic Properties Management Plan.
- 11) measures to protect the bald eagle and its habitat within the project boundary as specified in the license.
- 12) a report on the feasibility of protecting specified bald eagle habitat and Natural Heritage inventory sites

## 1.1 Project Description

The Merrimack River Project consists of three developments located along 21 miles of the Merrimack River. The project's developments from downstream to upstream are Amoskeag, Hooksett and Garvins Falls. All three developments are located in developed areas within the towns of Bow, Pembroke, Allentown, and Hooksett and the cities of Manchester and Concord, New Hampshire.

As currently licensed, the Amoskeag development consists of a 29-foot-high, 710-foot-long concrete gravity dam comprised of a low crest section with a 5.5-foot-high inflatable rubber dam in two sections and a high crest section with 3-foot-high flashboards. The dam impounds a 7-mile-long, 478-acre reservoir. The bypassed reach is approximately 2,000 feet long. The powerhouse contains three generating units with a total installed capacity of 16 MW. Fish passage facilities at the development include a pool and weir type fish ladder at the powerhouse, with an eel trap and a downstream fish passage system at the waste gate. The development also includes a 415-foot-long, 34.5-kilovolt (kV) transmission line.

The Hooksett development consists of a 14-foot-high dam comprised of a 340-foot-long stone masonry section with 2-foot-high flashboards connected to a 250-foot-long concrete section with 2-foot-high flashboards, and a 15-foot-by-20-foot taintor gate. The dam impounds a 5.5-mile-long, 405-acre reservoir. The bypassed reach is about 300 feet long. The powerhouse contains a single generating unit with an installed capacity of 1.6 MW. Fish passage facilities at the development include a downstream fish bypass system between the taintor gate and the powerhouse.

The Garvins Falls development consists of an 18-foot-high, 550-foot-long concrete and granite gravity dam comprised of a low crest section with 3-foot-high flashboards and a high crest section with 1.2-foot-high flashboards. The dam impounds an 8-mile-long, 640-acre reservoir. The bypassed reach is about 650 feet long. The development also includes: a 500-foot-long power canal with a 10-foot-wide waste gate; two powerhouses, each containing two generating units for a total installed capacity of 12.3 MW; and a louver-type fish guidance and downstream bypass system in the canal. The current license also identifies a 340-foot-long, 34.5-kV transmission line.

## 1.2 Regional Setting

The Merrimack River is the second largest river in New England, draining a total area of 5,014 square miles (sq mi) extending from the White Mountain region of New Hampshire to east-central Massachusetts. The river, which bisects the lower third of New Hampshire, begins at the confluence of the Pemigewasset and Winnepesaukee rivers in Franklin, New Hampshire. It flows for 116 miles before entering the Atlantic Ocean in Newburyport, Massachusetts (NHDES, 1997).

The Merrimack River Hydroelectric Project (Project) is located on the Merrimack River in central New Hampshire. The Project is located in the towns of Bow, Pembroke, Allenstown, and Hooksett and the cities of Concord and Manchester. Major tributaries in the Project vicinity include the Turkey River, which enters the Merrimack River from the west near Concord, the Soucook River (drainage area of 91.4 sq. mi.), which enters the Merrimack River from the east just below Garvins Falls Dam; and the Suncook River (drainage area of 256 sq. mi.), which enters the Merrimack River from the east above the Hooksett Dam. Other smaller tributaries between Garvins Falls and Amoskeag include: Bow Bog Brook, Meetinghouse Brook, Brown's Brook, Brickyard Brook, Peter's Brook, Dalton Brook, Messer Brook, Millstone Brook, and several unnamed brooks (PSNH, 2003). The Merrimack River from Garvins Falls and north is designated as the Upper Merrimack RSA 483, the Rivers Management & Protection Act.

Land use within the Merrimack Project boundary includes utility facilities, open water, recreational development and open space. PSNH has flowage rights over these river and shoreline lands to the level of pondage created by use of the dam flashboards.

These lands are primarily undeveloped farmland and open space. Uses on lands adjacent to the Project boundary include open space, residential, commercial, recreational, farmland, and industrial. Beginning at the most upstream portion of the Garvins Falls the project is bordered by agricultural, conservation and open space lands. Upon entering the city of Concord, the lands adjacent to the impoundment include commercial and industrial uses. The adjacent land use then returns to open space until reaching the Garvins Falls development. Immediately downstream of the Garvins Falls development the land use adjacent to the Hooksett impoundment is a combination of open space, recreational and residential lands. The land use adjacent to the Amoskeag impoundment is a mix of residential, recreational, and open space with more residential development than Garvins Falls or Hooksett. As the river flows into the city of Manchester, the adjacent land use is a mix of industrial, commercial and residential lands. Recreation sites are interspersed along the three impoundments.

## **2.0 *PURPOSE, GOALS AND OBJECTIVES OF THE SHORELINE MANAGEMENT PLAN***

The purpose of this Shoreline Management Plan (SMP) is to ensure that PSNH's actions conform to the Project license requirements and that these actions are consistent with the goals of protecting and enhancing scenic, recreational and other environmental values of the Project. FERC guidelines recommend that a SMP use existing resource information to designate Shoreline Management Classifications (SMC) and guidelines. These guidelines provide a framework for determining what proposed shoreline uses are most appropriate in relation to existing shoreline uses, environmental resources and operational requirements of a Project.

### **2.1 Shoreline Management Plan Goal and Objectives**

PSNH is committed to developing a comprehensive, forward looking SMP that coexists with applicable federal, state and local shoreline management requirements without unnecessary redundancy. The SMP will serve as a tool to assist in analyzing appropriate shoreline uses within the Project boundaries effectively, as well as provide a supportable and defensible means for shoreline management and permitting decisions.

The objectives of the Merrimack River SMP are to:

- Provide a means by which PSNH may manage its shoreline resources in compliance with its FERC license,
- Establish an equitable and reasonable balance between public and private uses of the shoreline,
- Protect and maintain the shoreline's natural and cultural resources,
- Establish Shoreline Management Classifications (SMC) and Allowable Uses to aid in the management of Project lands,
- Describe the SMP amendment and monitoring process,
- Provide a reference and/or linkage to other Project-related studies, management plans, and permitting regulations,
- Provide support and rationale for permitting processes and regulations within the Project boundaries,
- Alert property owners adjacent to the Project boundaries of regulatory requirements and State identified Best Management Practices (BMP) they may voluntarily implement on non-Project lands and which PSNH may require them to implement within the Project boundaries.

### 3.0 CONSULTATION

A primary requirement of FERC in licensee development of SMPs is to consult with specific federal and state agencies. FERC's publication, *Guidance for Shoreline Management Planning at Hydropower Projects* (April 2001), also emphasizes the importance of involving stakeholders such as the general public and local municipalities and organizations in the SMP development process. By doing so, licensees maximize the likelihood of creating a SMP that will successfully balance support local social and economic needs, afford protection of environmental resources and preserved public access and interests at the Project.

#### 3.1 Agency Consultation and Public Outreach

Consistent with FERC's recommendation for licensees to involve a broad range of stakeholders in the SMP development process, PSNH kicked off the process by holding a daytime and evening public meeting on March 17, 2008. PSNH noticed the meetings in the local newspaper and posted associated information and presentation materials on its website at <http://www.psnh.com/Energy/Water/ShorelineMgmt.asp>.

In addition to soliciting input from the general public, PSNH also met with representatives from all six communities along the Merrimack River abutting the Project (Manchester, Concord, Bow, Pembroke, Allentown, and Hookset) and considered local land use zoning classifications from these municipalities in development of shoreline management classifications and preparation of this SMP. PSNH has also consulted directly with the City of Concord who expressed interest in potential development restrictions along the shoreline within the City.

NHDES and the ACOE currently have a joint application process for permitting shoreline and in-water development in the State of New Hampshire. This process accounts for various criteria including: minimization of impacts on natural resources through limitations on habitat disturbance and vegetation removal, identifies certain restrictions by type of activity and potential mitigation measures, and defines allowable materials/sizes of structures such as docks and timing of construction activities. To a large extent, these criteria are consistent with the shoreline management objectives

intended by FERC license requirements and PSNH's SMP and discussed with agencies during various meetings held as identified below.

PSNH met with representatives from Wetlands Bureau and Shoreland Protection program on April 30 and June 3, 2008 to discuss the objectives of the SMP and its intent to mirror (where possible) state regulations within the SMP and associated permitting program and attended the New Hampshire Comprehensive Shoreland Protection Act Workshop in August 2008.

PSNH issued a draft SMP for public review on March 2, 2009, requesting written comments be submitted within 45 days. A public notice of the draft SMP was also run in local newspapers and forwarded to city and town officials and other parties. Written comments on the draft SMP were provided by:

<b>Entity</b>	<b>Date</b>
Manchester Water Works (MWW)	April 9, 2009
Edward Valade	April 14, 2009
NH Fish and Game Department	April 16, 2009
Upper Merrimack River Local Advisory Committee (UMRLAC)	April 16, 2009
City of Concord Conservation Commission	April 16, 2009
Town of Bow	April 17, 2009
US Fish and Wildlife Service	April 21, 2009
Concerned Citizens of Bow	April 30, 2009

Generally, comments provided are incorporated into this SMP, as appropriate. Several commentors request that the Project Boundary be identified on the classification maps, particularly with respect to parcels near Garvins Falls where the project boundary incorporates a buffer zone to protect bald eagle habitat. The classification maps have been updated to include the Project Boundary. Some comments were not incorporated into the plan as explained below:

### *Manchester Water Works*

MWW identifies a concern that the SMP does not specifically identify the PSNH/MWW Water Diversion Agreement Amendment of May 25, 2005. It appears that MWW is concerned that by the amendment not being referenced in the plan that its additional water supply withdrawals may not be allowable in the future. This is not the case. PSNH is simply identifying that certain uses may be permitted by PSNH without FERC approval, while other uses within the Project Boundary may require that PSNH seek FERC approval beforehand. The proposed MWW water withdrawal has been approved by FERC, subject to certain conditions, including agency consultation and the filing of the intake location and design with FERC for final approval at least six months prior to the planned start of construction. Final agency and FERC action will be based on the resources present in the intake and withdrawal area and, if and as applicable, any necessary conditions. When finally approved by FERC, the proposed MWW intake and water withdrawal will be an authorized use under the SMP.

### *Upper Merrimack River Local Advisory Committee*

The UMRAC requests a portage improvement directive be included in Section 4.3 of the SMP because the existing portage opportunities are essentially inadequate for providing connectivity between the segments upstream and downstream of Garvins falls. Such a directive has not been included because PSNH has performed an on-site evaluation, consulted with agencies, developed a plan and layout, and applied for permits to develop a new portage at Garvins Falls in 2009. PSNH believes development of the portage is consistent with the requirements of the FERC license and the spirit of UMRAC's comment. PSNH is also in the process of obtaining permits to make improvements to the existing portage take-out at the Amoskeag development.

The UMRAC also requests that the *Upper Merrimack Management and Implementation Plan* (September 2007, [www.merrimackriver.org](http://www.merrimackriver.org)) be referenced in the SMP and that the SMP goals and objectives be in alignment with those in the UMRAC plan. As part of the relicensing process, FERC and licensees must evaluate the consistency of a new license with federally approved comprehensive plans. While the



UMRLAC plan is not one identified by FERC as a federally approved plan, it nonetheless identifies objectives associated with management and protection of various resources, including but not limited to, water quality, riparian and wildlife habitat, archaeological and recreational resources. Although PSNH has not incorporated specific objectives of the plan in the SMP, PSNH believes that the intent of the SMP, developed in consultation with state and federal resource agencies, local interest groups, municipalities, and the general public, is consistent in its intent to implement shoreline management policies to protect and enhance such resources within the project boundary.

#### *Concerned Citizens of Bow*

The Concerned Citizens of Bow (Citizens) suggest that additional information be provided regarding specific local regulations for the various municipalities, under Section 7.7.3. For the purposes of the SMP, applicable regulations will primarily be floodplain related. PSNH acknowledges that other municipal ordinances may be applicable and may change over time. Therefore, Section 7.7.3 recommends that applicants contact their local Code Enforcement Officer for further information.

Citizens recommend additional detail be included in Section 4.0 regarding state listed mussel species and specific terrestrial RTE species. This information has not been added to the SMP because the shoreline classifications already incorporate locations of mussels and RTE species identified during relicensing. Known locations of species were incorporated into the SMP GIS mapping, resulting in adjacent shoreline segments being classified as Resource Management.

#### *U.S. Fish and Wildlife Service*

USFWS recommends eliminating the Integrated Use classification by use of grand-fathering and expanding the Resource Management classification. While PSNH understands the intent of this recommendation, the Resource Management classification is based upon specific resource data such as presence of RTE species and habitat and areas of cultural significance. The Integrated Use classification applies to areas without specific presence of such resources, therefore making it more feasible to allow shoreline

uses that meet PSNH, state, federal, and local permitting requirements.

PSNH met with representatives of NHDES Wetlands Bureau, NH Fish and Game, and USFWS on April 29, 2009, as well as representatives from NHDES Wetland Bureau and Shoreland Protection program on May 1, 2009. During the April 29<sup>th</sup> meeting, a number of comments were discussed that were also provided in written comments on the draft SMP, included in Appendix F. It was PSNH's intent to develop permitting standards under the SMP consistent with and in support of NHDES' review and approval of proposed shoreline development activities within the Project boundary. At the May 1<sup>st</sup> meeting, NHDES stated that because the project boundary is on the river side of the "bank full" line, shoreland regulations will not be applicable, therefore wetlands permitting, under RSA 482-A, will be the primary requirement for water dependent development regulated under the SMP. In addition, NHDES shoreland regulation continues to be subject to legislative action, and because shoreland management regulations are still undergoing review and revision, NHDES recommended that shoreland permitting considerations be removed from the SMP.

As a result of the recent meeting with NHDES, PSNH is currently working with NHDES to refine a process by which applications received by NHDES will be forwarded to PSNH for review prior to NHDES approval. Under the SMP, as discussed in Section 7.0, PSNH will also provide pre-application screening to potential applicants to evaluate the potential for allowance of proposed activities under the SMP and, will permit allowable activities contingent upon applicants obtaining all necessary federal, state, and local permits and approvals. The results of the pre-screening will be provided in written form, which applicants will include in their application to NHDES if it has not already been submitted, or as a supplement if their application has already been submitted to NHDES.

While no specific comments on the draft SMP were received from the State Historic Preservation Officer (SHPO), PSNH did develop a Historic Properties Management Plan (HPMP) in consultation with the SHPO. The final HPMP, approved by FERC on January 27, 2009, refers to the SMP as a mechanism to protect culturally sensitive areas within the Project Boundary. As such, PSNH has incorporated cultural

resource site location data into the GIS mapping of shoreline classifications. Any shoreline adjacent to culturally significant areas is classified as Resource Management.

#### **4.0 ENVIRONMENTAL, CULTURAL, AND RECREATIONAL RESOURCES**

The following is a general description of basin and Project resources. Its intent is to identify key issues relevant to the shoreline management planning process. Resource specific management plans developed by PSNH, the license application and the associated Environmental Assessment (EA) for the Project address some of the topics in more depth.

##### **4.1 Environmental Resources**

###### **4.1.1 Aquatic Resources**

Currently, the project area contains a widely varied, healthy fish population that supports a good resident sport fishery primarily centered on smallmouth and largemouth bass (Normandeau 1997). Various entities have conducted numerous fishery studies in the project area since the mid 1960's. Saunders (1993) provides a comprehensive review of the environmental studies conducted in the project area between 1967 and 1978 and as continued in 1995 (Normandeau 1997). After reviewing existing records, consulting agencies determined that there was no need to collect any additional fisheries data within the project boundaries for the Project's relicensing.

An anadromous fish restoration program has been ongoing since 1969, when Connecticut River American shad eggs were released into most reaches of the Merrimack River. Earlier efforts established a small run of adult shad that ascended the fishway at the Lawrence Hydroelectric Project during the 1970's and could negotiate the river as far as Pawtucket Dam in Lowell, MA, approximately 11 miles upstream of Lawrence. The fishway at Essex Dam was replaced with a fish lift in the early 1980's in an effort to improve fish passage at the site.

Historically, Atlantic salmon, shad and alewives had large runs that extended into the upper Merrimack River basin, but these runs were

extirpated from the upper Merrimack River as early as 1847 due to Essex Dam in Lawrence, MA. Restoration plans for the Merrimack River continue to focus on American shad, Atlantic salmon and alewife, but blueback herring and American eel have recently been included in the restoration efforts. Other anadromous fish that have benefited from these restoration efforts in recent years include sea lamprey and striped bass.

The Atlantic salmon restoration program that began in 1976 is ongoing, and agencies continue to capture sea-run adult salmon at the Essex Dam and transfer these fish to the Nashua National Fish Hatchery for egg production. In addition, sea-run kelts are maintained at the North Attleboro National Fish Hatchery to support stock development. These salmon fry are used to stock tributaries to the Merrimack River, including the Pemigewasset River and its East Branch, Souhegan River, Piscataquog River, Smith River, Baker River and Mad River. In addition to Atlantic salmon fry stocking, agencies annually stock approximately 50,000 one year old smolts into the Merrimack River.

#### 4.1.2 Terrestrial Resources

The Project area for the terrestrial, botanical and wildlife resource investigations undertaken during relicensing included the habitats within approximately one-quarter mile of each side of the riverbed. Within this study area, PSNH collected data at representative sites of each vegetation cover type that included typical vegetation species and observations of wildlife use. PSNH compiled a list from the available literature, of wildlife species whose known ranges and habitat needs overlap the study area. The list included 12 species of amphibians, 14 species of reptiles, 107 bird species, and 44 mammal species. PSNH also contacted state and Federal agencies and nongovernmental organizations (NGOs) during relicensing regarding information on critical areas, other site-specific data, or other special concerns for the study area.

Like any river of comparable size, the Merrimack River serves a valuable connective function in the landscape, maintaining on its floodplain and banks a continuous corridor of vegetation that persists because of its close proximity to the river. The larger flightless animals, e.g., deer and coyote, can pass from one preferred habitat to another without detection and the danger of road crossings; the smaller animals may actually breed in the corridor as well as use it for population recruitment and exchange.

The Bald eagle is present at the Project and uses Project lands and waters for perching, foraging and winter roosting. No known nesting areas have been documented within the Project boundary. The FERC EA concluded that relicensing the Project would not likely adversely affect the Bald eagle. FERC subsequently required PSNH include specific areas of known or potential habitat in the Project boundary and protect this habitat under the SMP. Specifically, PSNH developed a Bald eagle monitoring plan (Appendix C). PSNH also reviews all proposed shoreline uses regardless of their location to ascertain the potential for adverse effect to eagles and eagle habitat.

#### 4.2 Cultural Resources

In consultation with the New Hampshire SHPO and the National Park Service (NPS), PSNH commissioned archaeological and historical resource evaluations for the Merrimack Hydroelectric Project in support of relicensing. The Area of Potential Effects (APE) for the relicensing of the project encompasses all lands within the Project boundary as well as locations outside the project boundary where Project operation or project-related activities, such as recreational enhancements, could affect properties listed in or eligible for inclusion in the National Register of Historic Places (NRHP).

The APE with respect to historic and archaeological resources for the Merrimack River Hydroelectric Project corresponds to the area within the licensed Project boundary. Actual flowage rights extend only to the contour

associated with the elevation of the top of the wooden flashboards mounted on the dams' spillways at each of the three hydroelectric developments that comprise the Merrimack River Project. As the Project boundary is derived from flowage rights over abutting property owners' lands, these flowage rights were assumed (for purposes of the archaeological reconnaissance) to extend 10 meters (33 feet) inland of the shoreline as marked by the pond at the time of survey.

The APE contains no archaeological or historical resources listed in the NRHP. No archaeological sites within the APE have been formally determined eligible for inclusion in the NRHP. However, during SHPO's analysis of the Phase IA archaeological investigation they determined that structures at all three developments are eligible for inclusion in the National Register under Criteria A, C, and D for Amoskeag Development, Criteria C for Hooksett Development and Criteria C in the area of engineering for the Garvins Falls development.

#### 4.3 Recreation

PSNH reviewed the area within 50 miles of the project to determine the availability of recreational facilities and opportunities in the surrounding region. In addition to the opportunities provided at the Merrimack Project, recreationists in the southern New Hampshire region participate in bank and boat fishing, motor boating, jet skiing, canoeing, kayaking, hiking, hunting, camping, and wildlife viewing. During the winter season, ice fishing, snowmobiling, downhill and cross-country skiing, and snowshoeing are popular activities. There are over 300 known fishing areas, more than 320 miles in hiking trails, nearly 200 ponds and lakes, 386 miles of rivers and streams, and more than 120 boat launch sites in the region.

In addition to SMP development requirements under Article 407 of the FERC license for the Merrimack River Project, Article 408 requires PSNH to develop a Recreation Plan. PSNH developed the Recreation Plan in consultation with agencies and approved by FERC on June 9, 2008. The Recreation Plan includes provisions for improvements to existing Project recreation facilities and

monitoring of adequacy associated with FERC's Form 80 recreational monitoring program. Should future monitoring indicate that facilities are inadequate or new facilities are needed to accommodate public usage demand, PSNH will consider development of new facilities under the guidelines of this SMP to ensure such development is consistent with the goals of the SMP and permitting requirements.



## **5.0     *SHORELINE MANAGEMENT GUIDELINES FOR PROJECT LANDS***

Development of Shoreline Management Classifications (SMC) for the Merrimack River Project involved review and analysis of existing land uses, the environmental and cultural resources adjacent to and within the Project boundary, federal and state shoreline use and permitting requirements and municipal zoning classifications adjacent to and within the Project boundary. This effort included review of areas identified during the Project relicensing as supporting particularly sensitive or valuable environmental and cultural resources, and field verification of existing uses and structures. This analysis resulted in PSNH defining and applying distinct SMCs within the Project boundary. These Project specific classifications provide PSNH a basis for assessing future allowable uses and supporting appropriate and consistent permitting for such uses within the Project boundary.

Except for the areas around the dams and powerhouses and a parcel of land downstream of the Garvins Falls dam, the current Project boundary for the most part is comprised of contour lines that follow the reservoirs' shoreline: at Amoskeag, it is at 175.0 feet mean sea level (msl); at Hooksett, it is 189.0 feet msl; and at Garvins Falls, it is at 219.8 feet msl. Because the project boundary with rare exception hugs the shoreline, there are almost no project lands or buffer zones around the reservoirs. As PSNH does not own the majority of land immediately adjacent to the Project reservoirs and these lands are not within the FERC jurisdictional Project boundary, the scope of the SMCs and associated allowed uses are limited to the minimal amount of land located directly along the Merrimack River and included within the Project boundary.

### **5.1     Shoreline Management Classifications and Permitting of Shoreline Uses**

The following sections provide a description of each SMC, a discussion of allowable uses within each SMC and, if applicable, a summary of permitting process necessary. Table 5.1-1 provides a matrix of uses, identifies associated NHDES Wetland Bureau (WB) regulation fact sheets, indicates if PSNH allows particular uses within the specific SMCs.

### 5.1.1 Integrated Use

The shoreline areas which PSNH classifies as Integrated Use have no known significant environmental/cultural resources or associated resource management goals that would preclude existing or future shoreline uses. Accordingly, the Integrated Use classification acknowledges and accommodates the presence of existing and allows for potential future private, public and commercial shoreline uses. PSNH will manage these lands to accommodate reasonable demands for public and private uses within the guidelines of PSNH's SMP Permitting Program.

#### 5.1.1.1 Allowable Uses within Integrated Use Classification Areas

PSNH recognizes the following as allowable shoreline uses within the Integrated Use Classification; however, this does not mean that all uses listed below are appropriate for all shoreline areas within the classification locations. Under RSA 482-A, regulates dredging, filling, and construction in or on any bank, flat, marsh, wetland, or swamp in and adjacent to any waters of the state. NHDES governs activities within the Protected Shoreland under RSA 483-B, establishing minimum standards for various activities.

State wetland and shoreland permitting requirements may preclude certain uses if they have potential to adversely impact adjacent wetlands or significant wildlife habitats such as PSNH owned parcels designated for future habitat protection (*i.e.*, bald eagle roosting habitat). Additionally, NHDES has specific permitting regulations for the following uses, including design criteria for boat docks. These criteria will be a condition of PSNH permit issuance (see Section 7.0).

- seasonal and permanent docks and boat slips
- accessory structures (canopies and boat lifts)
- moorings, swim lines, and swim rafts connected to shoreline or docking (if not connected, are regulated by Department of Safety)
- shoreline boathouses
- beaches
- boat launches or ramps
- bank shoreline stabilization measures (including retaining walls, riprap and other “naturalized” shoreline stabilization measures)
- dredging
- water withdrawal structures
- water elevation gaging stations
- vegetation management (including shoreline planting and vegetation removal), subject to review for large trees that may serve as current or future nesting habitat for Bald eagles.
- stairways and walkways
- footpaths
- public recreation sites
- installation and maintenance wildlife support facilities
- ≤ 50 % replacement, repair, and maintenance (in kind) of existing uses and structures<sup>1</sup>

#### 5.1.1.2 Permitting of Uses within the Integrated Use Classification

All uses within the FERC Project boundary require review and approval by PSNH, including those that may consist of substantive vegetation removal that may adversely affect future potential Bald eagle habitat (*e.g.*, removal of vegetation for segments over 50 feet or large trees in the area of the proposed use). As part of implementing this SMP, PSNH will survey and photograph existing uses within the Integrated Use classifications.

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<sup>1</sup> If actions result in > 50% or not kind replacement, then a structure is considered a new facility and will require a new permit as opposed to an amendment to an existing permit.

PSNH will issue permits for uses in existence prior to the FERC's approval and PSNH's enactment of the SMP. As a condition of any such permit issuance, shoreline use owners who receive these permits must maintain such facilities in accordance with standards and requirements as discussed in Sections 7.0 and 8.0.

Any new shoreline structures, facilities and other uses proposed after SMP enactment must also meet PSNH's permitting standards and requirements.

Additionally, most shoreline uses will likely require review and approval by the local municipality, the NHDES Wetlands Bureau (under RSA 482-A) and Shoreline Protection (under RSA 483-B) and, in some instances the New Hampshire Fish and Game Department, New Hampshire Natural Heritage Bureau and New Hampshire Division of Historical Resources. Other federal agencies also may exercise jurisdiction over some activities such as the Army Corps of Engineers and FERC (as defined by the Merrimack River Project standard license articles). PSNH will not permit any shoreline use without proof of receipt of all other relevant permits. Sections 7.0 and 8.0 provide further details on PSNH's shoreline use review and permitting process.

#### 5.1.1.3 Case by Case Review for Bald Eagles

As Section 4.1.2 discusses and Appendix C details, PSNH is committed to protecting Bald eagle habitat; however, eagle use of the lands and habitat within the Project boundary is somewhat transient and can change over time. Accordingly, not all allowable uses will necessarily have an adverse effect on this species. Some potential future Bald eagle habitat areas exist within the Integrated Use classification. While these areas are not specifically and publicly identified, PSNH has an extensive mapping database that

it uses internally when reviewing shoreline use proposals. As such, any proposed activity that includes tree removal in these areas will be reviewed closely.

PSNH will review any permit application to determine first, if proposed activities within the Project boundary are within active nesting and/or roosting areas and to assess the proposed timing of construction and the type of shoreline use to determine if the proposed activity or shoreline use is appropriate and in keeping with its Bald Eagle Habitat Protection Plan. PSNH will not allow any uses which have the potential to adversely effect Bald eagles or their habitat. Should a proposed use be located in a Bald eagle habitat area, PSNH will ensure that USFWS, NHFG, and the Audubon Society are appropriately consulted by the applicant, to determine if the proposed timing or type of shoreline use has potential to adversely affect eagles and what measures may be necessary.

#### 5.1.2 Resource Management

Shoreline areas PSNH classifies as ‘resource management’ are designated as such for specific resource management, species protection and environmental purposes. The objective of the Resource Management classification is to protect habitat, cultural significance, character, and aesthetic value of particular locations. These areas may include palustrine wetlands<sup>2</sup>, steep slopes<sup>3</sup>, sensitive aquatic or terrestrial habitat, and islands. This classification also includes shoreline areas with significant Rare Threatened or Endangered (RTE) species habitat or known presence of

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<sup>2</sup> For the purpose of the SMP, PSNH uses UFSWS National Wetland Inventory data to identify wetland areas. This identification does not preclude the right or responsibility of adjacent property owners to further delineate wetlands in support of permit applications for facilities or uses within the Project boundary.

<sup>3</sup> For the purposes of the SMP, PSNH uses NHDES Wetlands Bureau restrictions on constructing structures on slopes greater than 25%.

communities of RTE species<sup>4</sup>.

#### 5.1.2.1 Allowable Uses within the Resource Management Classification

Generally, other than site-specific maintenance and resource protection activities (e.g. erosion control) or uses administered and authorized by PSNH or other resource agencies, PSNH allows no permanent shoreline uses within this classification regardless of other state or federal approvals for these uses. PSNH will only consider new use(s) within the Resource Management classification if they reduce existing impacts to resources (e.g. use of mooring buoys instead of docks), have minimal effect on environmental/cultural resources and meet the criteria outlined below. Actions specifically required under the FERC license and 401 Water Quality Certification occurring within the Resource Management classification (*e.g.* providing public recreation access) are automatically allowed. They will be completed in accordance with applicable requirements.

#### 5.1.2.2 Permitting Uses within the Resource Management Classification

The majority of the shoreline classified as Resource Management applies to the project boundary, which generally follows the normal high water line of the impoundments. As such, PSNH is required by FERC to regulate development from the project boundary into the water. Lands on the inland side of the project boundary are not the responsibility of PSNH to regulate, with the exception of limited areas where the project boundary runs inland to encompass parcels designated for the protection of Bald Eagle habitat.

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<sup>4</sup> based upon review of NH Natural Heritage Bureau species mapping and some field verification.

Within segments of the Project boundary classified as Resource Management, PSNH will generally not permit new shoreline structures or other uses, identified in Table 5.1-1, in these areas. PSNH will only consider any new structures, facilities other uses proposed within the Resource Management classification by adjacent property owners or other entities if the proponent of this activity can:

- 1) Obtain all required permits from NHDES and ACOE and any other jurisdictional entity,
- 2) Meet the FERC license conditions for the Project, and
- 3) Provide specific protection, mitigation and/or environmental enhancements (PM&E measures) as may be prescribed by PSNH or through any consultation with jurisdictional agencies or municipal zoning entities.

In the event a shoreline use proponent wishes to pursue proposing shoreline development activities within the Resource Protection classification, they must request a waiver from PSNH. Section 8.0 describes this process.

#### 5.1.3 Project Works

PSNH must maintain strict control over infrastructure required for Project operations and to which, due to safety, security, operational or other constraints, public access may be legitimately restricted. PSNH must also provide for the establishment of facilities, structures and sites required by the FERC license. PSNH includes shoreline areas occupied by Project works such as dams, powerhouses and other structures, as well as any areas necessary to meet any requirements of the FERC license, such as recreational sites and fish passage facilities, within this classification.

#### 5.1.3.1 Allowable Uses within the Project Works Classification

PSNH will not allow any uses other than those associated with Project operation or fulfillment of FERC license requirements within the Project Works classification.



**Table 5.1-1. Allowable Uses by Shoreline Classification**

	Classified By DES Permit Regulations Under RSA 482-A <sup>5</sup>	Integrated Use	Resource Management	Project Works
<b>Private Uses and Facilities</b>				
Single Family docks <sup>6</sup>	YES (WB-12)	YES	NO	NO
Structures to accommodate private/residential water withdrawal <sup>11</sup>	YES (WD-DWGB-1-17)	YES	YES	NO
Accessory Structures (seasonal canopies, lifts for boats and personal watercraft)	YES (WB-12)	YES	NO	NO
Boathouses	YES (WB-12)	YES	NO	NO
<b>Commercial/Municipal Uses and Facilities</b>				
Multi-boat slips		YES	NO	NO
Structures to accommodate municipal/agricultural water withdrawal & discharges <sup>7</sup>	YES (WD-DWGB-1-17 and 401 Water Quality Certification)	YES	Only as administered/ approved by PSNH	NO
Public recreation sites		YES	Only as administered/ approved by PSNH	
<b>General Uses and Facilities</b>				
Boat launches or ramps	YES (WB-12)	YES	Only as administered/approved by PSNH	As needed for FERC compliance or project operations
Retaining walls <sup>8</sup>	YES (WB-11)	YES	NO	
Shoreline/bank stabilization measures	YES (WB-11)	YES	Only natural or bio control measures allowed	
Beaches and replenishment of sand	YES (WB-12)	YES	NO	NO
Moorings, swim rafts, and swim lines	No – regulated by Department of Safety (WB-12)	YES	YES	As needed for project operations
Dredging <sup>9</sup>	YES (WB-12)	YES	NO	
Breakwaters	Only allowed on Lake Winnepesaukee (WB- 12)	NO	NO	NO
Water elevation gaging stations		YES	YES	YES
Vegetation removal <sup>10</sup>	YES (WB-13)	YES	Only as administered	As needed for project

<sup>5</sup> WB designations identify NHDES Wetlands Bureau Fact Sheets. **Note that these fact sheets may change over time and applicants should contact NHDES Wetland Bureau for current permit requirements under RSA 482-A.**

<sup>6</sup> Single family docks are allowed if location is not conducive to a multi-user facility to service all residents of a particular area.

<sup>7</sup> PSNH does not have the authority to authorize water withdrawals.

<sup>8</sup> Retaining walls are not the preferred method of erosion control or bank stabilization. PSNH will only authorize these types of structures when no other measures are feasible.

<sup>9</sup> All dredging activities must be reviewed and approved by FERC as well as the Army Corps of Engineers and the NHDES.

<sup>10</sup> While PSNH does not regulate the removal or planting of vegetation in Integrated Use classification, other county and state regulatory agencies may. Anyone considering these activities should verify the proposed action is allowable under state law.

	Classified By DES Permit Regulations Under RSA 482-A <sup>5</sup>	Integrated Use	Resource Management	Project Works
Vegetation plantings <sup>8</sup>	YES (WB-13)	YES	Approved by PSNH	operations
Stairways & walkways/footpaths	See Accessory Structures	YES	Only as administered/ approved by PSNH	
Fish/wildlife support activities & devices	YES (WB-17)	YES	YES	YES
≤ 50% In kind repair or replacement of <b>Existing</b> use within existing footprint	YES (WB-12)	YES, if structure has existing permit		

## 5.2 Prohibited Activities

*Within the Project boundary*, the SMP generally prohibits the following activities:

- removal of any vegetation within the Resource Management classification not in accordance with NHDES Comprehensive Shoreland Protection Act guidelines or permit conditions. An exception to this restriction may be relevant for the removal of invasive species, which if identified, may require PSNH and NHDES to determine an appropriate plan for removal and replacement with native species as recommended by NHDES under RSA 487.
- application of any herbicides or pesticides for control or removal of vegetation,
- application of fertilizer,
- brush-hogging, scraping, or mechanical removal of vegetation, or any unpermitted ground disturbance,
- restaurants
- habitable structures (permanent or temporary, enclosed living structures over or on docks and piers, etc.)
- amusement or water parks

## 5.3 Shoreline Management Classification Mapping

PSNH's Geographic Information System (GIS) incorporates information from agency and PSNH resource databases as well as the local knowledge from the public and stakeholders to serve as the basis for the classification mapping. In some instances, PSNH verified this information with onsite observations to determine the most appropriate and pertinent locations to apply classifications within the Project.

In classifying the shoreline areas, a few areas were mapped as exceptions to the general definition of a classification. As an example, a specific location may have one or more characteristics that fall under the Resource Management definition; however, existing uses within that specific location preclude application of the Resource Management classification. In other areas, the shoreline may present characteristics such as an open, undeveloped shoreline that would typically be classified as Resource Management, but consideration of commercial, municipal, or residential development on private lands adjacent to the Project boundary led to classifying the area as Integrated

Use. The mapping as presented in this SMP identifies a total of shoreline miles for each classification as identified in Table 5.1-2.

**Table 5.3-1. Allowable Uses by Shoreline Classification**

<b>Shoreline Management Classification</b>	<b>Distance (ft)</b>	<b>Distance (mi)</b>	<b>Percent</b>
Integrated	45125	8.6	13%
Project Works	13558	2.6	4%
Resource Management	285603	54.1	83%

PSNH's GIS mapping system represents as accurately as possible the classifications of various areas; however errors of scale or detail may affect a specific area. In the event there is a question or concern about the classification applicable to a specific parcel, proponents of shoreline activities may check with PSNH staff to verify the correct classification.

In addition to classification data, PSNH also surveyed the Project impoundments to identify any existing shoreline structures including seasonal and permanent docks and retaining walls. Photo documentation and descriptive information were incorporated into the GIS to serve as a baseline inventory and basis for issuing permits for existing structures. Permitting requirements for future modification of existing structures are further discussed under Section 7.4, *Grand-fathered Improvements*.

## **6.0     *BEST MANAGEMENT PRACTICES***

Best Management Practices (BMPs) are on-site actions implemented by an individual or group to lessen potential impacts to a particular resource resulting from the direct or indirect use of that resource. For example, if a property owner chooses to cut vegetation from his/her property to improve access or to improve the view-shed, the landowner may choose to conduct selective clearings and/or to replant low-lying vegetation that will help maintain the bank stabilization; the selective clearing and/or replanting would be considered a best management practice because it is an on-site action that works to lessen the potential impacts of the specific use.

NHDES permitting requirements under the state Comprehensive Shoreland Protection Act (CSPA) governs activities allowed within the "protected shoreland", which is defined as all land located within 250 feet of the reference line of public waters. The first 150 feet from the reference line is classified as the "woodland buffer". This buffer protects water quality by limiting erosion and sedimentation and preventing nutrient and chemical pollution, and preserves the natural canopy and fish and wildlife habitat, with certain activities being restricted without a permit from NHDES. The CSPA also defines allowable activities within the "waterfront buffer", defined as protected shorelands within 50 feet of the reference line of public waters. NHDES intends this buffer to provide protection of the quality of public waters while allowing landowner some discretion with relative to water access, safety, viewscape maintenance, and lot design.

Because PSNH shoreline management goals and the objectives of the State CSPA go hand-in-hand, PSNH will generally approve proposed activities within the project boundary for which NHDES will issue a permit, within PSNH's Integrated Use shoreline classification.

### **6.1     Waterfront Buffer**

The CSPA stipulates prohibited activities and limitations within the 50 foot waterfront buffer, including:

- No application of chemicals, including fertilizers unless allowed by Revised Statutes Annotated (RSA) or by special permit obtained from the Division of Pesticide Control
- Rocks, stumps and associated root systems may not be removed without specific NHDES approval
- Natural ground cover may not be removed unless allowed by RSA stipulations for foot paths, no cutting of trees that have grown over 3 feet in height unless specifically approved by NHDES
- Within 50 foot by 50 foot segments of the buffer, quantities of allowable tree removal are defined by NHDES scaling system, which may include removal of dead/unsafe trees and new plantings
- Lots developed prior to April 1, 2008 may maintain but not enlarge cleared areas
- Normal trimming, pruning and thinning limited to bottom ½ of trees allowed to maintain views
- Provisions for temporary 12 foot wide paths, with replanting requirements, and permanent 6 foot wide paths to the water, configures so as not to concentrate erosion or runoff.

## 6.2 Natural Woodland Buffer

In addition to the waterfront buffer regulations, the CSPA stipulates the following prohibited activities and limitations within the 150 foot natural woodland buffer:

- Specific percentages of unaltered vegetation depending on lot size
- Photographic documentation the natural woodland buffer associated with any permitted activities
- Removal of dead, diseased, or unsafe vegetation removal is allowed if it poses a hazard to existing structures or risk of personal injury
- Preservation of trees or native species planting that are beneficial to wildlife is encouraged

## 6.3 Protected Shoreland

As identified above, NHDES requires landowners to file permit applications for any construction, excavation or filling activities. In most cases, the Project boundary, within which PSNH must regulate activities in compliance with the FERC license does not extend to the 250 foot protected shoreland zone. However, any construction,

excavation, filling, clearing, mowing, pruning, planting or landscaping with vegetation or other materials within Project boundary will require prior approval by PSNH for segments of the shoreline designated as Integrated Use. Because all these activities also require a permit and approval from NHDES, it is likely that PSNH will permit any activity if the landowner has previously obtained a permit from NHDES for areas within the Integrated Use classification. PSNH does reserve the right to deny a permit if the activity is inconsistent with FERC license requirements (*e.g.*, interferes with PSNH's ability to operate the Project) or has the potential to adversely effect specific species such as the Bald eagle.

For any activity proposed in the Resource Protection or Project Works classifications, PSNH will not likely issue a permit for a proposed activity even if permitted by NHDES. The Resource Protection classification is intended to preserve the shoreline where lands have been designated for conservation, critical habitat, or are historically significant, and the shoreline areas designated as Project Works are integral to the day-to-day operation of the project.

In cases where PSNH denies a permit, an explanation why the proposed activity cannot be permitted under the requirements of the Project FERC license will be provided. If appropriate, PSNH may recommend modifications to the proposed activity that may allow the activity to be permitted. Special circumstances such as the presence of wetlands may result in a requirement for mitigation or alternative vegetation management practices. Removal of vegetation within the Resource Management classification is not allowed unless prescribed by a resource agency for habitat enhancement.

#### 6.4 Other BMP Considerations

In order to minimize the effects of any shoreline development activities, shoreline use proponents must implement measures to control erosion and sedimentation, which can adversely affect water quality and habitat. Any proposed activity must include measures to prevent erosion and sedimentation during construction, such as use of silt fencing or temporary diversion, and measures to prevent long term erosion through preservation of existing vegetation or re-vegetation of disturbed areas. NHDES provides

guidance for these measures in their Fact Sheet titled, *Erosion Control for Construction in the Protected Shoreland Buffer Zone*, available at <http://www.des.state.nh.us/sp.htm>. NHDES also provides a list of native plant species acceptable for re-vegetation planting at <http://www.des.state.nh.us/cspa/download.htm>. Any application for permit submitted to PSNH must describe erosion and sedimentation control measures that will be implemented for the proposed activity.



## **7.0     *SHORELINE USE EVALUATION AND PERMITTING PROCESS***

### **7.1     PSNH's Responsibilities and Mandates as a Licensee**

As the recipient of a federal license, PSNH is responsible for supervision and control of the uses and occupancies for which it grants permission. Additionally FERC requires PSNH to monitor compliance with any permits or conveyances they issue. Through the issuance of the Project licenses, FERC delegated PSNH the authority to issue permits for the non-Project use of Project lands for construction, replacement and modification of all shoreline facilities and activities within the Project boundary. Table 7.1-1 identifies uses allowed within the project boundary under Article 410 of the Project license and to what degree PSNH must seek approval from FERC before allowing such uses.

**Table 7.1-1. Use and Occupancy Requirement Under FERC License Article 410**

<b>Allowable Uses Without Prior Approval by FERC</b>	<b>Allowable Uses Requiring Approval by FERC<sup>11</sup></b>
Landscape Plantings	Construction of new bridges and roads (with state and federal agency approval)
Single family, non-commercial piers, landings, docks or similar structures that can accommodate no more than 10 watercraft at a time	Sewer or effluent lines that discharge into Project waters (with state and federal agency approval)
Embankments, bulkheads, retaining walls or similar structures for to protect against shoreline erosion <sup>12</sup>	Other pipelines that cross Project lands and waters but do not discharge into Project waters
Food plots and wildlife enhancements	Non-project overhead transmission lines that require construction of support structures within the Project boundary (with state and federal agency approval)
Replacement, expansion, realignment, or maintenance of bridges and roads (with state and federal agency approval)	Private or public marinas that can accommodate no more than 10 water craft at a time and are located a minimum of ½ mile from other public or private marinas
Storm drains and water mains	Construction of new recreation facilities, consistent with recreational resources identified in the approved Exhibit E for relicensing
Sewers that do not discharge into Project waters	Other uses if 1) the land conveyed is five acres or less, 2) all land conveyed is at least 75 horizontal feet from Project waters at normal surface elevation and 3) no more than 50 total acres of Project lands are conveyed requiring FERC approval in a given calendar year
Minor access roads	
Telephone, gas, and electric utility distribution lines	
Non-project overhead transmission lines that do not require construction of support structures within the Project boundary	
Submarine, overhead or underground telephone distribution cables or electrical transmission lines of 69 KV or less	
Water intake or pumping facilities that do not extract more than 1 MGD from a project impoundment	

<sup>11</sup> PSNH must submit notification for FERC approval no less than 60 days prior to conveyance. Unless FERC, within 45 days from filing the notification, requires an application be filed for the conveyance, PSNH may convey the intended interest at the end of the 60 day period.

<sup>12</sup> Prior to approving proposed construction of bulkheads or retaining walls, PSNH must inspect the site, consider whether vegetative plantings or riprap would be adequate erosion control alternatives, and determine that the proposed construction is necessary and would not change the basic contour of the shoreline.

## 7.2 Pre-Application Screening

Through the use of the Shoreline Management Classification (SMC) maps provided in Appendix A and review of the allowable use matrix included in Section 5.0, adjacent property owners and developers will be able to locate their property and determine which management classifications occur within the Project boundary at that location. They then may review the allowable uses that pertain to this management classification, general development standards which are applicable to the site of their proposed project, reference applicable permit applications and identify supporting documentation necessary for their permit applications.

In order to avoid having a shoreline use proponent undertake local, state, and federal permitting for proposed activities that PSNH cannot allow under its Project license or the SMP, PSNH strongly recommends anyone considering shoreline development within the Project boundary meet with PSNH staff. After applicants familiarize themselves with the SMP, they should contact PSNH and request a Pre-application Screening. At the ensuing meeting, PSNH will review proposed shoreline uses to determine if, as proposed, the activity or facility is allowable and permissible by PSNH. Staff will also answer questions about the application process and assist applicants in identifying permits that they must obtain from NHDES, the ACOE, other state agencies and/or municipalities.

PSNH will issue conditional permits for proposed shoreline development contingent upon an applicant acquiring necessary permits from applicable agencies and municipalities. Because the geographic scope of the SMP (generally the immediate shoreline within the Project boundary) falls primarily within the zone regulated by the NHDES Wetland Bureau under RSA 482-A (from “bank full” to the water), all activities within the scope of the SMP are likely to require a permit from NHDES. Generally PSNH will permit shoreline development within the Project boundary if NHDES has issued a permit for the activity in areas designated as Integrated Use, although PSNH does reserve the right to deny a permit if the activity is inconsistent with the Project FERC license as describe in Section 5.0 (See Table 5.1-1).

PSNH generally will not issue a permit for proposed activities within the project boundary Resource Management classification. The purpose of this classification is to preserve and protect critical habitat and known populations of RTE and Heritage Bureau species, and preserve conservation lands and historically significant areas. The pre-screening consultation with PSNH will allow landowners to determine the potential for obtaining a permit prior to undertaking the state and federal permitting process.

PSNH will generally not allow any proposed activities within the Project Works classification due to the need for those project lands for operations and maintenance of the Project.

### 7.3 Permitting Process

As Section 7.2 discusses, PSNH encourages potential permit applicants to contact it to schedule a pre-screening meeting. PSNH will provide written pre-screening results to applicants that should be included in any application filed with NHDES so the agency knows that PSNH has been consulted. The written results will identify whether an application must formally apply for a permit/license from PSNH upon issuance of a permit from NHDES. Should the applicant pursue a permit from PSNH, applicants must submit a written permit application to PSNH identifying the entity requesting a permit, a primary contact and whether they represent a residential, commercial/industrial or municipal applicant. The application must include drawings providing location, description of the activity including design and dimensions, and a description of materials and type of construction. The request must include discussion and method/design of erosion and sedimentation control measures for both during and post-construction. Documentation verifying that all state, federal, and municipal permits have been obtained also must be provided. Approved applications will result in PSNH issuing conditional permits contingent upon Applicants obtaining all necessary state, federal, and municipal permits.

### 7.3.1 Evaluation of Proposed Shoreline Uses

PSNH will evaluate proposed modifications to existing structures/facilities or proposed new activities based on:

- Consistency with existing governmental jurisdictional regulations and classification designation
- The relative extent of the public and/or private need for the proposed facility and activity
- The practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed facility or activity
- The extent and permanence of the beneficial and/or detrimental effects which the proposed facility or activity is likely to have on the uses which the area is suited

The decision whether to grant or deny a permit is based on review of the probable impact of the proposed activity and its intended use. Benefits and detriments are balanced by considering effects on items such as:

- navigation
- safety
- conservation
- aesthetics
- economics
- general environmental concerns
- wetlands
- fish and wildlife values
- flood hazards
- shore erosion and accretion
- recreation
- water supply and conservation
- water quality
- energy needs
- needs and welfare of the people
- consideration of private ownership

#### 7.4 Grand-fathered Shoreline Uses

As part of implementing the SMP, PSNH undertook a reservoir impoundment survey to identify all existing shoreline uses. PSNH used this survey to establish the basis for the allowed uses identified in the SMP. Some uses, constructed or placed during the term of the previous Project license have not been permitted by PSNH and/or do not meet the standards and requirements include in this SMP. PSNH recognizes that the owners of these uses could not have anticipated a change in policies regarding shoreline uses and acknowledges that its permitting system was not clearly communicated during the term of the previous license. Accordingly, PSNH will consider these structures and uses as “grandfathered” and does not intend to require current uses be removed or brought up to the standards established within the SMP immediately. Using the results of the survey of existing uses discussed in Section 5.1.1.2, PSNH will issue permits for the existing facilities found during the survey.

Triggers that will require uses be brought into compliance with current policies include when owners/users of grandfathered structures propose major repairs involving more than 50 percent of the structure, as determined by PSNH. In the future, new uses must meet PSNH’s permitting standards and requirements. If fire, natural disasters or other means destroy or damage a previously permitted structure, the replacement structure must comply with the most current requirements and guidelines as established by this SMP.

#### 7.5 Appeal/Waiver Process

Any new shoreline use or activity proposed by adjacent property owners or other entities that are not consistent with the classification or do not meet the allowed use criteria for that classification may apply to PSNH for a waiver from the established criteria. In some instances an adjacent property owner may believe PSNH applied a shoreline management classification in error. If this is the case, the adjacent property owner or use proponent may request PSNH review the mapping and site specific conditions to determine if the classification is appropriate. In considering waiver requests PSNH considers positive and negative impacts to the following:

- Characteristics, zoning and prevailing permitted uses within a half-mile radius of the proposed activity.
- Shoreline topography and geometry.
- Environmental impacts
- Safety, navigation and flood control requirements.
- Potential economic development and tourism benefits.
- Recreational use impacts
- Potential for proposed use to minimize or mitigate adverse resource impacts
- Applicable State and Federal regulations

If a proponent of an inconsistent use wishes to petition PSNH for a waiver they must:

- justify the shoreline management classification at their proposed use location is incorrect, or
- justify the proposed use,
- provide compelling evidence of hardship,
- justify the project location as the only feasible alternative, and
- provide specific protection, mitigation and/or environmental enhancements (PM&E measures) as may be prescribed by PSNH or through any consultation with jurisdictional agencies or the appropriate coordinating committee.

PSNH reserves final authority in determining whether or not to approve an inconsistent use or amend shoreline management classifications. Once a waiver application is reviewed and a final determination made, absent an appeal to the FERC there is no further option for the use proponent other than modifying the proposed use.

## 7.6 General Property Inspections

PSNH reserves the right to inspect facilities and uses within the Project boundaries and/or on PSNH property periodically both during and after construction or implementation. Should inspection of particular facilities and uses reveal inconsistencies or violations of established management policies and/or permitting standards, PSNH will notify facility owners/users in writing of such violation and advise them of the violation,

suggested means to correct the violation, and actions to be taken by PSNH should the violation persist.

## 7.7 Other Agency Regulatory Review and Permitting

All uses within the FERC project boundaries require review and approval by PSNH as specified herein. Additionally, most uses adjacent to or within the Merrimack river, associated wetlands and/or the floodplain will likely require review and approval by the local municipality, and the Shoreland Protection and Wetlands Bureau of the New Hampshire Department of Environmental Services. Other federal agencies also may exercise jurisdiction over some activities such as the Army Corps of Engineers and FERC (as defined by the Merrimack Projects standard license articles). As indicated in Section 7.2, PSNH will issue conditional permits for any shoreline use contingent upon Applicant's receipt of all other relevant permits.

### 7.7.1 Army Corps of Engineers

Under Section 404 of the Clean Water Act, Congress directs the Army Corps of Engineers (ACOE) to regulate the discharge of dredged and fill material into all waters of the United States, including their adjacent wetlands. The intent of this law is to protect the nation's waters from the indiscriminate discharge of material capable of causing pollution and to restore and maintain their chemical, physical and biological integrity. Typical activities requiring permits include, but are not limited to, boat ramps, docks, bulkheads/retaining walls, ditches, dams, dikes, weirs, dredging, filling, intake structures, outfall structures, riprap, and similar activities. Penalties for violations can range from being required to remove the structures and material to substantial fines or even imprisonment.

Typically NHDES reviews all application submitted to them and makes a determination on whether the proposed use triggers the need for additional review by the ACOE. The Merrimack River is considered Essential Fish Habitat (EFH) for Atlantic salmon, therefore any application submitted to NHDES may require further review and approval by the ACOE through their coordinated permit



procedure. In 2007, the New England District of the ACOE issued a this Programmatic General Permit (PGP) that expedites review of minimal impact work in coastal and inland waters and wetlands within the State of New Hampshire and to limit duplication between NHDES management of such activities and ACOE's Regulatory program. Under certain conditions, the PGP eliminates the need to apply for separate approval from the ACOE for most minor, non-controversial work if it has been authorized by the NHDES Wetlands Bureau. Specific details regarding this joint permitting process are available at [www.nae.usace.army.mil/reg/NHPGPpermit.PDF](http://www.nae.usace.army.mil/reg/NHPGPpermit.PDF).

#### 7.7.2 New Hampshire Department of Environmental Services

The New Hampshire Department of Environmental Services (NHDES) exercises jurisdiction under several state and federal authorities. NHDES is responsible for certifying that construction activities meet Section 401 of the Clean Water Act. This "water quality certification" is needed when a federal approval (ACOE, FERC, etc.) is required for a project. NHDES also exercises jurisdiction for shoreline development through the DES Shoreland Program (RSA 483-B), and development in wetlands (including docks) through the Wetlands Bureau (RSA 482-A).

For further information, shoreline use proponents may contact the NHDES at:

New Hampshire Department of Environmental Services  
Wetlands Bureau  
PO Box 95  
Concord NH 03302  
(603) 271-2147  
[wetmail@des.state.nh.us](mailto:wetmail@des.state.nh.us)

#### 7.7.3 Local Government

Municipal zoning may regulate development within a specific distance from the ordinary high water mark, or within the 100-year floodplain of designated shorelines. Most development within the Project boundaries will fall

under the local and State jurisdiction. Accordingly any new proposed uses require review and approval by local planning boards (potentially including advisory review from conservation commissions) with subsequent review by the NHDES.

Local government also reviews shoreline uses in frequently flooded areas and may require application for Floodplain Management Permits and/or compliance with local critical areas ordinances. For further information shoreline use proponents should contact their local municipal Code Enforcement Officer.

The Upper Merrimack River (from Garvins Falls and north) is part of the state's designated rivers program under RSA 483, the Rivers Management & Protection Act. In association with this designation the UMRAC actively participates in resource protection activities for this section of the Merrimack River including the NHDES Wetland Bureau permitting process.

#### 7.7.4 State Historic Preservation Office (SHPO)

Generally major shoreline ground disturbance activities require review and comment from the State Historic Preservation Officer (SHPO). NHDES requires this information be provided at the time of application for relevant wetland or shoreland permits. PSNH staff will review all proposed new uses regardless of the shoreline management classification in which they occur to identify potential impacts to known or potentially sensitive archaeological and historical properties. Early identification of proposed activities, as well as identification of activities requiring authorization and those that do not, will be key to minimizing problems for project proponents. PSNH will review the permit application and supporting information to ensure that the adjacent property owner or new user provide the appropriate information. PSNH will assist use proponents in determining whether the proposed action requires consultation with the SHPO. PSNH, as a requirement or condition permit issuance, requires any entity that is proposing ground-disturbing activities within the Project boundary to undertake the appropriate level of investigation, monitoring, and any subsequent mitigation

found to be required for reasonable protection of Historic Properties within the Project boundary.

## **8.0     *ENFORCEMENT OF THE SHORELINE MANAGEMENT PLAN***

The Project license, and more specifically the Standard land use article, within the license, directs PSNH to oversee shoreline activities and take action to prevent unauthorized uses of Project shorelines. FERC has historically required some form of oversight of Project lands by licensees. In 1980 FERC formalized the use of a Standard Land Use Article (Order Amending License for the Brazos River Authority's Morris Sheppard Project 11 FERC ¶61,162) which gives licensees broader and more inclusive oversight of uses and occupancies on Project lands. This article is also included as Article 410 in the 2007 FERC license order. As referenced in other portions of this document, all proposed shoreline uses, which affect Project land and waters, are subject to approval of PSNH. PSNH retains the authority, pursuant to the land use article, to review all uses and occupancies through its permitting criteria and standards to ensure they are consistent.

PSNH designed the SMP to compliment and support these criteria and standards, as set forth in its permitting guidelines. All shoreline uses allowed by PSNH as described herein are subject to inspection by PSNH staff. Should an inspection reveal that these uses deviate from the approved plans, PSNH will require that the property owner or project proponent correct the discrepancy or remove the encroachment from the Project boundary. In the event that a use is undertaken without prior PSNH approval, the same restrictions and requirements will apply. Any alterations, additions, relocation or other physical changes to existing use must be approved by PSNH prior to such changes. In an effort to ensure the goals and objectives of the SMP as well as all license requirements are adhered to, PSNH reserves the right to revoke any permits. In extreme cases of non-conformance of established rules and requirements, PSNH will take all legal measures necessary to require removal of the use, as well as restoration of the property to its original condition if these conditions are not followed.

## **9.0     *MONITORING/AMENDMENT PROCESS***

In developing this SMP, PSNH has committed to the long-term stewardship of the Project's lands, water and environmental, recreational and socioeconomic values. PSNH formulated this SMP in anticipation of potential growth and new uses within and adjacent to the Project boundaries. PSNH recognizes that that non-project uses change over time. While these changes in use may occur slowly, they may result in patterns that necessitate reassessment of the SMP. It should be noted that changes to the SMP in the future will be limited and will be evaluated thoroughly to ensure that the purpose of the SMP, to manage shoreline development to protect resources within the project boundary, is not compromised.

To assure the SMP continues to remain relevant, PSNH intends to review and, if necessary, to amend the SMP periodically, with continued input from interested parties. Due to the anticipated moderate to slow pace at which conditions around the reservoirs will change over the foreseeable future, PSNH coordinates review of the SMP with submittal of recreation reports to FERC, which occur every six years from the date of license issuances. The six year time frame allows PSNH to assess new issues that may arise as a result of development around the reservoirs as well as assess the need for any changes to the plan as it relates to public access and recreational use. A shorter time frame would not let any meaningful cumulative affects be analyzed; however, PSNH is always willing to listen to concerned stakeholders if unforeseeable circumstances warrant a review of particular sections of the SMP. This review process will provide the means for the permitting program to change, if necessary, or for PSNH to adopt or replace additional BMPs as their effectiveness is tested. Sections 9.2 and 9.3 discuss the distinction between, minor modification to the SMP which PSNH will undertake internally and major modification which may require reopening the SMP through amendment process. Any components of the SMP, include appendices, can be updated as necessary by filing with FERC and posting on PSNH SMP web site.

### **9.1     Overall Land Use Monitoring**

PSNH's primary means of tracking and monitoring shoreline uses is through its shoreline permitting programs. As a result of the assignment of land classification system and associated mapping, and PSNH's requirement that any owners of existing, uses be issued a fact permit, PSNH will monitor new applications (and existing permits)

through a GIS. With the data already in place for the land classifications, PSNH will use the global positioning satellite (GPS) coordinates of any new permit applications to analyze the exact location on a particular reservoir and any permit stipulations that may be required as a result of the land classification. PSNH will review the number of permits it has processed on each land classification type on each reservoir annually to assess overall shoreline use and the effectiveness of the SMP in managing these uses.

PSNH will contact local and regional planning staff periodically for updates on regional development adjacent to the reservoirs that may be relevant to the SMP.

## 9.2 Triggers for Minor Modification

If the annual review of issued permits, discussions with the local and regional planning staff or other information reveals increased demand for shoreline use in a particular location, changes in development patterns, or other land use issues that may be relevant to the SMP, PSNH will note the location as an area of concern and monitor developments more closely. As long as resource and use criteria established by this SMP do not change, PSNH will not seek additional review by stakeholders or FERC.

PSNH also anticipates the potential need to make site specific changes in the location of shoreline management classifications to reflect on the ground conditions that were not anticipated or observed when it developed the classification mapping. This will most likely involve minor relocation of classification boundaries or site specific waivers dependent on field observations. Unless a shoreline management classification is entirely removed or modified to an extent that requires remapping the entire shoreline at a particular location, PSNH does not intend to amend the SMP. During the review of Project mapping minor changes such as new development within existing subdivision adjacent to the Lakes, or changes in recreational uses will be noted in the PSNH land use database and on the Project maps but are not anticipated to warrant amendments to the SMP. These changes will be captured in PSNH's GIS system. New maps will be posted to the PSNH SMP web page every six years.

### 9.3 Triggers for SMP Amendment

Major changes within the Project boundary may change goals and assumptions presented in this plan. PSNH established the following criteria that may indicate the need to address amendment of the plan. While such changes may not result in changes to the plan, they are reasonable triggers to facilitate review.

*New Residential Uses or Pressure:* These may include large, new housing developments, infrastructure improvements that could lead to new development, or socioeconomic changes affecting the influx, and out-migration of populations.

*Major Commercial Upgrades or New Uses:* The Project reservoirs are currently not experiencing ongoing commercial growth. This could possibly change over the lifetime of the SMP and would likely necessitate reconsideration of PSNH's management policies. PSNH will continue to monitor this type of shoreline use and compile data that may be useful in the event an SMP amendment becomes necessary during the review period.

*Large Parcel Land Sales/Major Changes in Land Ownership:* In the event that major parcels of previously undeveloped land change ownership, with an identifiable purchaser and new intent for use, PSNH may review both the shoreline management classification designation as well as the allowed uses within the area to determine if amendments to the SMP are warranted.

*Changes within the Management Classifications:* The shoreline management classifications identified in this SMP are based on environmental and aesthetic resources. Some of these classifications are dynamic by nature. It is possible that within the review period new concerns such as nuisance aquatic vegetation or wetland habitat may change, therefore necessitating the re-evaluation and possible amendment of both management classification as well as the allowed uses within them. PSNH also acknowledges the possibility that mapping of the classifications may require site specific modification. It will, during its six year review of the SMP compare the original mapping with corrected mapping which has occurred in the interim between SMP implementation and review.

period to assess any changes in classification locations over time. If this change has resulted in modification of at least 50% reclassification of a particular shoreline classification area, PSNH will consider the need to amend the SMP.

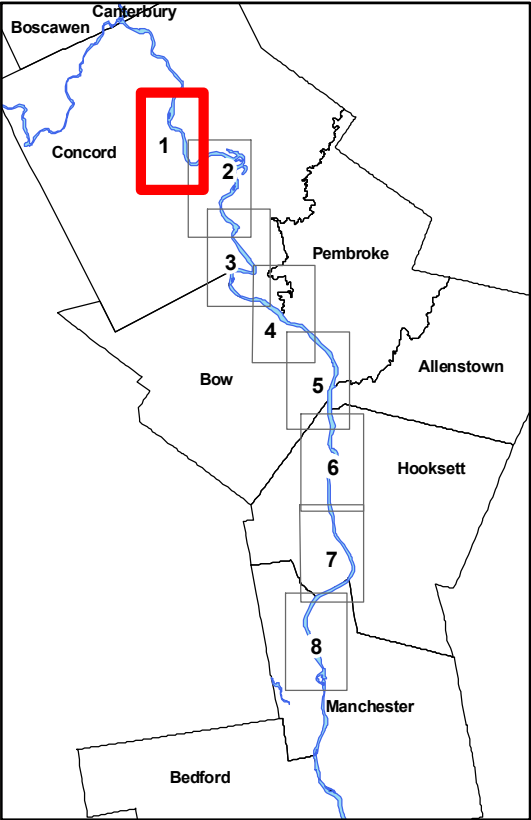
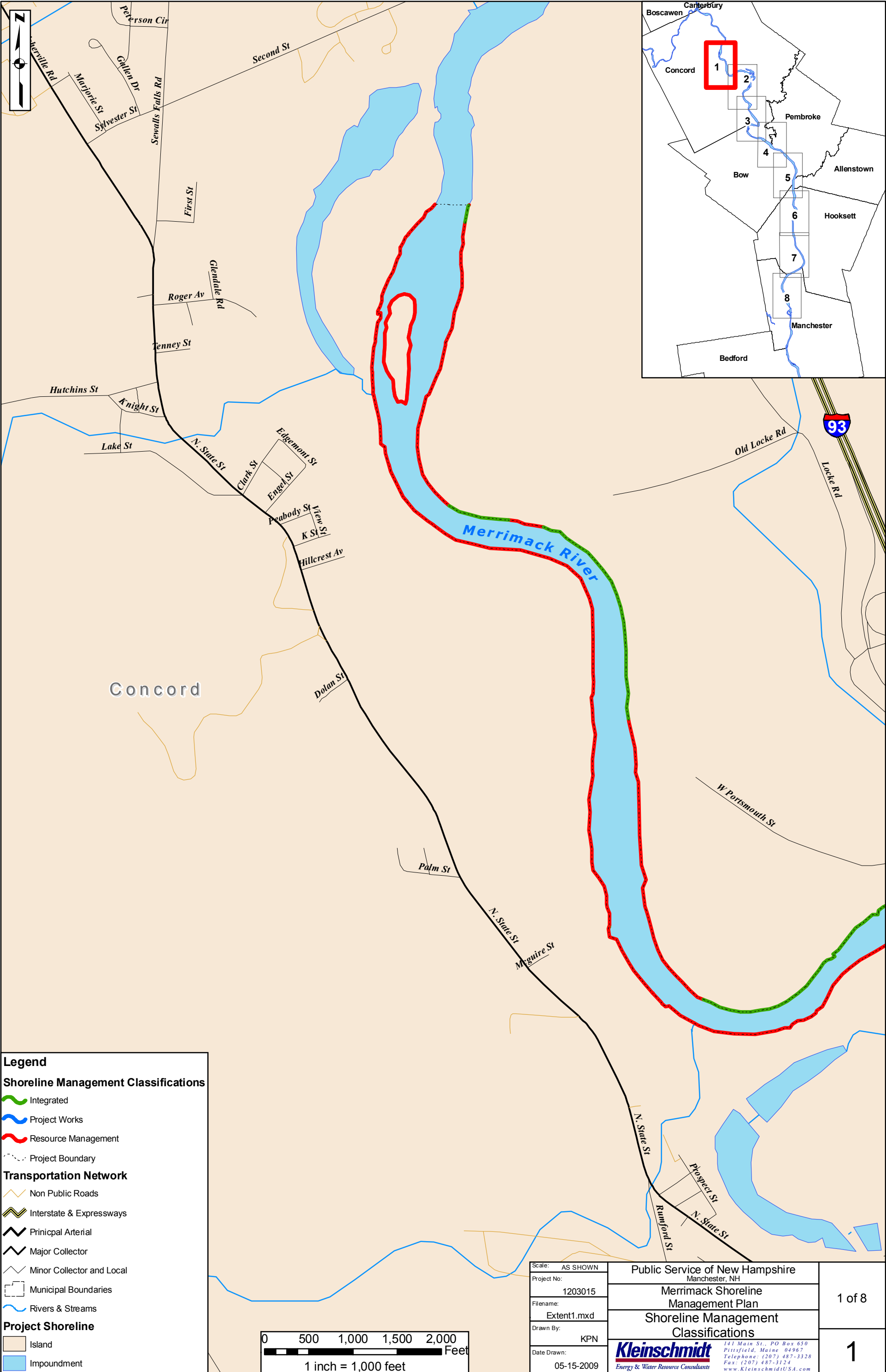
#### 9.4 Amendment Process

As the previous sections detailed, Project and resource drawings will be updated on an ongoing basis by PSNH to assure they are reflective of field conditions. As long as resource and use criteria as established by the SMP do not change, PSNH will not seek additional review by FERC. If it appears there may be major impacts on the SMP's effectiveness, PSNH will initiate agency and stakeholder review of SMP language and/or assessment of the overall document. PSNH will invite a group of reviewers to include personnel from various state and federal agencies, and other interested stakeholders to assess what changes, if any, need to be made to the SMP. Specifically, at a minimum, USFWS, NHFG, and NHDES (both Wetlands Bureau and River Management and Protection sections) If it is determined that an amendment to the plan is necessary, PSNH will notify FERC of its intentions, provide draft language for review by the Commission, and implement such changes as approved. These changes may include revised shoreline management classification definitions, permitting process changes or establishing other allowed uses not currently in the SMP. PSNH will continue to coordinate and consult with resource agencies, coordinating committee members, and county planning staff throughout the SMP revision or redrafting process and will supply a consultation records to FERC with any SMP amendment application.



## APPENDIX A

### SHORELINE MANAGEMENT CLASSIFICATION MAPS



**Legend**

**Shoreline Management Classifications**

Integrated

Project Works

Resource Management

Project Boundary

**Transportation Network**

Non Public Roads

Interstate & Expressways

Principal Arterial

Major Collector

Minor Collector and Local

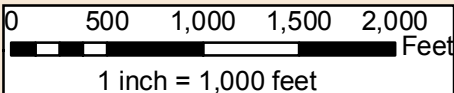
Municipal Boundaries

Rivers & Streams

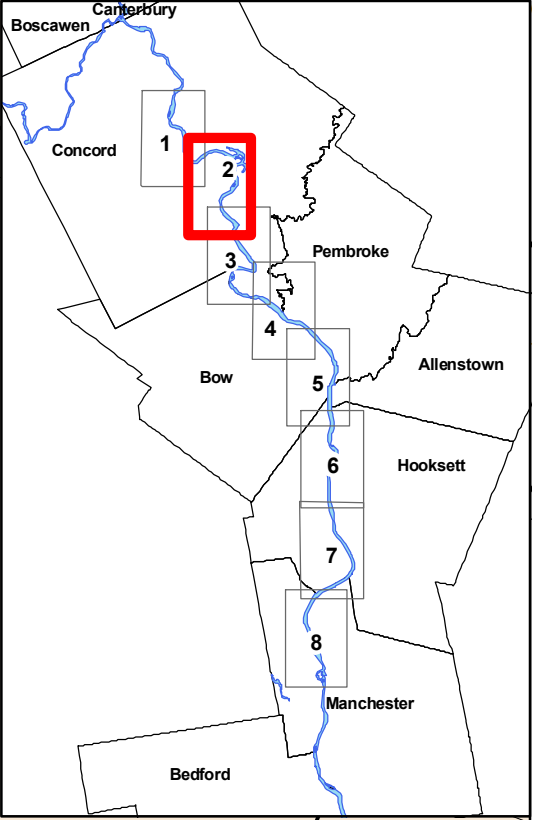
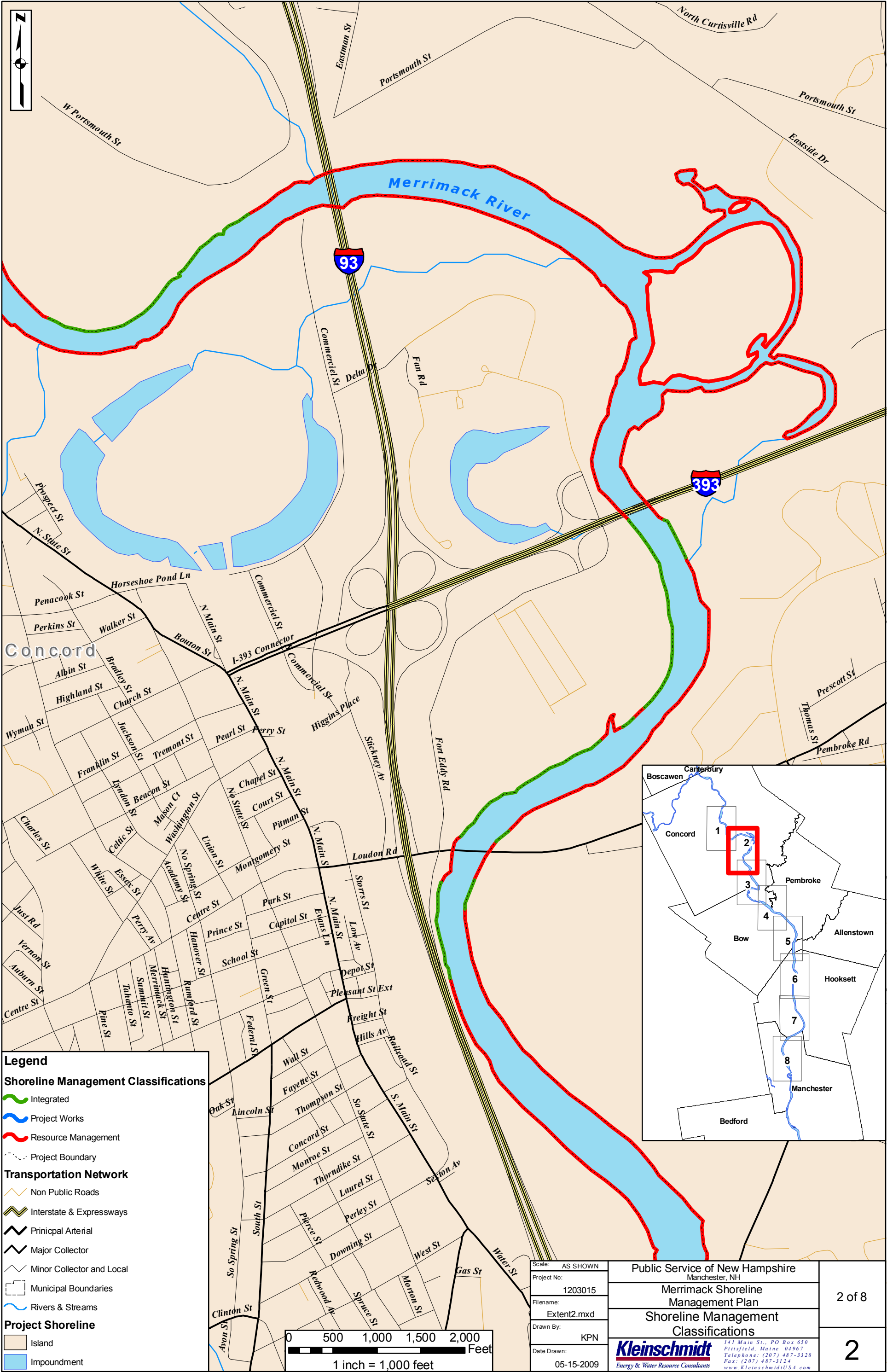
**Project Shoreline**

Island

Impoundment



Scale: AS SHOWN	Public Service of New Hampshire Manchester, NH	
Project No: 1203015	Merrimack Shoreline Management Plan	
Filename: Extent1.mxd	Shoreline Management Classifications	
Drawn By: KPN	 Energy & Water Resource Consultants 141 Main St., PO Box 650 Pittsfield, Maine 04967 Telephone: (207) 487-3328 Fax: (207) 487-3124 www.KleinschmidtUSA.com	
Date Drawn: 05-15-2009		
		1 of 8
		1



**Legend**

**Shoreline Management Classifications**

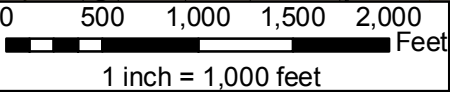
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- Project Works
- Resource Management
- Project Boundary

**Transportation Network**

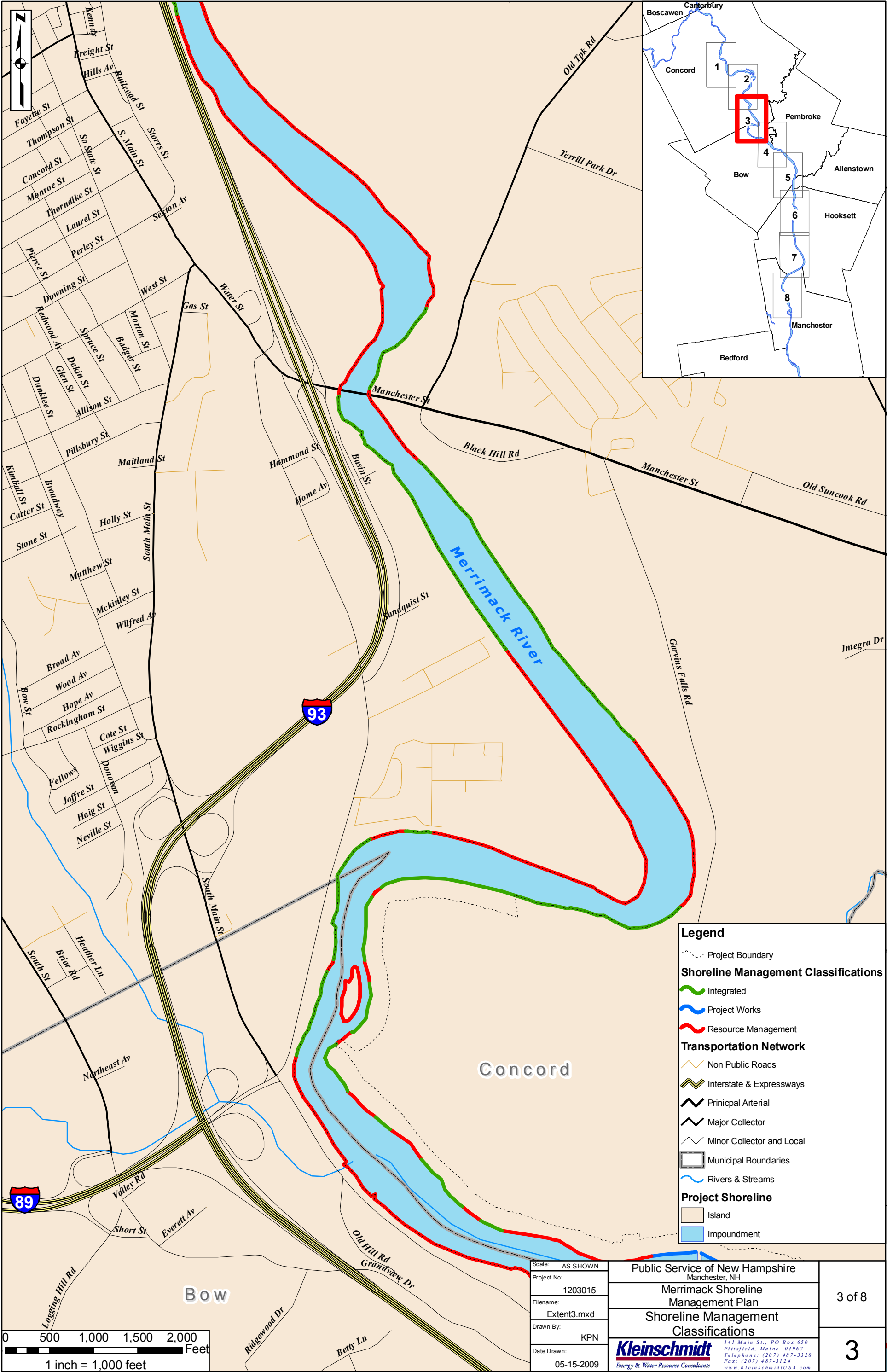
- Non Public Roads
- Interstate & Expressways
- Principal Arterial
- Major Collector
- Minor Collector and Local
- Municipal Boundaries
- Rivers & Streams

**Project Shoreline**

- Island
- Impoundment



Scale: AS SHOWN	Public Service of New Hampshire Manchester, NH		2 of 8
Project No: 1203015	Merrimack Shoreline Management Plan		
Filename: Extent2.mxd	Shoreline Management Classifications		2
Drawn By: KPN	<b>Kleinschmidt</b> Energy & Water Resource Consultants		
Date Drawn: 05-15-2009	141 Main St., PO Box 650 Pittsfield, Maine 04967 Telephone: (207) 487-3328 Fax: (207) 487-3124 www.KleinschmidtUSA.com		



**Legend**

Project Boundary

**Shoreline Management Classifications**

Integrated

Project Works

Resource Management

**Transportation Network**

Non Public Roads

Interstate & Expressways

Principal Arterial

Major Collector

Minor Collector and Local

Municipal Boundaries

Rivers & Streams

**Project Shoreline**

Island

Impoundment

Scale:	AS SHOWN
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Drawn By:	KPN
Date Drawn:	05-15-2009

Public Service of New Hampshire  
Manchester, NH

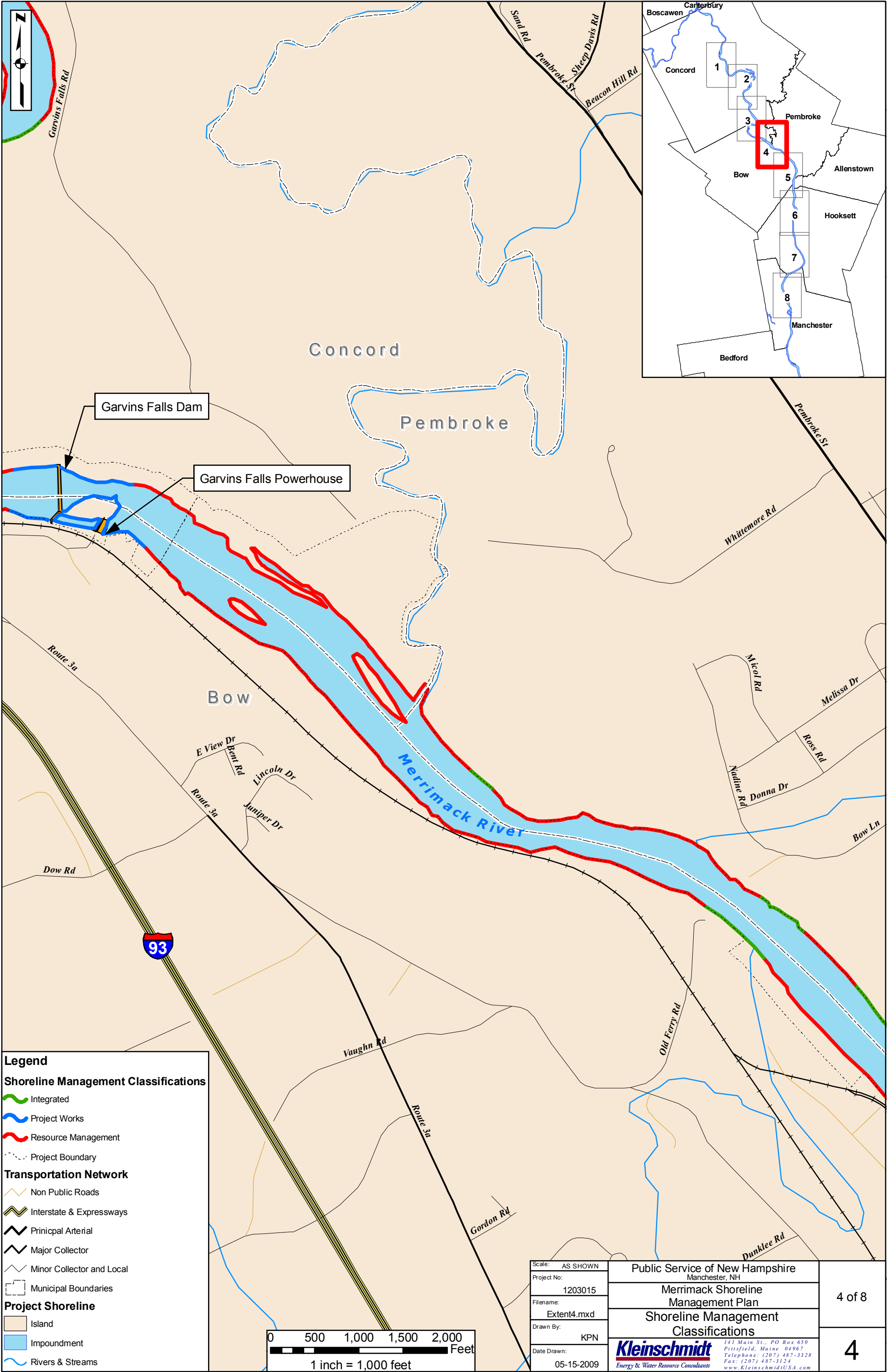
Merrimack Shoreline  
Management Plan

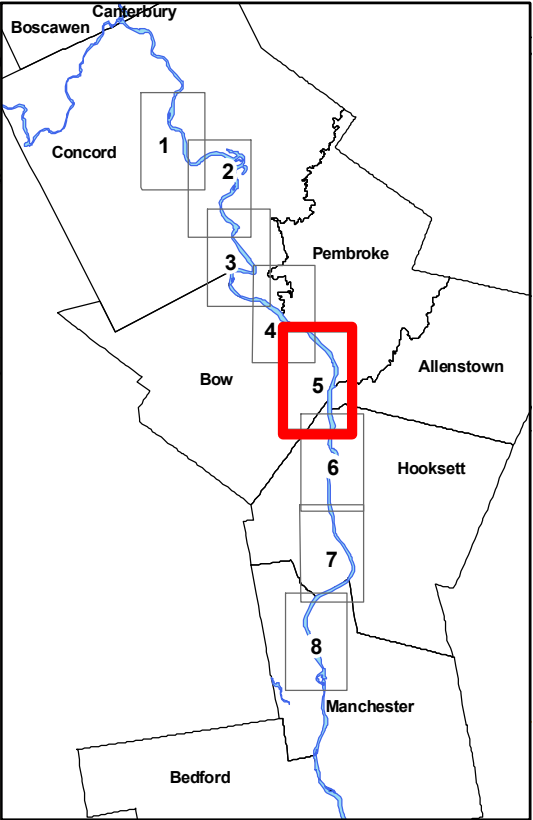
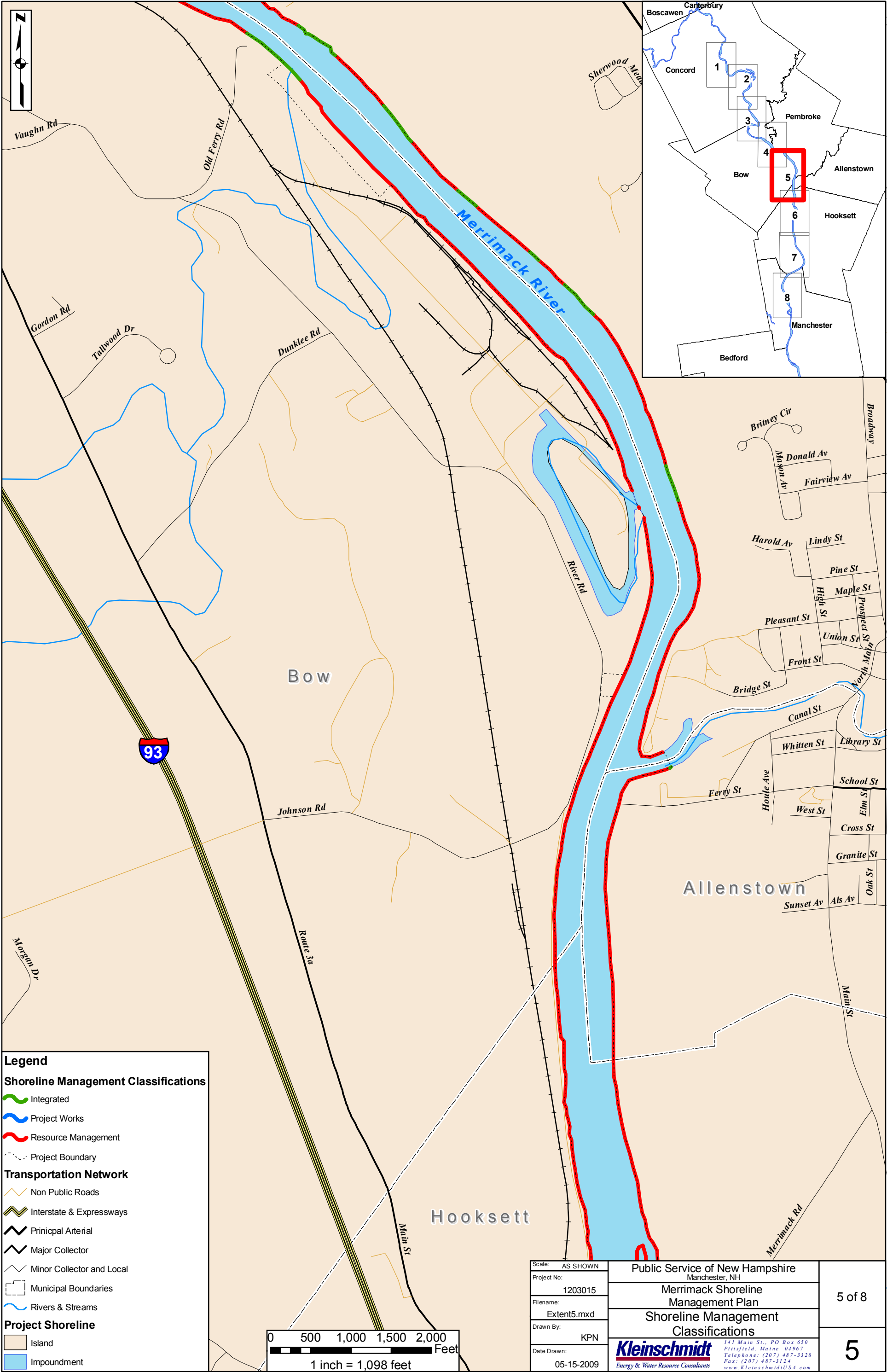
Shoreline Management  
Classifications

**Kleinschmidt**  
Energy & Water Resource Consultants

141 Main St., PO Box 650  
Pittsfield, Maine 04967  
Telephone: (207) 487-3328  
Fax: (207) 487-3124  
www.KleinschmidtUSA.com







**Legend**

**Shoreline Management Classifications**

Integrated

Project Works

Resource Management

Project Boundary

**Transportation Network**

Non Public Roads

Interstate & Expressways

Princippal Arterial

Major Collector

Minor Collector and Local

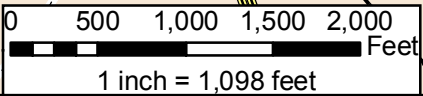
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Rivers & Streams

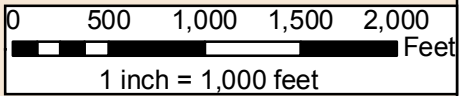
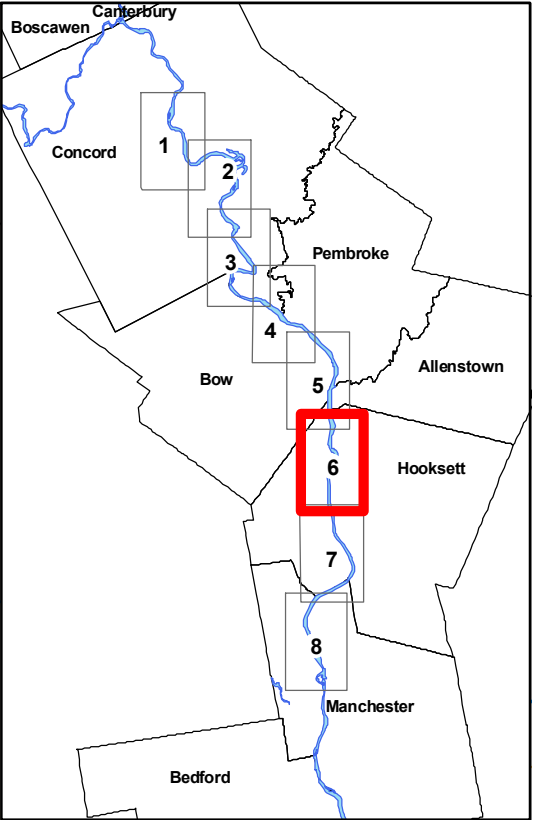
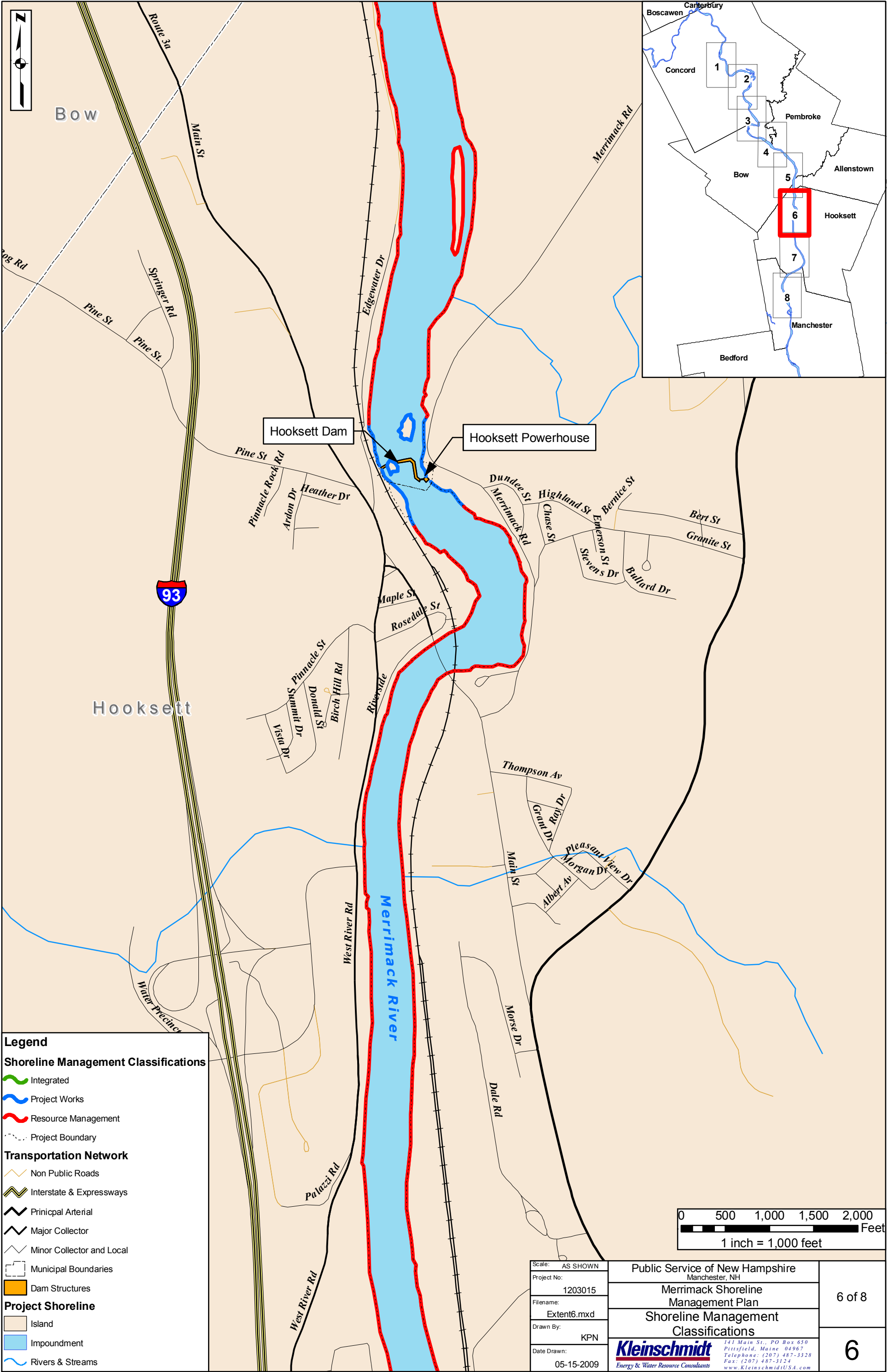
**Project Shoreline**

Island

Impoundment

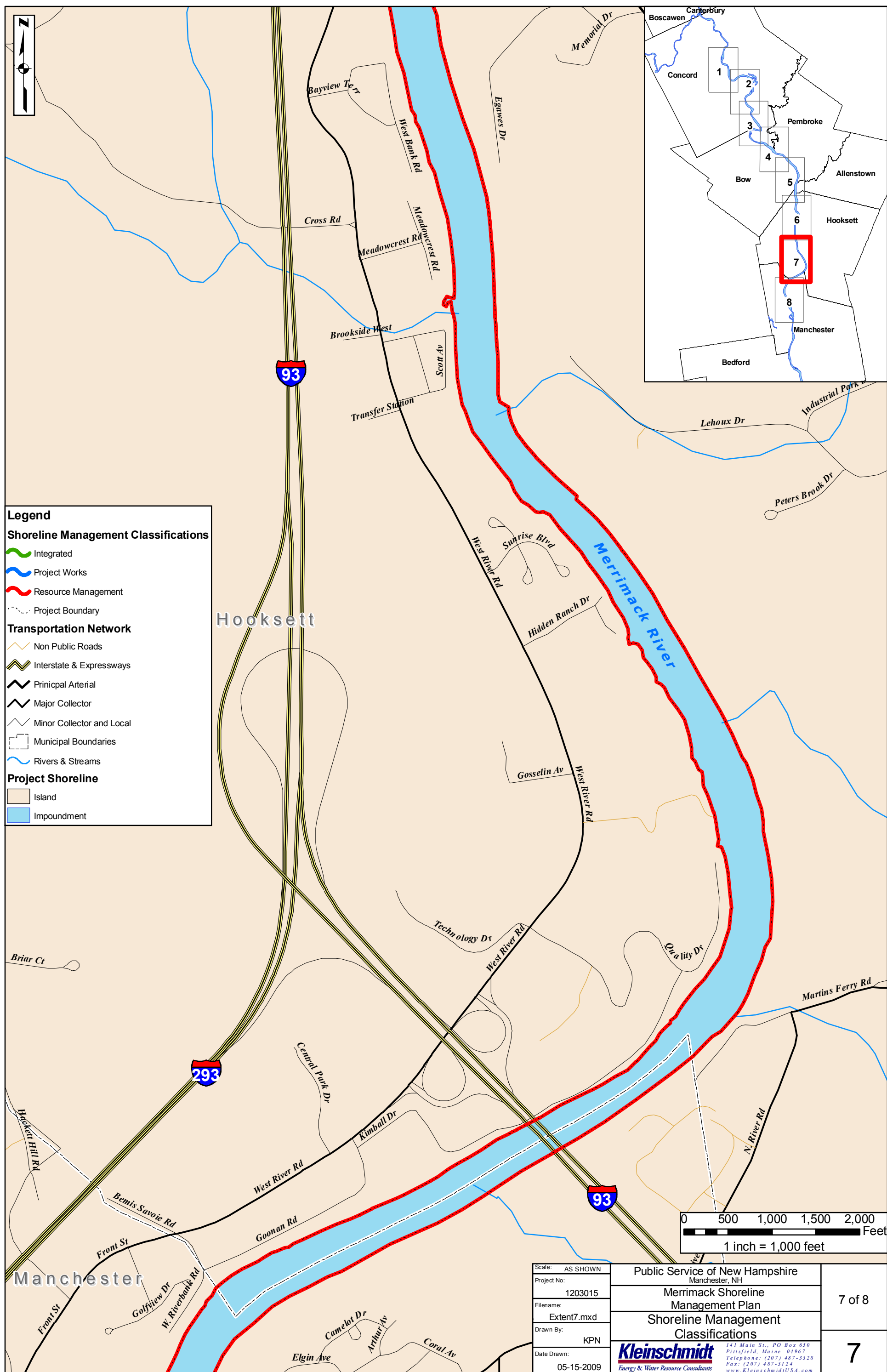


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Date Drawn: 05-15-2009		
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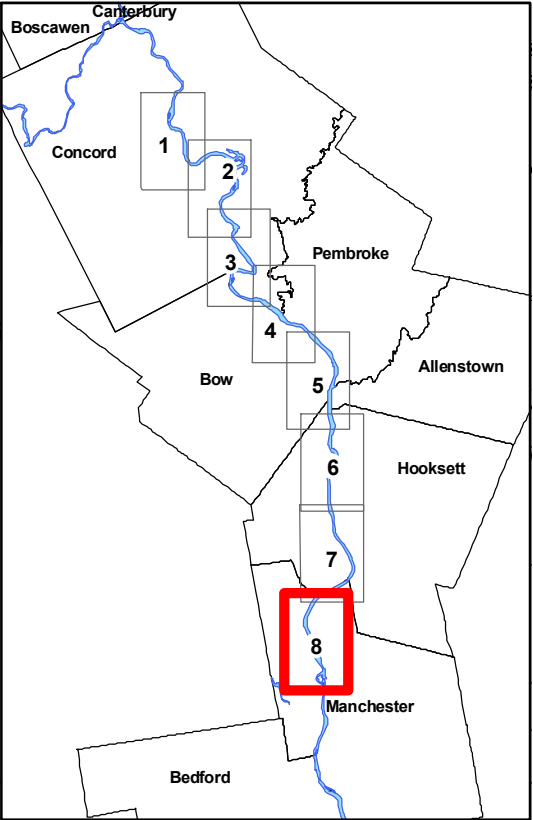
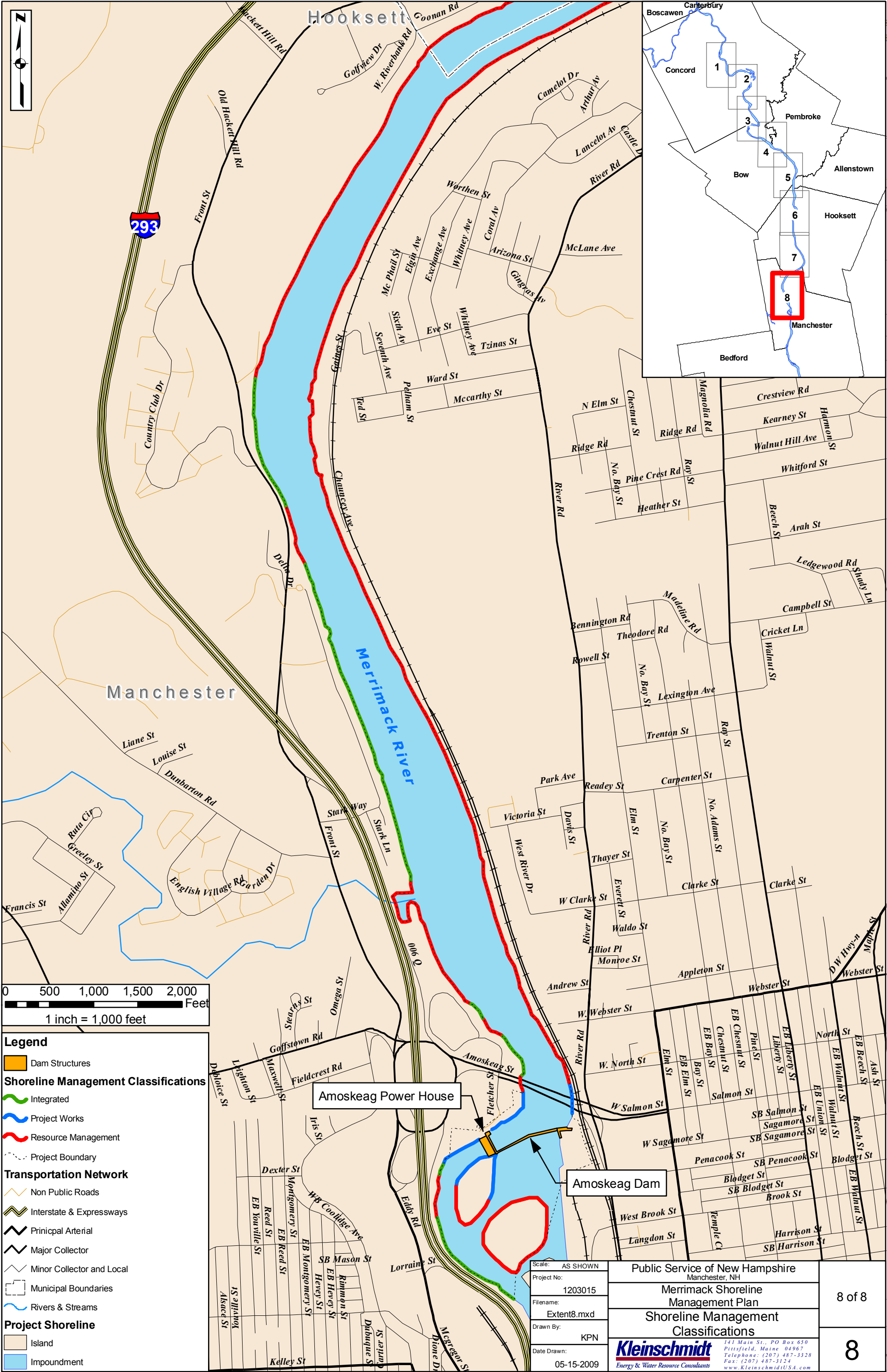


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Date Drawn: 05-15-2009		
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Scale: AS SHOWN	Public Service of New Hampshire Manchester, NH		8 of 8
Project No: 1203015	Merrimack Shoreline Management Plan		
Filename: Extent8.mxd	Shoreline Management Classifications		
Drawn By: KPN	Date Drawn: 05-15-2009		8
 Energy & Water Resource Consultants			
<small>141 Main St., PO Box 650 Pittsfield, Maine 04967 Telephone: (207) 487-3328 Fax: (207) 487-3124 www.KleinschmidtUSA.com</small>			

## APPENDIX B

### RELEVANT LICENSE ARTICLES AND LANGUAGE

119 FERC ¶ 61,170  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;  
Sudeen G. Kelly, Marc Spitzer,  
Philip D. Moeller, and Jon Wellinghoff.

Public Service Company of New Hampshire	Project No.	1893-042
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ORDER ISSUING NEW LICENSE

(Issued May 18, 2007)

Article 407. Shoreline Management Plan. Within one year of license issuance, the licensee shall file for Commission approval a shoreline management plan (SMP) for the project. The plan shall include, at a minimum:

- (1) a discussion of the plan's purpose, goals, and objectives;
- (2) a discussion of key issues associated with shoreline management at the project, and how these issues were addressed in developing the plan;
- (3) an identification and description of land use along the project shoreline, including maps identifying the locations of land use types, a description of how these use classifications were defined and delineated, and descriptions of activities and uses that would be allowed within those classifications;
- (4) a description of all types of permitted uses, the permit application process, and guidelines for applying for a construction permit within the project boundary;
- (5) measures to protect water, fish, and wildlife during shoreline development;
- (6) a description of management policies, monitoring programs, and enforcement;
- (7) provisions for periodically reviewing and updating the plan;
- (8) provisions for consultation with agencies and other interested entities in the implementation of the plan;
- (9) provisions for coordination with the recreation plan (Article 408) and historic properties management plan (Article 409);

(10) measures to protect the bald eagle and its habitat within the project boundary (including those lands identified in Article 203), including, at a minimum:

- (a) provisions for annual surveys to monitor for bald eagle presence and habitat use (both nesting and roosting);
- (b) provisions for reporting the results of monitoring;
- (c) provisions for defining and maintaining specific buffer distances around any roost sites and nest sites located at the project including expanding specific buffer areas beyond 200-feet as necessary;
- (d) measures to identify, protect, and enhance winter roosting habitat, including specific timber management practices to enhance potential roosting or nesting habitat;
- (e) provisions for consultation with the Commission, the U.S. Department of the Interior, and the New Hampshire Department of Fish and Game (New Hampshire Fish and Game) prior to conducting significant land-disturbing activities, as defined by the SMP, on project lands with bald eagle habitat;

(11) A report on the feasibility of protecting each of the following areas, listed from south to north as identified in volume VII of the license application filed in July 2003, Endangered and Threatened Species Report (figure 2, sheets 1-8 and figure 3, sheets 1-8):

- (a) approximately 9 acres of known bald eagle roosting habitat in the City of Manchester (sheet 7);
- (b) approximately 5 acres of potential bald eagle roosting habitat in the Town of Hooksett which are adjacent to 3 additional acres that are already conservation lands (sheet 7);
- (c) the Natural Heritage Inventory site for blunt-leaved milkweed in the Town of Hooksett (sheet 6);
- (d) the Natural Heritage Inventory site for sweet goldenrod, Southern New England dry oak/pine forest on sandy/gravelly soils in the Town of Hooksett (sheet 6);

- (e) the Natural Heritage Inventory site for wild lupine in the Town of Hooksett (sheet 6);
- (f) approximately 5 acres of potential bald eagle roosting habitat in Town of Hooksett, which includes a Natural Heritage Inventory site for the noctuid moth, the barrens xylotype, the northern blazing star, and New England pitch pine/scrub oak barrens (sheet 6);
- (g) the Natural Heritage Inventory site for golden-heather in the Town of Hooksett (sheet 6);
- (h) approximately 12 acres of potential bald eagle roosting habitat in the Town of Hooksett (sheet 6);
- (i) the Natural Heritage Inventory site for Southern New England lake sediment/river terrace forest in the Town of Hooksett (sheet 5);
- (j) approximately 12 acres of known bald eagle roosting habitat in the Town of Hooksett, which includes a Natural Heritage Inventory site for golden heather (sheet 5);
- (k) a section of the shoreline that is identified as bald eagle perching and foraging habitat on PSNH-owned land in the Town of Bow (sheet 4);
- (l) approximately 3 acres of potential bald eagle roosting habitat in the Town of Pembroke, which are adjacent to 5.5 additional acres that are already conservation lands (sheet 4);
- (m) the Natural Heritage Inventory site for common moorhen in the City of Concord (sheet 3);
- (n) the Natural Heritage Inventory site for golden-heather, wild lupine, New England dry riverbluff opening in the City of Concord (sheet 2);
- (o) the Natural Heritage Inventory site for Southern New England floodplain forest in the City of Concord (sheet 2)
- (p) an approximately 5-acre island in the City of Concord, which is identified as both potential roosting and potential nesting habitat for bald eagles (sheet 1); and
- (q) approximately 6 acres of potential roosting and potential nesting habitat for bald eagles in the City of Concord (sheet 1).

The licensee shall prepare the plan after consultation with the U.S Fish and Wildlife Service, New Hampshire Department of Fish and Game, and the New Hampshire Department of Environmental Services. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing activities shall begin at the project until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

## APPENDIX C

### BALD EAGLE MANAGEMENT PLAN

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**

**MERRIMACK RIVER PROJECT  
FERC PROJECT NO. 1893**

**BALD EAGLE MANAGEMENT PLAN**

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2.0	MANAGEMENT AND MONITORING .....	2
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**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**

**MERRIMACK RIVER PROJECT  
FERC PROJECT NO. 1893**

**BALD EAGLE MANAGEMENT PLAN**

***1.0 INTRODUCTION***

The Merrimack River Project (FERC Project No. 1893) is a federally licensed hydroelectric project owned and operated by Public Service Company of New Hampshire (PSNH). The Project is located on the Merrimack River in Merrimack and Hillsborough Counties, New Hampshire. On May 18, 2007 the Federal Energy Regulatory Commission (FERC) issued a new license (119 FERC ¶61,170) for the 29.9-megawatt (MW) Project. The license included a number of conditions, including license articles that PSNH must meet in order to maintain compliance with FERC regulations and license conditions. Article 407 of the project license requires PSNH to develop and file a Shoreline Management Plan (SMP) with FERC, prepared in consultation with agencies and interested parties. Article 407 stipulates that the PSNH shall file for Commission approval, a shoreline management plan (SMP) for the project. The SMP should include “measures to protect the bald eagle and its habitat within the project boundary.” The following summarizes PSNH’s plan for addressing this requirement.

## **2.0     *MANAGEMENT AND MONITORING***

Article 203 identifies certain parcels of known and future potential bald eagle (*Haliaeetus leucocephalus*) habitat that must be protected under the Shoreline Management Plan (SMP). The parcels are incorporated into the shoreline classification system developed by PSNH as described in Section 5.1 of the SMP. Bald Eagle Habitat Utilization Maps were developed during relicensing and contained in PSNH's license application filed on December 30, 2003. These maps were incorporated into PSNH's GIS that serves as the SMP classification mapping system. The habitat data were then used to develop maps depicting proposed monitoring/observation location throughout the Project (Appendix A). Due to river access limitations relative to known habitat blocks, monitoring locations were selected such that the to utilize existing river access points (*e.g.*, boat launches) or locations where public roadways run in close proximity to the river. PSNH will modify these locations, as appropriate, based upon comments from agency review of the draft plan.

Article 407 of the Project license requires that PSNH do the following to protect bald eagles, known nesting, roosting, and forage habitat, as well as potential future habitat within the Project boundary:

- (f) provisions for annual surveys to monitor for bald eagle presence and habitat use (both nesting and roosting);
- (g) provisions for reporting the results of monitoring;
- (h) provisions for defining and maintaining specific buffer distances around any roost sites and nest sites located at the project including expanding specific buffer areas beyond 200-feet as necessary;
- (i) measures to identify, protect, and enhance winter roosting habitat, including specific timber management practices to enhance potential roosting or nesting habitat;
- (j) provisions for consultation with the Commission, the U.S. Department of the Interior, and the New Hampshire Department of Fish and Game (New Hampshire Fish and Game) prior to conducting significant land-disturbing activities, as defined by the SMP, on project lands with bald eagle habitat;

In order to meet these requirements, PSNH has developed the following activities for future management of bald eagle habitat within the project boundary.

1. PSNH will conduct annual surveys to monitor for bald eagle presence and habitat use (both nesting and roosting). The annual surveys will be conducted twice a week, to the extent possible, beginning December 1<sup>st</sup> of each year and continuing through mid-March, or later, if eagles are still present. A determination on the need to continue monitoring beyond mid-March will be determined in consultation with the New Hampshire Audubon's (NHA) to be consistent with their statewide monitoring program. To the extent possible, surveys will be conducted during periods of the day when they are most active, early morning and late afternoon until dusk.

Surveys will be conducted at each of the proposed observation points with date, time and location of the observation point documented. An Eagle Survey Form (Appendix B) will be completed for each eagle observed noting any distinctive features such as plumage patterns (dark or light), missing feathers, or any colored wing tags or leg bands. PSNH will record the eagle's specific resource use, along with noting the eagle's approximate location information (latitude/longitude). Any observed perch or roost sites will also be recorded and photographed.

2. PSNH will submit an annual report to FERC to summarize Bald Eagle habitat use within the project boundary. The report will include updates to the Bald Eagle Resource Utilization Maps showing the approximate location of identified eagles and their specific habitat use, including nests, within the project boundary. The report will also evaluate whether observed eagle use dictates a need for additional protection. Prior to filing the report with FERC, PSNH will provide a review draft to U.S. Department of Interior and NH Department of Fish and Game, as consulting agencies identified under Article 407 of the Project license.
3. Known Habitat Areas - Lands within the project boundary that are found to be within 200-feet of known significant eagle habitat are identified as Resource Management under the SMP and are protected from further development through a comprehensive permitting process. Proposed uses within Resource Management shoreline areas will be considered only if the proponent of the activity can obtain permits from the appropriate state and federal agencies and PSNH. At this time, it is unlikely that PSNH will permit a proposed use within Resource Management lands even with proper authorization from the appropriate state and federal agencies.
4. Future Potential Habitat Areas - Lands within the project boundary that have been identified as future potential habitat are included in the Integrated Use classification under the SMP. Proposed uses within Integrated Use shoreline areas will be permitted by PSNH contingent upon the proponent of the activity obtaining permits from the appropriate state and federal agencies. As part of the SMP permitting process, PSNH will review all proposed shoreline uses and water dependent structures regardless of their location to ascertain the potential for adverse effect to eagles and eagle habitat and to minimize effects on large trees within those designated habitats prior to approval of the proposed use/structure. Any proposed tree cutting within the project boundary will be closely reviewed, potentially in consultation with USFWS, NHFG and the Audubon Society, to ensure that existing or

future potential nesting or roosting trees are not removed. If a proposed activity could adversely affect future potential habitat, PSNH will not permit that activity within the Integrated Use classification.

### ***3.0 SCHEDULE AND REPORTING***

Within one year of the FERC approval of this management plan, the PSNH will initiate annual monitoring and reporting. PSNH proposes to file annual reports on the anniversary issuance of the FERC license, May 18<sup>th</sup>. The report will include a summary of monitoring observations and updates to the Bald Eagle Resource Utilization maps, as necessary.

#### **4.0      *CONSULTATION***

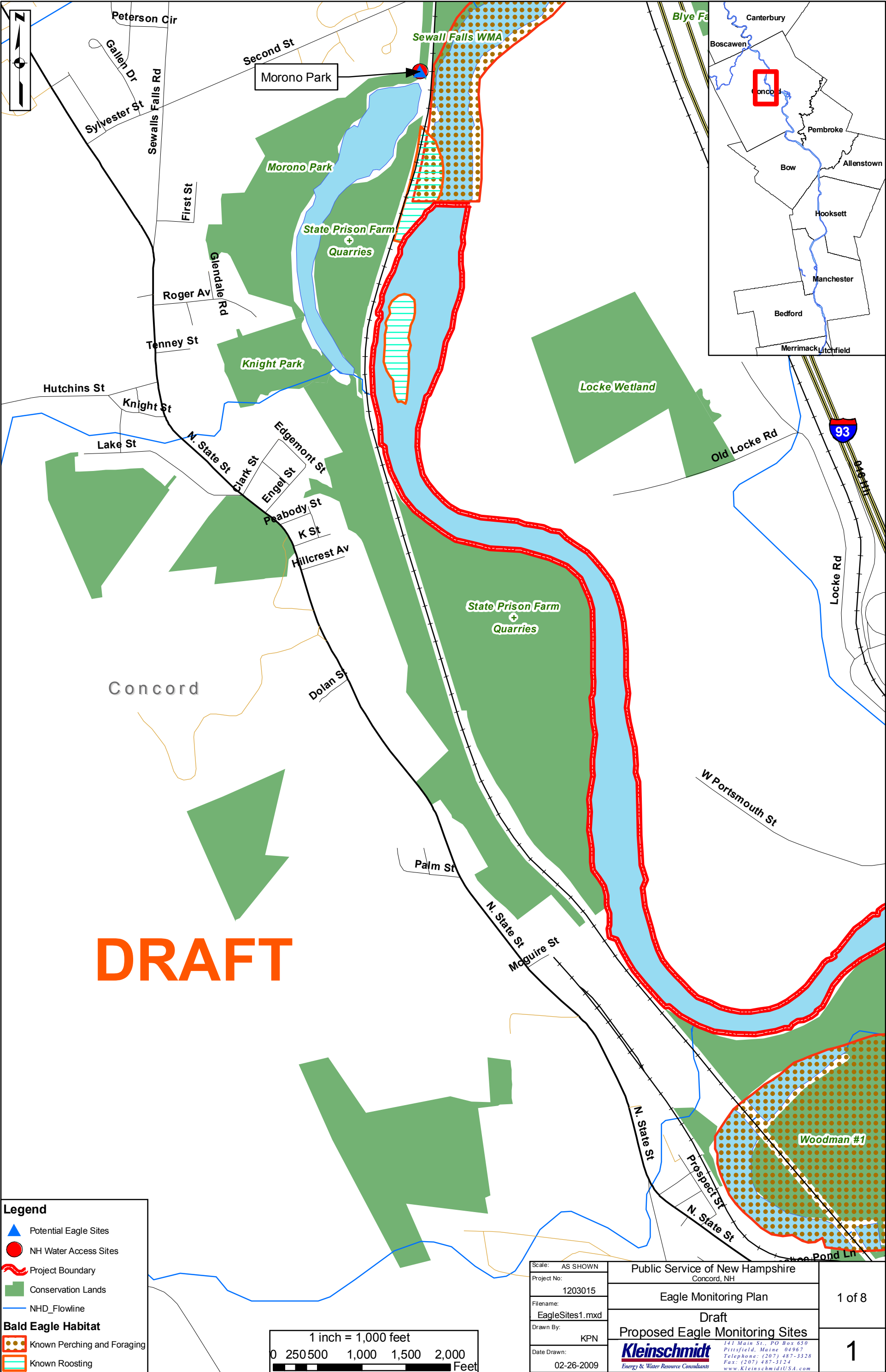
This Bald Eagle Management Plan was provided to state and federal agencies and interested parties as Appendix C to the Merrimack River Project SMP. Comments on the plan, primarily provided by USFWS, NHFG, and the Audubon Society, have been incorporated into the final plan. PSNH recognizes that it may be necessary to coordinate timing, monitoring and certain other aspects of the plan with monitoring being done by other parties and anticipate a consultation meeting may be an appropriate forum for such discussion.

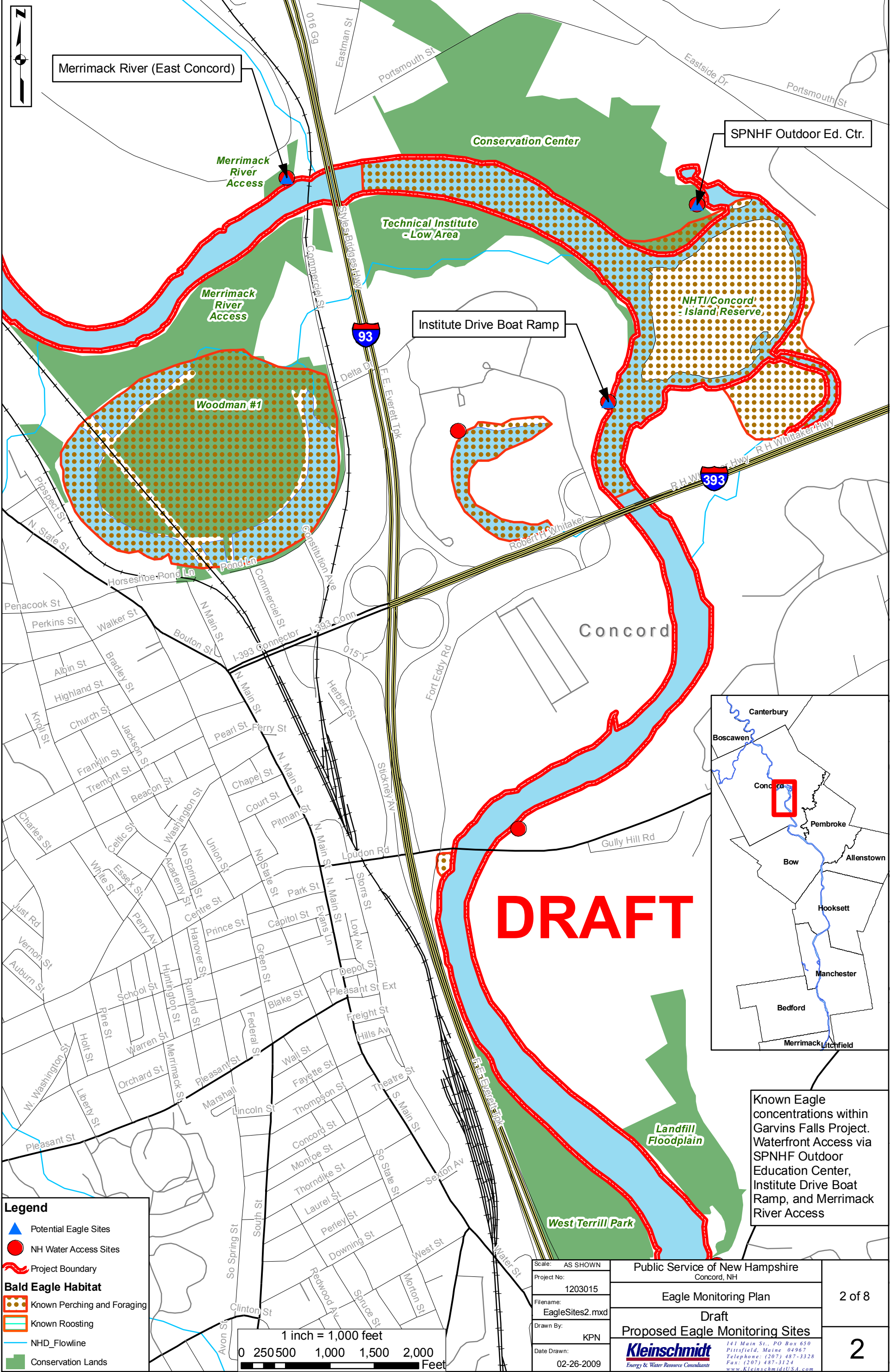
## ***5.0 LITERATURE CITED***

Federal Energy Regulatory Commission (FERC), Order Issuing New License, May, 2007.

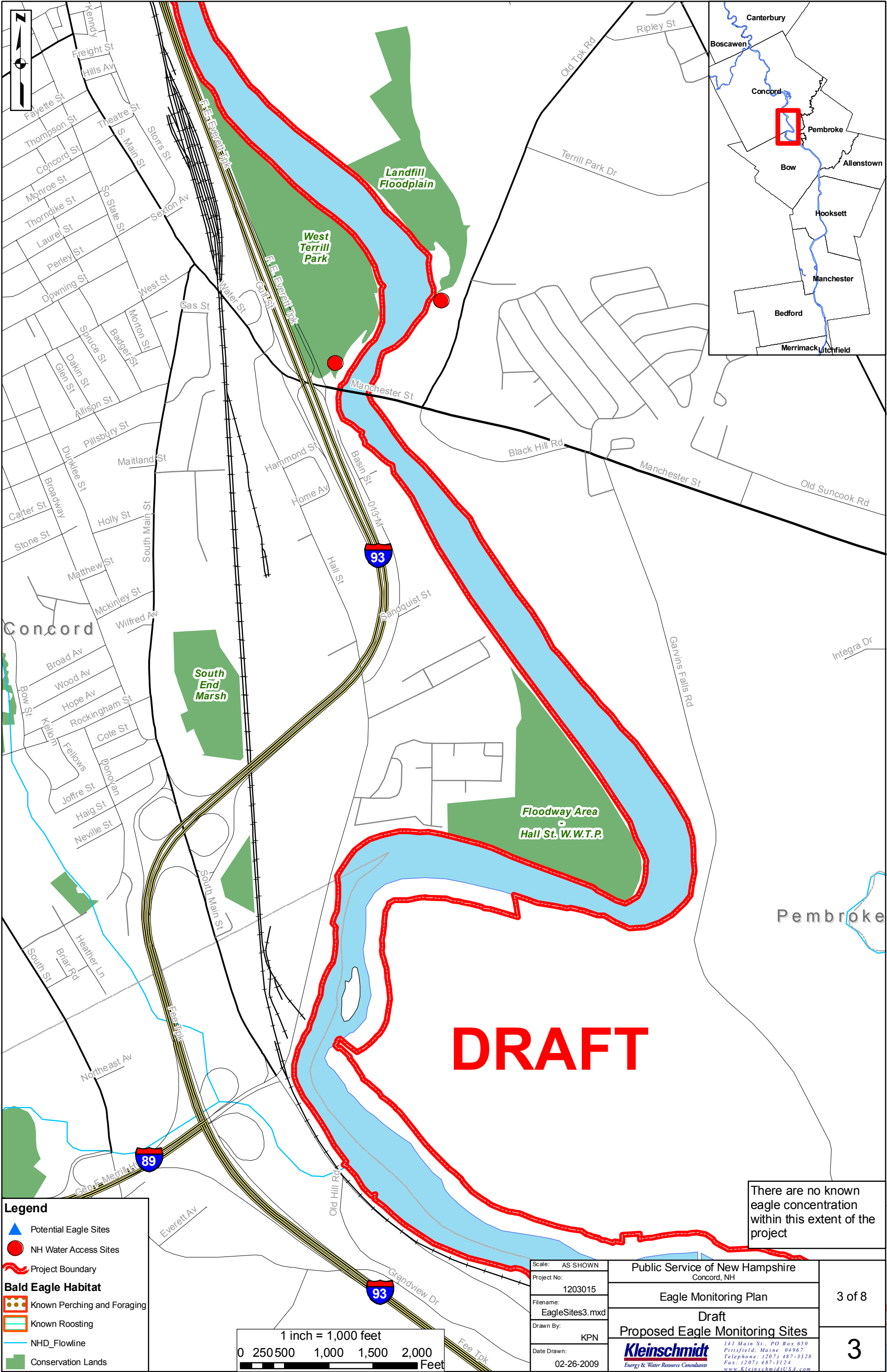
APPENDIX A  
PROPOSED MONITORING LOCATION MAPS





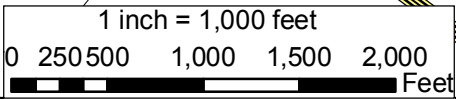






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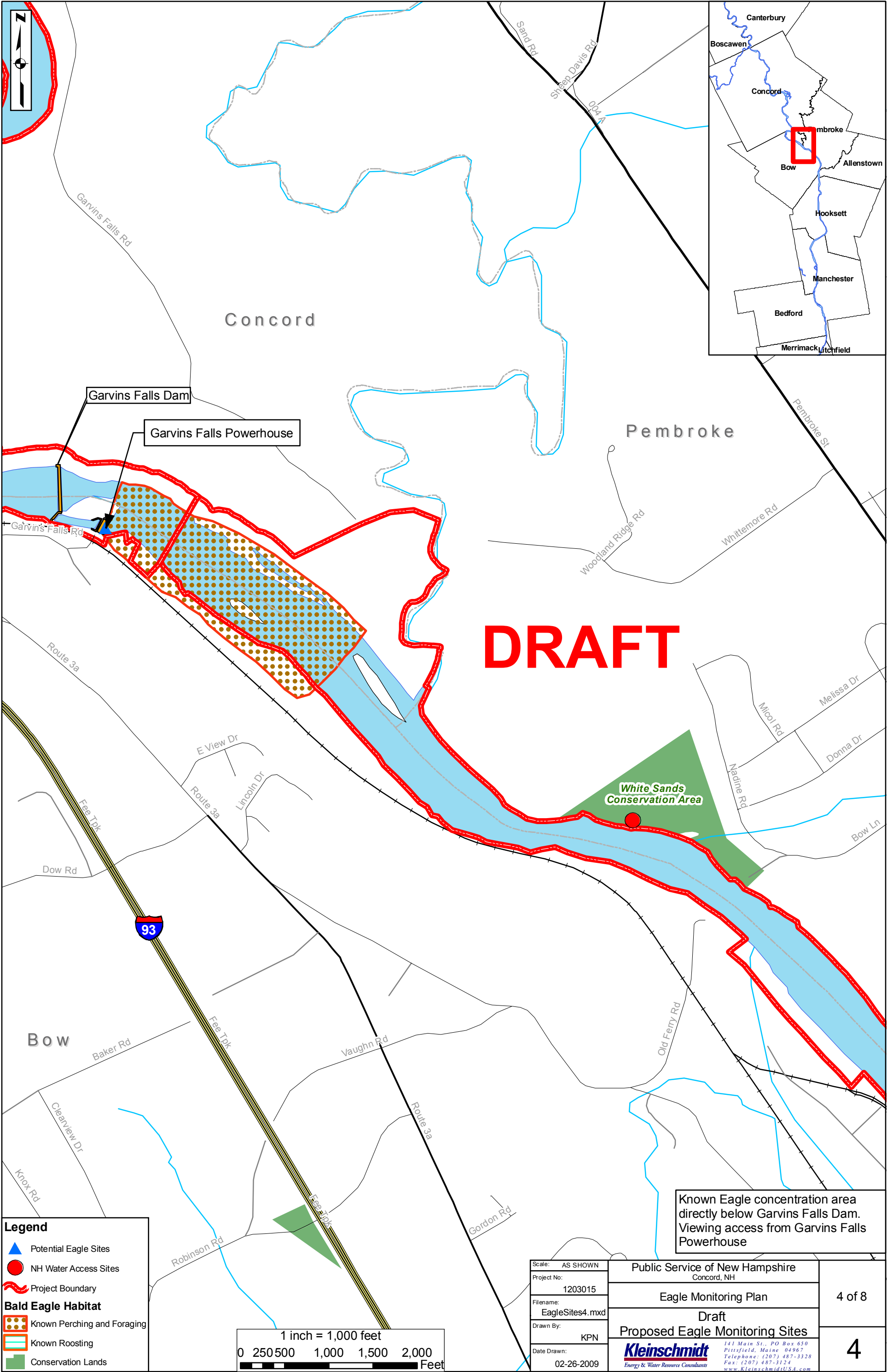
- Potential Eagle Sites
- NH Water Access Sites
- Project Boundary
- Bald Eagle Habitat**
  - Known Perching and Foraging
  - Known Roosting
- NHD\_Flowline
- Conservation Lands



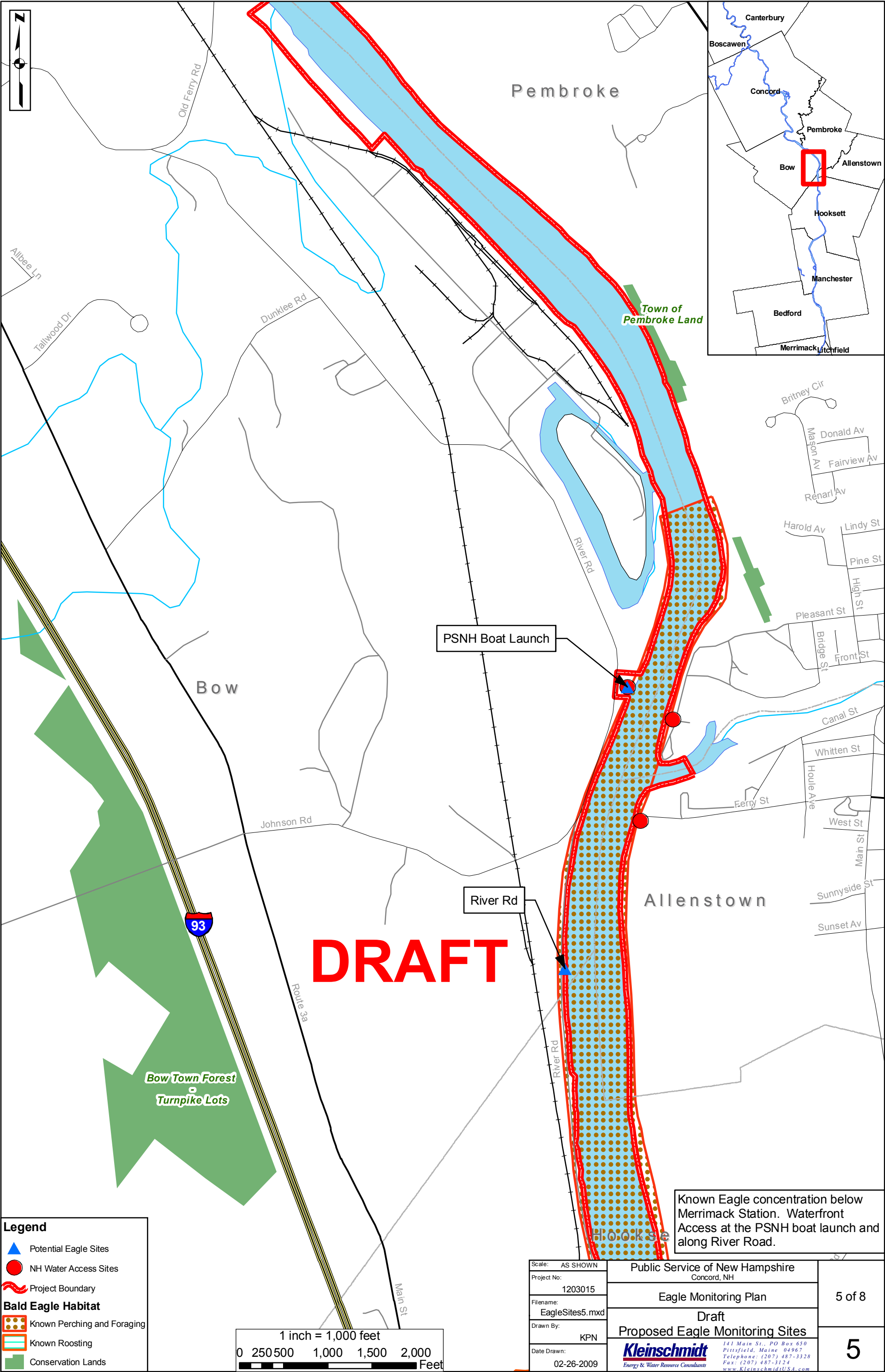
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Filename:	EagleSites3.mxd
Drawn By:	KPN
Date Drawn:	02-26-2009

Public Service of New Hampshire Concord, NH	
Eagle Monitoring Plan	
Draft Proposed Eagle Monitoring Sites	
<b>Kleinschmidt</b> Energy & Water Resource Consultants 141 Main St., PO Box 650 Pittsfield, Maine 04967 Telephone: (207) 487-3328 Fax: (207) 487-3124 www.KleinschmidtUSA.com	

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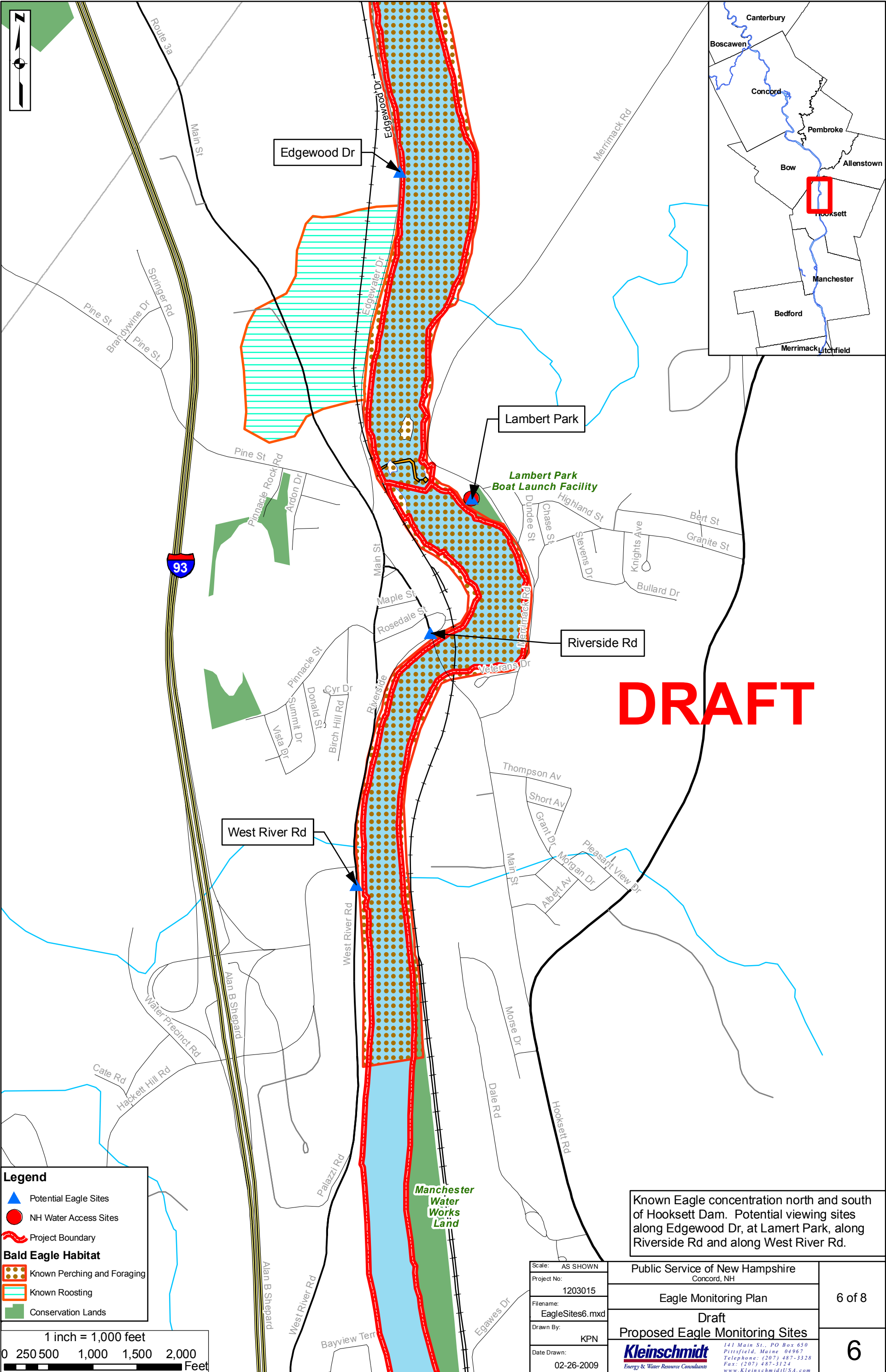


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Filename: EagleSites4.mxd	Draft	4
Drawn By: KPN	Proposed Eagle Monitoring Sites	
Date Drawn: 02-26-2009	<b>Kleinschmidt</b> Energy & Water Resource Consultants 141 Main St., PO Box 650 Pittsfield, Maine 04967 Telephone: (207) 487-3328 Fax: (207) 487-3124 www.KleinschmidtUSA.com	



Scale: AS SHOWN	Public Service of New Hampshire Concord, NH	
Project No: 1203015	Eagle Monitoring Plan	
Filename: EagleSites5.mxd	Draft	
Drawn By: KPN	Proposed Eagle Monitoring Sites	
Date Drawn: 02-26-2009	<b>Kleinschmidt</b> Energy & Water Resource Consultants 141 Main St., PO Box 650 Pittsfield, Maine 04967 Telephone: (207) 487-3328 Fax: (207) 487-3124 www.KleinschmidtUSA.com	
5 of 8		5

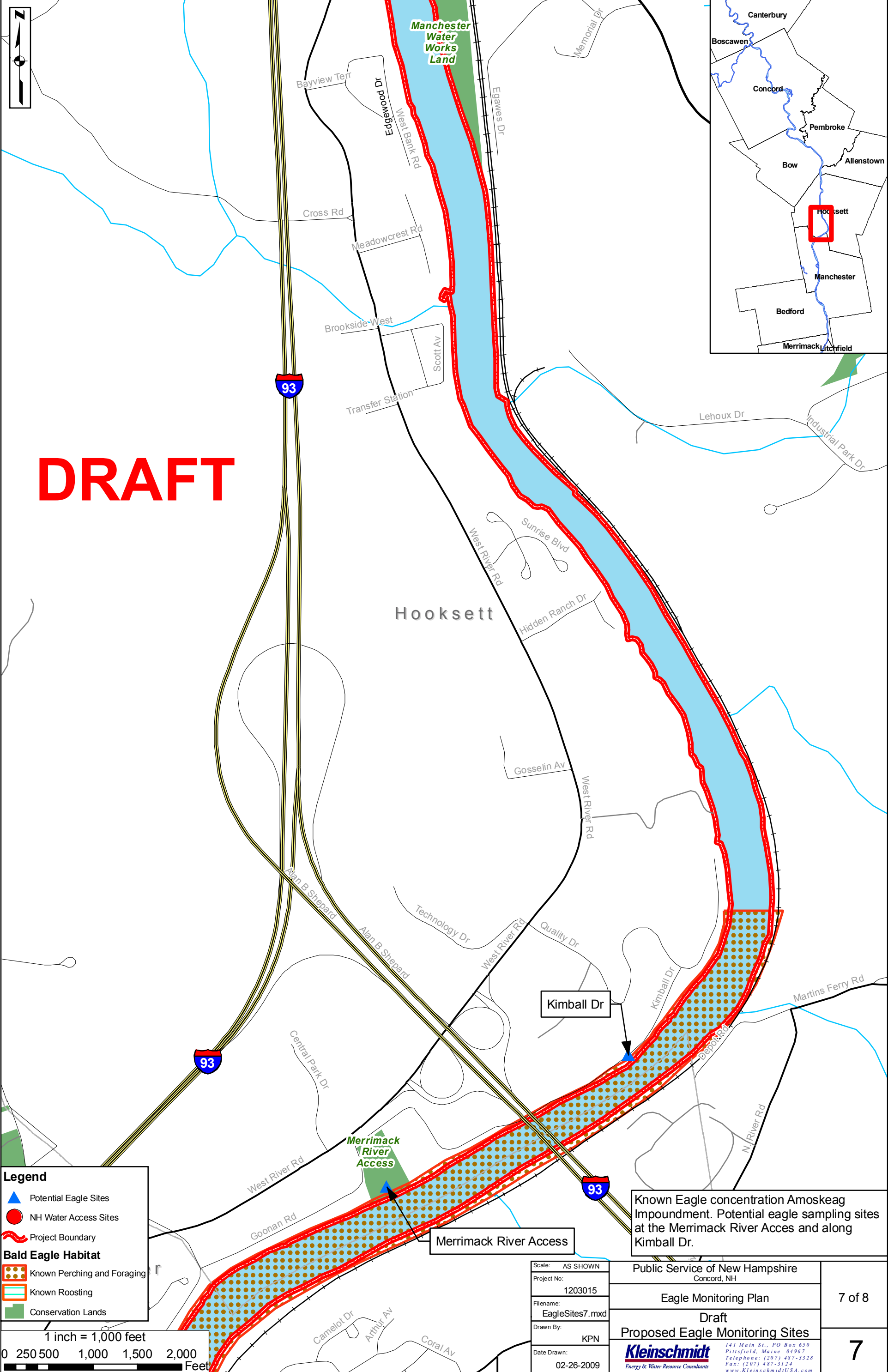




DRAFT

Known Eagle concentration north and south of Hooksett Dam. Potential viewing sites along Edgewood Dr, at Lamert Park, along Riverside Rd and along West River Rd.

Scale: AS SHOWN	Public Service of New Hampshire Concord, NH	
Project No: 1203015	Eagle Monitoring Plan	
Filename: EagleSites6.mxd	Draft	
Drawn By: KPN	Proposed Eagle Monitoring Sites	
Date Drawn: 02-26-2009	<b>Kleinschmidt</b> Energy & Water Resource Consultants <small>141 Main St., PO Box 650 Pittsfield, Maine 04967 Telephone: (207) 487-3328 Fax: (207) 487-3124 www.KleinschmidtUSA.com</small>	
		6 of 8
		6



DRAFT

**Legend**

- Potential Eagle Sites
- NH Water Access Sites
- Project Boundary
- Bald Eagle Habitat**
  - Known Perching and Foraging
  - Known Roosting
  - Conservation Lands

1 inch = 1,000 feet

0 250 500 1,000 1,500 2,000 Feet

Scale: AS SHOWN

Project No: 1203015

Filename: EagleSites7.mxd

Drawn By: KPN

Date Drawn: 02-26-2009

Public Service of New Hampshire  
Concord, NH

Eagle Monitoring Plan

Draft  
Proposed Eagle Monitoring Sites

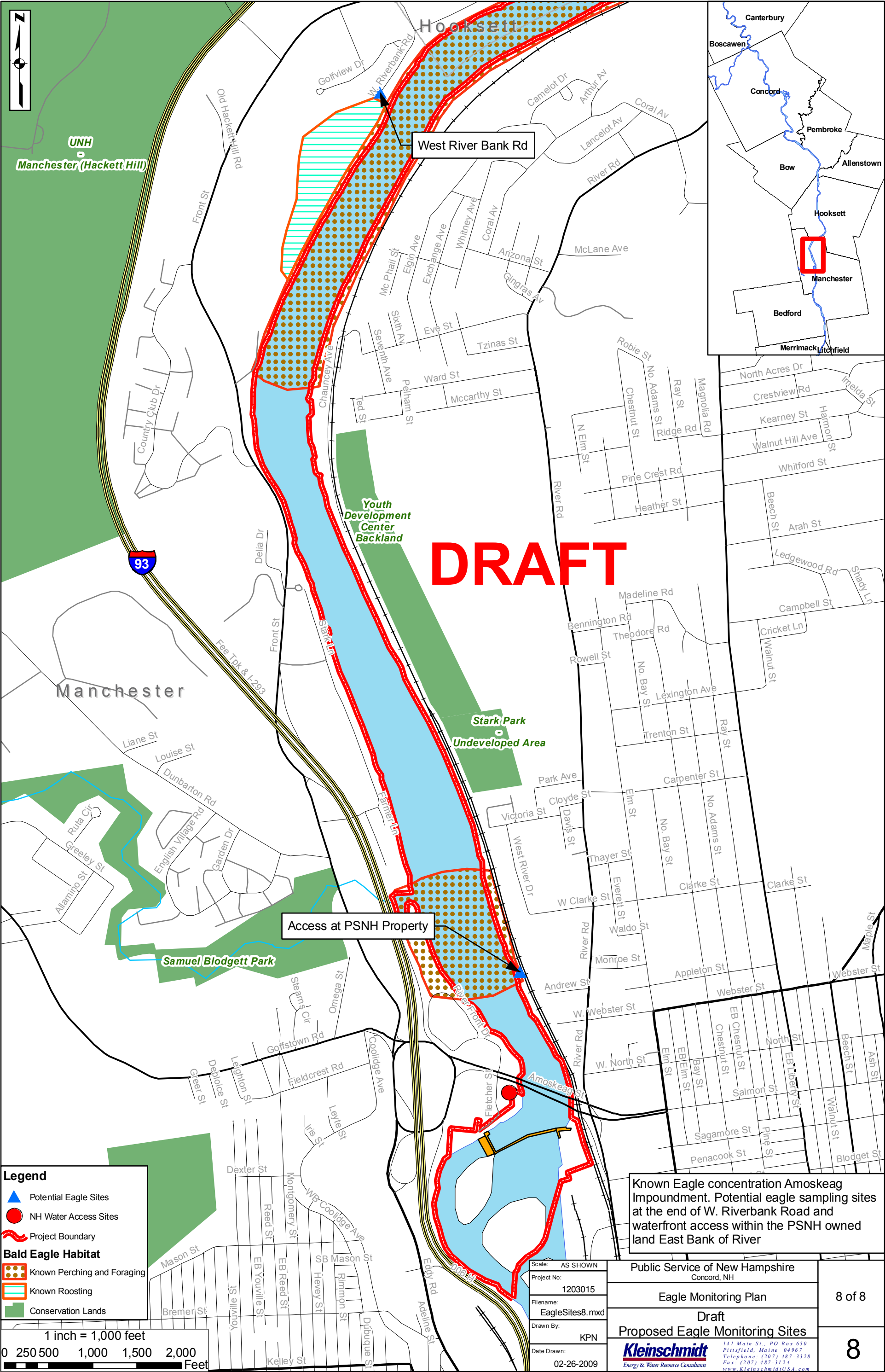
**Kleinschmidt**  
Energy & Water Resource Consultants

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Pittsfield, Maine 04967  
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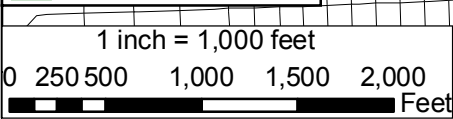
7

Known Eagle concentration Amoskeag Impoundment. Potential eagle sampling sites at the Merrimack River Acces and along Kimball Dr.



**Legend**

- Potential Eagle Sites
- NH Water Access Sites
- Project Boundary
- Bald Eagle Habitat**
- Known Perching and Foraging
- Known Roosting
- Conservation Lands



Known Eagle concentration Amoskeag Impoundment. Potential eagle sampling sites at the end of W. Riverbank Road and waterfront access within the PSNH owned land East Bank of River

Scale: AS SHOWN  
Project No: 1203015  
Filename: EagleSites8.mxd  
Drawn By: KPN  
Date Drawn: 02-26-2009

Public Service of New Hampshire  
Concord, NH

Eagle Monitoring Plan

Draft  
Proposed Eagle Monitoring Sites

**Kleinschmidt**  
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## APPENDIX D

### RELEVANT SECTIONS OF NHDES COMPREHENSIVE SHORELAND PROTECTION ACT

**6.0      TITLE L**  
**WATER MANAGEMENT AND PROTECTION**

**6.1      CHAPTER 483-B**  
**COMPREHENSIVE SHORELAND PROTECTION ACT**

**483-B:2 Minimum Standards Required.** – To fulfill the state's role as trustee of its waters and to promote public health, safety, and the general welfare, the general court declares that the public interest requires the establishment of standards for the subdivision, use, and development of the shorelands of the state's public waters. The development standards provided in this chapter shall be the minimum standards necessary to protect the public waters of the state of New Hampshire. These standards shall serve to:

- I. Further the maintenance of safe and healthful conditions.
- II. Provide for the wise utilization of water and related land resources.
- III. Prevent and control water pollution.
- IV. Protect fish spawning grounds, aquatic life, and bird and other wildlife habitats.
- V. Protect buildings and lands from flooding and accelerated erosion.
- VI. Protect archaeological and historical resources.
- VII. Protect commercial fishing and maritime industries.
- VIII. Protect freshwater and coastal wetlands.
- IX. Control building sites, placement of structures, and land uses.
- X. Conserve shoreline cover and points of access to inland and coastal waters.
- XI. Preserve the state's lakes, rivers, estuaries and coastal waters in their natural state.
- XII. Promote wildlife habitat, scenic beauty, and scientific study.
- XIII. Protect public use of waters, including recreation.
- XIV. Conserve natural beauty and open spaces.
- XV. Anticipate and respond to the impacts of development in shoreland areas.
- XVI. Provide for economic development in proximity to waters.

**Source.** 1991, 303:1. 1992, 235:1, 2. 1994, 383:1, eff. July 1, 1994.

**483-B:4 Definitions.** – In this chapter:

I. "'Abutter" means any person who owns property that is immediately contiguous to the property on which the proposed work will take place, or who owns flowage rights on such property. The term does not include those properties separated by a public road or more than 1/4 mile from the limits of the proposed work. If contiguous properties are owned by the person who is proposing the work, then the term includes the person owning the next contiguous property, subject to the 1/4 mile limitation.

II. "'Accessory structure" means a structure, as defined in paragraph XXII of this section, on the same lot and customarily incidental and subordinate to the primary structure, as defined in paragraph XIV of this section; or a use, including but not limited to paths, driveways, patios, any other improved surface, pump houses, gazebos, woodsheds, garages, or other outbuildings.

III. "'Basal area" means the cross sectional area of a tree measured at a height of 4 1/2 feet above the ground, usually expressed in square feet per acre for a stand of trees.

IV. "'Commissioner" means the commissioner of the department of environmental services or designee.

V. "'Department" means the department of environmental services.

VI. "'Disturbed area" means an area in which natural vegetation is removed, exposing the underlying soil.

VII. "'Ground cover" means any herbaceous plant which normally grows to a mature height of 4 feet or less.

VII-a. [Repealed.]

VII-b. "'Impervious surface" means any modified surface that cannot effectively absorb or infiltrate water. Examples of impervious surfaces include, but are not limited to, roofs, decks, patios, and paved, gravel, or crushed stone driveways, parking areas, and walkways unless designed to effectively absorb or infiltrate water.

VIII. "'Lot of record" means a legally created parcel, the plat or description of which has been recorded at the registry of deeds for the county in which it is located.

IX. [Repealed.]

X. "'Municipality" means a city, town, village district if specifically authorized to zone by the legislature, or county in respect to unincorporated towns or unorganized places or any combination thereof pursuant to RSA 53-A.

X-a. [Repealed.]

X-b. "'Natural ground cover" means any herbaceous plant or any woody seedling or shrub generally less than 3 feet in height. Natural ground cover shall also include naturally occurring leaf or needle litter, stumps, decaying woody debris, stones, and boulders. Natural ground cover shall not include lawns, invasive species as listed by the department of agriculture, markets, and food in accordance with RSA 430:53, III, exotic species as designated by rule of the department of environmental services in accordance with RSA 487:24, VII, imported organic or stone mulches, or other artificial materials.

XI. "'Natural woodland buffer" means a forested area consisting of various species of trees, saplings, shrubs, and ground covers in any combination and at any stage of growth.

XI-a. [Repealed.]

XI-b. [Repealed.]

XI-c. "'Nonconforming lot of record" means an existing lot which does not conform to the provisions of this chapter.

XI-d. "'Nonconforming structure" means a structure that, either individually or when viewed in combination with other structures on the property, does not conform to the provisions of this chapter, including but not limited to the impervious surface limits of RSA 483-B:9, V(g).

XI-e. "'Ordinary high water mark" means the line on the shore, running parallel to the main stem of the river, established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the immediate bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. Where the ordinary high water mark is not easily discernable, the ordinary high water mark may be determined by the department of environmental services.

XII. "'Person" means a corporation, company, association, society, firm, partnership or joint stock company, as well as an individual, a state, and any political subdivision of a state or any agency or instrumentality thereof.

XIII. "'Primary building line" means a setback from the reference line.

XIV. "'Primary structure" means a structure as defined in paragraph XXII of this section that is central to the fundamental use of the property and is not accessory to the use of another structure on the same premises.

XV. "'Protected shoreland" means, for natural, fresh water bodies without artificial impoundments, for artificially impounded fresh water bodies, and for coastal waters and rivers, all land located within 250 feet of the reference line of public waters.

XVI. "'Public waters" shall include:

(a) All fresh water bodies listed in the official list of public waters published by the department pursuant to RSA 271:20, II, whether they are great ponds or artificial impoundments.

(b) Coastal waters, being all waters subject to the ebb and flow of the tide, including the Great Bay Estuary and the associated tidal rivers.

(c) Rivers, meaning all year-round flowing waters of fourth order or higher and all rivers and river segments designated as protected under RSA 483:15. Stream order shall be determined using the New Hampshire hydrography dataset archived by the geographically referenced analysis and information transfer system (GRANIT) at the complex systems research center of the university of New Hampshire, and developed by GRANIT in collaboration with the department of environmental services. A listing of the streams of fourth order and higher shall be prepared and periodically updated by the GRANIT at the complex systems research center of the university of New Hampshire and delivered to the commissioner 30 days after the effective date of this subparagraph.

XVII. ""Reference line" means:

(a) For natural fresh water bodies without artificial impoundments, the natural mean high water level as determined by the department of environmental services.

(b) For artificially impounded fresh water bodies with established flowage rights, the limit of the flowage rights, and for water bodies without established flowage rights, the waterline at full pond as determined by the elevation of the spillway crest.

(c) For coastal waters, the highest observable tide line, which means a line defining the furthest landward limit of tidal flow, not including storm events, which can be recognized by indicators such as the presence of a strand line of flotsam and debris, the landward margin of salt tolerant vegetation, or a physical barrier that blocks further flow of the tide.

(d) For rivers, the ordinary high water mark.

XVIII. ""Removal or removed" means cut, sawed, pruned, girdled, felled, pushed over, buried, burned, killed, or otherwise destructively altered.

XVIII-a. ""Repeat violation" means a violation that occurs within 3 years of notification by the department of a prior violation, as defined in RSA 483-B:18, I, whether on the same site or by the same person or entity on a second site. Each day of continuing violation after notification of that violation shall be considered a repeat violation.

XVIII-b. ""Repair" means work conducted to restore an existing, legal structure by partial replacement of worn, broken, or unsound parts or to fix a specific defect, during which all of the exterior dimensions are intact and remain so during construction.

XVIII-c. ""Replace in kind" means the substitution of a new structure for an existing legal structure, whether in total or in part, with no change in size, dimensions, footprint, interior square footage, and location, with the exception of changes resulting in an increase in the setback to public waters.

XVIII-d. ""Replacement system" means a septic system that is not considered new construction under RSA 485-A:29-44 and rules adopted to implement it.

XIX. ""Residential unit" means a structure, or portion thereof, providing complete and independent living facilities, including permanent facilities for living, sleeping, eating, cooking, and sanitation which are used in common by one or more persons.

XX. ""Sapling" means any woody plant which normally grows to a mature height greater than 20 feet and has a diameter less than 6 inches at a point 4 1/2 feet above the ground.

XX-a. ""Shoreland frontage" means the average of the distances of the actual natural shoreline footage and a straight line drawn between property lines.

XXI. ""Shrub" means any multi-stemmed woody plant which normally grows to a mature height of less than 20 feet.

XXII. ""Structure" means anything built for the support, shelter or enclosure of persons, animals, goods, or property of any kind, as well as anything constructed or erected with a fixed location on or in the ground, exclusive of fences.

XXIII. ""Subdivision" means subdivision as defined in RSA 672:14.

XXIV. ""Tree" means any woody plant which normally grows to a mature height greater

than 20 feet and which has a diameter of 6 inches or more at a point 4 1/2 feet above the ground.

XXIV-a. [Repealed.]

XXIV-b. ""Unaltered state" means native vegetation allowed to grow without cutting, limbing, trimming, pruning, mowing, or other similar activities.

XXV. ""Urbanization" means the concentrated development found in the sections of towns or cities where there has been an historic pattern of intensive building for commercial or industrial use, or mixed residential, commercial, and industrial use.

XXVI. ""Water dependent structure" means a structure that is a dock, wharf, pier, breakwater, beach, boathouse, retaining wall, or launching ramp or other similar structure, or any part thereof, built over, on, or in the waters of the state.

**Source.** 1991, 303:1. 1992, 235:3-7, 22. 1994, 383:2-5, 22, I. 1996, 17:1, 2, eff. June 14, 1996; 228:65, eff. July 1, 1996. 2002, 169:1, eff. Jan. 1, 2003; 263:2-7, eff. July 17, 2002. 2003, 319:9, eff. July 1, 2003. 2004, 257:44, eff. July 1, 2004. 2007, 267:1-6, eff. April 1, 2008. 2008, 5:5, I-IV, 6, 7, eff. May 1, 2008; 5:13-18, July 1, 2008; 171:13, eff. July 1, 2008; 171:17, eff. July 1, 2008 at 12:01 a.m.

**483-B:5-b Permit Required; Exemption. –**

I. (a) No person shall commence construction, excavation, or filling activities within the protected shoreland without obtaining a permit from the department to ensure compliance with this chapter.

[Paragraph I(b) repealed by 2008, 5:27, I, effective July 1, 2011.]

(b) The permit application fee shall be \$100 plus \$.10 per square foot of area affected by the proposed activities and shall be deposited in the wetlands and shorelands review fund established under RSA 482-A:3, III. Such fees shall be capped as follows:

(1) For projects of 0-9,999 square feet, \$750.

(2) For projects of 10,000-24,999 square feet, \$1,875.

(3) For projects of 25,000 square feet or more, \$3,750.

II. Timber harvesting operations permitting requirements shall be in accordance with RSA 485-A:17, IV and therefore shall be exempt from the permitting requirement under paragraph I.

[Paragraph III repealed by 2008, 5:27, II, effective July 1, 2011.]

III. Construction of public roads, public utility lines and associated structures and facilities, and public water access facilities shall be exempt from the permitting fees of paragraph I.

IV. Impacts in the protected shoreland that receive a permit in accordance with RSA 482-A shall not require a permit under this section.

IV-a. At the time of the permit application, the applicant shall provide postal receipts or copies, verifying that the governing body of the municipality or municipalities in which the property is located and all abutters have been notified of the application by certified mail.

V. (a) Within 30 days of receipt of an application for a permit or 75 days of receipt of an application for a permit that will require a variance of the minimum standard of RSA 483-B:9, V or a waiver of the minimum standards of RSA 483-B:9, the department shall request any additional information required to complete its evaluation of the application, and provide the applicant with any written technical comments the department deems necessary. Any request for

additional information shall specify that the applicant submit such information as soon as practicable and notify the applicant that if all of the requested information is not received within 60 days of the request, the department shall deny the application.

(b) When the department requests additional information pursuant to subparagraph (a), the department shall, within 30 days of the department's receipt of the information:

- (1) Approve the application and issue a permit;
- (2) Deny the application, in whole or in part; or
- (3) Extend the time for response for good cause and with the written agreement of the applicant.

(c) Where no request for additional information is made, the department shall, within 30 days of receipt of the application for a permit or 75 days of receipt of an application for a permit that will require a variance of the minimum standard of RSA 483-B:9, V or a waiver of the minimum standards of RSA 483-B:9, approve or deny the application, in whole or in part.

(d) If the department fails to render a decision in the time frame provided in this paragraph, the application shall be deemed to be approved and a permit shall be issued.

**Source.** 2008, 5:12, eff. July 1, 2008; 5:27, I, II, eff. July 1, 2011; 171:18, eff. July 1, 2008 at 12:01 a.m.

#### **483-B:9 Minimum Shoreland Protection Standards. –**

I. The standards in this section are designed to minimize shoreland disturbance so as to protect the public waters, while still accommodating reasonable levels of development in the protected shoreland. Development outside the protected shoreland shall conform to local zoning and local ordinances and shall not be subject to standards established in this chapter.

II. Within the protected shoreland the following restrictions shall apply:

(a) The establishment or expansion of salt storage yards, automobile junk yards, and solid or hazardous waste facilities shall be prohibited.

(b) Primary structures shall be set back behind the primary building line which is 50 feet from the reference line.

(c) A water dependent structure, meaning one which is a dock, wharf, pier, breakwater, or other similar structure, or any part thereof, built over, on, or in the waters of the state, shall be constructed only as approved by the department, pursuant to RSA 482-A.

(d) No fertilizer, except limestone, shall be used within 25 feet of the reference line of any property. Twenty-five feet beyond the reference line, low phosphate, slow release nitrogen fertilizer or limestone, may be used on lawns or areas with grass.

III. Public water supply facilities, including water supply intakes, pipes, water treatment facilities, pump stations, and disinfection stations shall be permitted by the commissioner as necessary, consistent with the purposes of this chapter and other state law. Private water supply facilities shall not require a permit.

IV. The placement and expansion of public water and sewage treatment facilities shall be permitted by the commissioner as necessary, consistent with the purposes of this chapter and other state law.

IV-a. Hydro electric facilities, including, but not limited to, dams, dikes, penstocks, and powerhouses, shall be recognized as water dependent, and shall be permitted by the commissioner as necessary, consistent with the purposes of this chapter and other state law.

IV-b. Public utility lines and associated structures and facilities, public roads, and public water access facilities including boat ramps shall be permitted by the commissioner as necessary and consistent with the purposes of this chapter and other state law.

IV-c. An existing solid waste facility which is located within 250 feet of the reference line of public waters under this chapter may continue to operate under an existing permit,

provided it does not cause degradation to an area in excess of that area under permit.

IV-d. No solid waste facility shall place solid waste within 250 feet of the reference line of public waters under this chapter except as expressly permitted under RSA 483-B:9, IV-c. However, any solid waste facility may be allowed, subject to permitting conditions under RSA 149-M:9, to erect accessory structures and conduct other activities consistent with the operation of the facility within 250 feet of the reference line of public waters under this chapter, such as filling, grading and installing monitoring wells and other drainage structures as is consistent with its solid waste permit as issued by the department of environmental services. Under no circumstances shall the toe of any slope encroach within 150 feet of the reference line.

V. The following minimum standards shall apply to areas and activities within the protected shoreland with the exception of forest management that is not associated with shoreland development or land conversion, and is conducted in compliance with RSA 227-J:9; forestry conducted by or under the direction of a water supplier for the purpose of managing a water supply watershed; and agriculture conducted in accordance with best management practices as required by RSA 483-B:3, III:

(a) MAINTENANCE OF A WATERFRONT BUFFER.

(1) The waterfront buffer shall be those protected shorelands within 50 feet of the reference line. The purpose of this buffer shall be to protect the quality of public waters while allowing homeowner discretion with regard to water access, safety, viewscape maintenance, and lot design.

(2) Within the waterfront buffer all of the following prohibitions and limitations shall apply:

(A) No chemicals shall be applied, including pesticides or herbicides of any kind except as allowed under special permit issued by the division of pesticide control under rules adopted by the pesticide control board under RSA 541-A, or fertilizers of any kind except those specified in RSA 483-B:9, II(d).

(B) Rocks and stumps and their root systems shall be left intact in the ground unless removal is specifically approved by the department, pursuant to RSA 482-A or RSA 483-B:11, II.

(C) No natural ground cover shall be removed except as necessary for a foot path to water as provided under RSA 483-B:9, V(a)(2)(D)(viii), cutting those portions that have grown over 3 feet in height for the purpose of providing a view, or as specifically approved by the department, pursuant to RSA 482-A or 483-B:11, II.

(D) Starting from the northerly or easterly boundary of the property, and working along the shoreline, the waterfront buffer shall be divided into 50 by 50 foot segments. Within each segment a minimum combined tree and sapling score of at least 50 points shall be maintained. If for any reason there is insufficient area for a full segment, the number of points required to be maintained in that partial segment shall be proportional to that required of a full segment.

(i) Tree and sapling diameters shall be measured at 4 1/2 feet above the ground and are scored as follows:

Diameter Score

1 inch to 6 inches 1

greater than 6 inches to 12 inches 5

greater than 12 inches 10

(ii) Dead, diseased, or unsafe trees or saplings shall not be included in scoring.

(iii) If the total tree and sapling score in any 50 foot by 50 foot segment exceeds 50 points, then trees and saplings may be removed as long as the sum of the scores for the remaining trees and saplings in that segment does not total less than 50 points. Trees and

saplings may be removed from partial segments provided that the sum of the scores for the remaining trees and saplings in that partial segment is equal to or greater than the proportional point requirement.

(iv) The department may approve applications pursuant to RSA 482-A that include the planting of native trees and saplings as necessary to at least maintain either the existing combined tree and sapling score or the minimum score required. The department shall not approve any application that would result in a combined tree and sapling score less than the minimum score required where the segment initially meets the minimum score or would result in any reduction of the combined tree and sapling score where the segment does not initially meet the minimum score.

(v) Owners of lots that were legally developed prior to July 1, 2008 may maintain but not enlarge cleared areas, including but not limited to existing lawns and beaches, within the waterfront buffer. Conversion to or planting of cleared areas with native species of ground cover, shrubs, saplings, and trees is encouraged but shall not be required unless it is necessary to meet the requirements of subparagraphs (g)(2) or (g)(3), or RSA 483-B:11, II.

(vi) Normal trimming, pruning, and thinning of branches to the extent necessary to protect structures, maintain clearances, and provide views is permitted. Trimming, pruning, and thinning of branches for the purpose of providing views shall be limited to the bottom 1/2 of the trees or saplings.

(vii) When necessary for the completion of construction activities permitted in accordance with RSA 483-B:6, a temporary 12 foot wide access path shall be allowed. The access path shall be completely restored and replanted with native vegetation upon completion of construction except as allowed under subparagraph (viii).

(viii) A permanent 6-foot wide foot path to the water body, configured in a manner that will not concentrate storm water runoff or contribute to erosion, is allowed.

**(b) MAINTENANCE OF A NATURAL WOODLAND BUFFER.**

(1) A natural woodland buffer shall be maintained within 150 feet of the reference line. The first 50 feet of this buffer is designated the waterfront buffer and is subject to the additional requirements of subparagraph (a). The purpose of the natural woodland buffer shall be to protect the quality of public waters by minimizing erosion, preventing siltation and turbidity, stabilizing soils, preventing excess nutrient and chemical pollution, maintaining natural water temperatures, maintaining a healthy tree canopy and understory, preserving fish and wildlife habitat, and respecting the overall natural condition of the protected shoreland.

(2) Within the natural woodland buffer of a given lot:

(A)(i) For lots with one-half acre or less of land within the natural woodland buffer, the vegetation within at least 25 percent of the area outside the waterfront buffer shall be maintained in an unaltered state. Owners of lots legally developed prior to July 1, 2008 that do not comply with this standard are encouraged to, but shall not be required to, increase the percentage of area maintained in an unaltered state. The percentage of area maintained in an unaltered state on nonconforming lots shall not be decreased.

(ii) For lots with greater than one-half acre of land within the natural woodland buffer, the vegetation within at least 50 percent of the area outside the waterfront buffer, exclusive of impervious surfaces, shall be maintained in an unaltered state. Owners of lots legally developed prior to July 1, 2008 that do not comply with this standard are encouraged to, but shall not be required to, increase the percentage of area maintained in an unaltered state. The percentage of area maintained in an unaltered state on nonconforming lots shall not be decreased.

(B) Any person applying to the department for a septic system construction approval or alteration of terrain permit pursuant to RSA 485-A, or an excavating and dredging permit pursuant to RSA 482-A, within the protected shoreland shall include photographic



documentation of the natural woodland buffer.

(C) Dead, diseased, or unsafe, trees, limbs, saplings, or shrubs that pose an imminent hazard to structures or have the potential to cause personal injury may be removed regardless of any requirements that pertain to the natural woodland buffer under this chapter. Such exemptions shall not be used to contravene the intent of the law.

(D) Preservation of dead and living trees that provide dens and nesting places for wildlife is encouraged.

(E) Native species planting efforts that are beneficial to wildlife are encouraged.

(c) SEPTIC SYSTEMS.

(1) The subdivision of a parcel of land shall be subject to subdivision approval by the department of environmental services under RSA 485-A:29 if any portion of the land to be subdivided is within the protected shoreland.

(2) The following conditions, based on the characteristics of the receiving soil as they relate to U.S. Department of Agriculture, Natural Resources Conservation Service drainage classes, shall dictate the setback requirements for all new leaching portions of new septic systems, as follows:

(A) Adjacent to ponds, lakes, estuaries, and the open ocean.

(i) Where the receiving soil downgradient of the leaching portions of a septic system is a porous sand and gravel material with a percolation rate equal to or faster than 2 minutes per inch, the setback shall be at least 125 feet from the reference line;

(ii) For soils with restrictive layers within 18 inches of the natural soil surface, the setback shall be at least 100 feet from the reference line; and

(iii) For all other soil conditions, the setback shall be at least 75 feet from the reference line.

(B) Adjacent to rivers the setback shall be no less than 75 feet.

(3) The placement of all septic tanks and leaching portions of septic systems for replacement systems shall comply with the requirements of subparagraph (c)(2), to the maximum extent feasible.

(d) EROSION AND SILTATION.

(1) All new structures, modifications to existing structures, and excavation or earth moving within protected shoreland shall be designed and constructed in accordance with rules adopted by the department under RSA 541-A for terrain alteration under RSA 485-A:17, to manage stormwater and control erosion and sediment, during and after construction.

(2) New structures and all modifications to existing structures within the protected shoreland shall be designed and constructed to prevent the release of surface runoff across exposed mineral soils.

(3) A permit under RSA 485-A:17, I shall be required for improved, developed, or subdivided land whenever there is a contiguous disturbed area exceeding 50,000 square feet that is either partially or wholly within protected shoreland.

(e) MINIMUM LOTS AND RESIDENTIAL DEVELOPMENT. In the protected shoreland:

(1) The minimum size for new lots in areas dependent upon on-site septic systems shall be determined by soil type lot size determinations, as established by the department of environmental services under RSA 485-A and rules adopted to implement it.

(2) For projects in areas dependent upon on-site sewage and septic systems, the total number of residential units in the protected shoreland, whether built on individual lots or grouped as cluster or condominium development, shall not exceed:

(A) One unit per 150 feet of shoreland frontage; or

(B) For any lot that does not have direct frontage, one unit per 150 feet of lot width as measured parallel to the shoreland frontage that lies between the lot and the reference line.

(3) No lot having frontage on public waters, shall be created with less than 150 feet of shoreland frontage.

(4) Lots and residential units outside of the protected shoreland shall not be subject to this chapter.

(f) MINIMUM LOTS AND NON-RESIDENTIAL DEVELOPMENT. In the protected shoreland:

(1) The minimum size for new non-residential lots in areas dependent upon on-site septic systems shall be determined by soil type lot size determinations, as set forth under rules adopted under RSA 541-A.

(2) No lot having frontage on public water shall be created with less than 150 feet of shoreland frontage.

(3) Non-residential lots outside of the protected shoreland shall not be subject to this chapter.

(g) IMPERVIOUS SURFACES.

(1) Subject to subparagraph (2), no more than 30 percent of the area of a lot located within the protected shoreland shall be composed of impervious surfaces.

(2) If the impervious surface area will exceed 20 percent, a stormwater management system shall be implemented and maintained which is designed to infiltrate increased stormwater from development occurring after the effective date of this paragraph in accordance with rules established by the department under RSA 485-A:17. In addition, if the natural tree and sapling cover in the waterfront buffer does not meet the 50-point minimum score of RSA 483-B:9, V(a)(2)(D) in any segment, then such segment shall be planted, as determined by rule of the department, with native trees, saplings, or natural ground cover in sufficient quantity, type, and location either to meet the minimum score or to provide at least an equivalent level of protection as provided by the minimum score and shall be maintained in accordance with RSA 483-B:9, V(a).

(3) Property owners and developers are encouraged to seek creative solutions that utilize low impact development techniques.

(h) COMMON OWNERS AND RESIDENTIAL OR NON-RESIDENTIAL DEVELOPMENT. In the protected shoreland, waterfront parcels held in common by one or more owners of contiguous interior parcels may be developed, but only in a manner consistent with the provisions of this chapter. Care shall be taken for the adequate provision of parking, toilet facilities, and related support systems to minimize the project's impact on the public waters.

(i) The commissioner shall have the authority to grant variances from the minimum standards of this section. Such authority shall be exercised subject to the criteria which govern the grant of a variance by a zoning board of adjustment under RSA 674:33, I(b).

**Source.** 1991, 303:1. 1992, 235:12-18, 28, I. 1994, 383:7-14. 1995, 32:1; 206:2; 299:16. 1996, 17:4, 5, eff. June 14, 1996; 100:1, eff. May 15, 1996; 228:66, 108, eff. July 1, 1996; 251:22; 296:52, 53, eff. Aug. 9, 1996. 2002, 114:1, eff. July 2, 2002; 263:9, eff. July 17, 2002. 2007, 267:8, 9, eff. April 1 2008. 2008, 5:9, 10, eff. May 1, 2008; 5:20, 21, eff. July 1, 2008; 171:9-12, eff. July 1, 2008 at 12:01 a.m.

#### **483-B:6 Other Required Permits and Approvals. –**

I. Within the protected shoreland, any person intending to:

(a) Engage in any earth excavation activity shall obtain all necessary local approvals in compliance with RSA 155-E.

(b) Construct a water-dependent structure, alter the bank, or construct or replenish a beach shall obtain approval and all necessary permits pursuant to RSA 482-A.

(c) Install a septic system as described in RSA 483-B:9, V(c) shall obtain all permits pursuant to RSA 485-A:29.

(d) Conduct an activity resulting in a contiguous disturbed area exceeding 50,000 square feet shall obtain a permit pursuant to RSA 485-A:17.

(e) Subdivide land as described in RSA 483-B:9, V(e) and (f) shall obtain approval pursuant to RSA 485-A:29.

(f) Conduct an activity regulated under a local zoning ordinance shall obtain all necessary local approvals.

II. In applying for approvals and permits, pursuant to paragraph I, applicants shall demonstrate that the proposal meets or exceeds the development standards of this chapter. The department shall develop minimum standards for information to be required on or with all applications under paragraph I. The department or municipality shall grant, deny, or attach reasonable conditions to approvals or permits listed in subparagraphs I(a)-(f), to protect the public waters or the public health, safety, or welfare. Such conditions shall be related to the purposes of this chapter.

III. The commissioner shall have the sole authority to issue variances and waivers of the provisions of this chapter as specifically authorized by this chapter.

IV. No variance, permit, or approval issued by a municipality shall exempt the owner from obtaining any other necessary permit or approval from the department as required by this chapter.

**Source.** 1991, 303:1. 1992, 235:10. 1996, 17:3, eff. June 14, 1996. 2002, 263:8, eff. July 17, 2002. 2007, 267:7, eff. April 1, 2008. 2008, 5:8, eff. May 1, 2008; 5:19, eff. July 1, 2008.

#### **483-B:8 Municipal Authority. –**

I. Municipalities may adopt land use control ordinances relative to all protected shorelands which are more stringent than the minimum standards contained in this chapter.

II. Municipalities are encouraged to adopt land use control ordinances for the shorelands of water bodies and water courses other than public waters.

III. Municipalities in which protected shoreland is situated may enforce the provisions of this chapter by issuing cease and desist orders and by seeking injunctive relief or civil penalties as provided in RSA 483-B:18, III(a) and (b). Civil penalties and fines collected by the court shall be remitted within 14 days to the treasurer of the municipality prosecuting said violations, for the use of the municipality. Any municipality electing to enforce the provisions of this chapter shall send copies of any pleading to the attorney general at the time of filing. Municipalities bordering the same water body are encouraged to employ jointly a single code enforcement officer to monitor compliance.

IV. The authority granted to municipalities under this chapter shall not be interpreted to extend to RSA 430:28-48.

V. Municipalities bordering the same water body are encouraged to employ jointly a single code enforcement officer to monitor compliance.

**Source.** 1991, 303:1. 1992, 235:11, eff. Jan. 1, 1993.

## APPENDIX E

### HABITAT PARCEL FEASIBILITY ASSESSMENT

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**

**MERRIMACK RIVER PROJECT**

**FERC Project No. 1893**

**REPORT ON THE FEASIBILITY OF  
HABITAT AND SPECIES PROTECTION**

**PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE**

**MERRIMACK RIVER PROJECT**

**FERC Project No. 1893**

**REPORT ON THE FEASIBILITY OF  
HABITAT AND SPECIES PROTECTION**

**INTRODUCTION**

The Merrimack River Project (FERC Project No. 1893) is a federally licensed hydroelectric project owned and operated by Public Service Company of New Hampshire (PSNH). The Project is located on the Merrimack River in Merrimack and Hillsborough Counties, New Hampshire. On May 18, 2007 the Federal Energy Regulatory Commission (FERC) issued a new license (119 FERC ¶ 61,170) for the 29.9-megawatt (MW) Project. Article 407 of the project license requires PSNH to develop and file a Shoreline Management Plan (SMP) with FERC, prepared in consultation with agencies and interested parties. Article 407 stipulates that the PSNH shall file for Commission approval, a shoreline management plan (SMP) for the project. The SMP should include a report on the feasibility of protecting certain eagle habitat areas and Natural Heritage Inventory sites identified in the Endangered and Threatened Species Report included in PSNH's license application. The following summarizes PSNH's plan for addressing this requirement.

## **SUMMARY SITE REVIEW AND FEASIBILITY ASSESSMENT**

License Article 407(11) identifies eagle habitat and Natural Heritage Inventory sites to be assessed for feasibility of protection through potential acquisition of parcels, conservation easements or other appropriate means of protection. PSNH engaged Norton Asset Management of Manchester, New Hampshire to prepare a Property Inventory Catalogue and Preliminary Analysis of the identified parcels. The inventory identifies the area, location, zoning, owner(s), contact information, general description, status of the property and assessed value, as well as prospects and potential steps, time line and likelihood/probability of obtaining useful protection.

The results of this survey are summarized below:

### **(a)(Site 21)**

#### **Site Description and Ownership**

**Approximately nine (9) acres of known bald eagle roosting habitat in the City of Manchester (sheet 7).**

*Site 21 is owned by the Intervale Land Company and is an active nine hole public golf course. The golf course is a successful membership club with greens fees play. It has a clubhouse and maintenance facility. The assessed value of the property is \$1.6 million. Contacts for this property are the club president and Board of Directors.*

#### **Feasibility Assessment**

Purchase of this site is not feasible. It may be possible to negotiate an agreement that would provide additional protection for the large pine trees on this site that provide roosting habitat. (Trees within the applicable shoreland buffer are currently offered some protection by state law and regulations.)

**LOW PRIORITY**

### **(b)(Site 20)**

#### **Site Description and Ownership**

**Approximately five (5) acres of potential bald eagle roosting habitat in the Town of Hooksett which are adjacent to three (3) additional acres that are already conservation lands (sheet 7).**

*Site 20 is made up of two lots (6.5 acres and 2.0 acres) owned by Manchester Water Works. Lot 12 is a long, narrow lot generally parallel to the river bank. Lot 11 is the site of a water pumping station with a pipe under the river connecting Hooksett to Manchester. Hooksett has five local water precincts but relies on Manchester to supply new commercial and industrial development. Lot 12 will be the future site of a Water Treatment Plant and Lot 11 will be the future site of a water intake facility with a pipe under the river connecting Hooksett to Manchester. The combined property is assessed at approximately \$240,000.*

#### **Feasibility Assessment**

Purchase of this site is not feasible. It may be possible to negotiate an agreement that would

provide additional protection for the roosting habitat at this site. (Trees within the applicable shoreland buffer are currently offered some protection by state law and regulations.)

*LOW PRIORITY*

**(c)(Sites 18, 19)**

**Site Description and Ownership**

**The Natural Heritage Inventory site for blunt leaved milkweed in the Town of Hooksett (sheet 6).**

*Site 18 is part of a larger 39 acre parcel owned by the Boston and Maine Railroad. It is an active rail line providing rail service for both coal trains and short haul freight trains. The rail corridor also has active fiber optic cables buried parallel to the tracks.*

*Site 19, approximately 1.4 acres is owned by the Town of Hooksett, NH and is narrow strip of land between the railroad right of way on the easterly side and the Merrimack River on the west side. This property appears to be undevelopable land with no access. Site 18 is part of a larger 39 acre parcel owned by the Boston and Maine Railroad. It is an active rail line providing rail service for both coal trains and short haul freight trains. The rail corridor also has active fiber optic cables buried parallel to the tracks.*

**Feasibility Assessment**

It seems likely that the property owned by the Town of Hooksett could be purchased or a conservation easement negotiated. However, as this is undevelopable land with no access owned by the Town, this parcel is not a high priority. It is not feasible or practical to purchase or protect the property owned by the Boston and Maine railroad and currently providing rail service. The Boston and Maine Railroad does not generally agree to encumber its real estate assets.

*LOW PRIORITY*

**(d)(Site 17)**

**Site Description and Ownership**

**The Natural Heritage Inventory site for sweet goldenrod, Southern New England dry oak/pine forest on sandy/gravelly soils in the Town of Hooksett (sheet 6).**

**Feasibility Assessment**

Purchase of this site is not feasible. PSNH's expert has advised that the current property owner is not likely to be interested in easements or other restrictions on this property.

*LOW PRIORITY*

**(e)(Site 18)**

**Site Description and Ownership**

**The Natural Heritage Inventory site for wild lupine in the Town of Hooksett (sheet 6).**

*Site 18 is part of a larger 39 acre parcel owned by the Boston and Maine Railroad. It is*



*an active rail line providing rail service for both coal trains and short haul freight trains. The rail corridor also has active fiber optic cables buried parallel to the tracks.*

Feasibility Assessment

It is not feasible or practical to purchase or protect the property owned by the Boston and Maine railroad and currently providing rail service. The Boston and Maine Railroad does not generally agree to encumber its real estate assets.

*LOW PRIORITY*

**(f)(Site 16)**

Site Description and Ownership

**Approximately five (5) acres of potential bald eagle roosting habitat in the Town of Hooksett, which includes a Natural Heritage Inventory site for the noctuid moth, the barrens xylotype, the northing blazing star, and New England pitch pine/scrub oak barrens (sheet 6).**

*Site 16 is a one acre industrial parcel which appears to have been subdivided from a larger adjacent parcel previously owned by Manchester Sand and Gravel. There is no clear access or right of way to provide frontage for development. This parcel is assessed at approximately \$160,000.*

Feasibility Assessment

*This site requires research to determine who owns the additional acreage.*

*ADDITIONAL RESEARCH NECESSARY*

**(g)(Site 15)**

Site Description and Ownership

**The Natural Heritage Inventory site for golden heather in the Town of Hooksett (sheet 6).**

Site 15 is part of a 120 acre parcel that is an active sand and gravel pit, asphalt plant and asphalt recycling facility. 96 acres are permitted for development and approximately 27 acres (1/3 of the site) has been reclaimed. The property is assessed at approximately \$2.5 million.

Feasibility Assessment

It is not feasible or practical to purchase this entire parcel. It may be possible to negotiate conservation restrictions on the reclaimed (already mined) portions of the property.

*MEDIUM PRIORITY*

**(h)(Sites 12, 13, 14)**

Site Description and Ownership

**Approximately 12 acres of potential bald eagle roosting habitat in the Town of Hooksett.**

*This area is made up of parts of three parcels of property: (1) approximately 5 acres of reclaimed sand pit, currently vacant, zoned commercial, abutting the I-93 ROW with steep slopes and about 1.5 acres developable, currently assessed at \$166,000; (2) a 54 acre former gravel pit, currently under option; and (3) a 72 acre parcel owned by the State of New Hampshire, Bureau of Turnpikes, Department of Transportation.*

#### Feasibility Assessment

This area requires additional research to more clearly identify the areas of eagle roosting habitat on each individual parcel. At the present time, purchase or protection of all or part of the 54 acre parcel under option is not practical. Purchase of the parcel owned by the State of New Hampshire, Bureau of Turnpikes, Department of Transportation is similarly not feasible. Negotiating an agreement for protection of bald eagle roosting habitat on this state owned property may be possible, but would be very time consuming and ultimately require approval of the Governor and Council. Additional research is necessary to determine if the habitat on the five acre parcel is sufficient to warrant further consideration of purchase of this parcel, with or without protection of adjacent areas.

#### *ADDITIONAL RESEARCH NECESSARY*

#### **(i)(Sites 10, 11)**

##### Site Description and Ownership

**The Natural Heritage Inventory site for Southern New England lake sediment/river terrace forest in the Town of Hooksett (sheet 5).**

*This area is made up of two single family residential lots, each approximately one half an acre. This site does not appear to have been correctly identified.*

#### Feasibility Assessment

This site has either been eliminated by development or has been misidentified. Additional research is necessary to assess this area

#### *ADDITIONAL RESEARCH NECESSARY*

#### **(j)(Sites 7, 8, 9)**

##### Site Description and Ownership

**Approximately twelve (12) acres of known bald eagle roosting habitat in the Town of Hooksett, which includes a Natural Heritage Inventory site for golden heather (sheet 5).**

*This site is made up of three parcels: (1) an 18 acre parcel of vacant wooded and farm land, including about 7 acres of wetland currently assessed at \$100,000; (2) a 20 acre undeveloped parcel zoned industrial and assessed as residential as highest and best use at \$118,000, and (3) a 20 acre apartment/residential condominium complex*

#### Feasibility Assessment

This area requires additional research to more clearly identify the areas of eagle roosting habitat on each individual parcel.

*ADDITIONAL RESEARCH NECESSARY/HIGH PRIORITY*

**(k)(PSNH Owned)**

Site Description and Ownership

**A section of shoreline that is identified as bald eagle perching and foraging habitat on PSNH owned land in the Town of Bow (sheet 4).**

*This site is on the north end of PSNH's Merrimack Generating Station property.*

Feasibility Assessment

PSNH will protect this section of shoreline under the classification and permitting process of the Shoreline Management Plan.

*HIGH PRIORITY*

**(l)(Sites 5, 6)**

Site Description and Ownership

**Approximately three (3) acres of potential bald eagle roosting habitat in the Town of Pembroke, which are adjacent to 5.5 additional acres that are already conservation lands (sheet 4).**

*This area consists of: (1) unbuildable conservation land gifted to the Town of Pembroke, and (2) ) part of a 93 acre parcel of undeveloped land in current use that is logged periodically and believed to be subject to a right of first refusal*

Feasibility Assessment

Providing additional protection with respect to conservation land owned by the Town of Pembroke is not necessary. Purchase or negotiation of additional protection with respect to property subject to a right of first refusal does not appear feasible.

*LOW PRIORITY*

**(m)(Site 4)**

Site Description and Ownership

**The Natural Heritage Inventory site for common moorhen in the City of Concord (sheet 3).**

*This 103 acre property is owned by the City of Concord and is the site of the City's main wastewater treatment plant.*

Feasibility Assessment

Purchase of this property does not appear to be feasible. Negotiation of additional protection with respect to undeveloped areas of the site may be feasible but does not appear to be necessary.

*LOW PRIORITY*

**(n)(Site 3)**

Site Description and Ownership

**The Natural Heritage Inventory site for golden heather, wild lupine, New England dry riverbluff opening in the City of Concord (sheet 2).**

*This 22 acre site is owned by the City of Concord. It is known as the City's "stump dump" and has most recently been used as a storage site for used asphalt and road construction debris.*

Feasibility Assessment

Purchase or protection of this site does not appear to be feasible.

*LOW PRIORITY*

**(o)(Site 2)**

Site Description and Ownership

**The Natural Heritage Inventory site for Southern New England floodplain forest in the City of Concord (sheet 2).**

*This area is part of a 196 acre parcel that is owned by the State of New Hampshire, Community College System of New Hampshire and is the site of the New Hampshire Technical Institute. The area of interest is in the city's 100 year flood zone and deemed not developable.*

Feasibility Assessment

Purchase of this site is not feasible and additional protection of the site may be possible but does not appear to be necessary.

*LOW PRIORITY*

**(p)(Site 1)**

Site Description and Ownership

**An approximately five (5) acre island in the City of Concord, which is identified as both potential roosting and potential nesting habitat for bald eagles (sheet 1).**

*Site 1 is believed to be owned by the State of New Hampshire Department of Resources and Economic Development. It is part of a 75 acre parcel acquired in 1966. The site is subject to flooding and not developable. The entire parcel is currently assessed at approximately \$135,000. Current property uses are light recreation (canoeing, kayaking, no camping) and conservation. The property has little risk of development.*

Feasibility Assessment

Purchase of this property does not appear to be feasible. Negotiation of additional protection may be feasible but does not appear to be necessary.

*LOW PRIORITY*

**(q)(Site 1)**

Site Description and Ownership

**Approximately six (6) acres of potential roosting and potential nesting habitat for**

## **bald eagles in the City of Concord (sheet 1).**

*Site 1 is believed to be owned by the State of New Hampshire Department of Resources and Economic Development. It is part of a 75 acre parcel acquired in 1966. The site is subject to flooding and not developable. The entire parcel is currently assessed at approximately \$135,000. Current property uses are light recreation (canoeing, kayaking, no camping) and conservation. The property has little risk of development.*

### Feasibility Assessment

Purchase of this property does not appear to be feasible. Negotiation of additional protection with respect to undeveloped areas of the site may be feasible but does not appear to be necessary.

*LOW PRIORITY*

## **PROPOSED FUTURE ACTIONS**

PSNH proposes to complete the additional research identified within 90 days of filing the SMP with FERC and provide the results to the consulting parties, and to pursue purchase, conservation easements or other protection with respect to areas identified as medium and high priority. PSNH will report progress regarding medium and high priority items to the consulting parties and the Commission every six months following approval of the SMP until the items have been resolved by purchase, execution of conservation easements or other protections, or a determination has been made that such action is no longer considered feasible.

With respect to parcels identified as low priority, PSNH will advise property owners of the habitat value of their property and request that they consider negotiation of conservation easements or other protection. PSNH will pursue negotiation of conservation easements with those parties that respond favorably and will report progress with respect to these areas to the consulting parties and the Commission annually until the items have been resolved by execution of conservation easements or other protections, or a determination has been made that such action is no longer considered feasible.

APPENDIX F  
COMMENTS ON DRAFT SMP



**Public Service  
of New Hampshire**

PSNH Energy Park  
780 North Commercial Street, Manchester, NH 03101

Public Service Company of New Hampshire  
P.O. Box 330  
Manchester, NH 03105-0330  
(603) 669-4000  
[www.psnh.com](http://www.psnh.com)

The Northeast Utilities System

March 2, 2009

Re: Notice of Availability of Draft Shoreline Management Plan  
Public Service Company of New Hampshire  
Merrimack River Project, FERC Project No. 1893

To the Consulting Parties  
on the attached Service List;

The Merrimack River Project (FERC Project No. 1893) is a federally licensed hydroelectric project owned and operated by Public Service Company of New Hampshire (PSNH). The project includes the Amoskeag, Hooksett and Garvins Falls Dams. The project boundary extends along the shoreline from the islands below the Amoskeag Dam in Manchester, New Hampshire to the breached Sewall's Falls dam in Concord, New Hampshire, in the cities of Manchester and Concord, and the towns of Hooksett, Allentown, Pembroke and Bow, New Hampshire.

On May 18, 2007 the Federal Energy Regulatory Commission (FERC) issued a new license for the 29.9-megawatt (MW) project. Development of a Shoreline Management Plan (SMP) is required by the terms and conditions of the license. Article 407 of the project license requires PSNH to develop and file an SMP with FERC, prepared in consultation with agencies and interested parties.

FERC typically requires SMPs for projects with significant undeveloped segments of shoreline in order to assure management of shoreline use within the project boundary. FERC's intent is that licensees develop an SMP that provides a comprehensive set of management guidelines and tools necessary to manage various shoreline uses within a project boundary in a manner that affords protection while addressing both public access needs and project operations and maintenance.

PSNH has prepared a draft SMP, incorporating specific requirements identified in Article 407. The draft SMP, shoreline classification maps and additional information regarding SMP development is available for review and comment at [www.psnh.com](http://www.psnh.com). A hard copy of the SMP and related classification maps has been provided for your convenience.

Comments regarding the draft SMP are due on or before **April 17, 2009**. Comments may be filed at [smp@psnh.com](mailto:smp@psnh.com) or may be mailed to James J. Kearns, PSNH,

780 North Commercial Street, Manchester, N.H. 03101. Comments received will be addressed in the final plan filed with the FERC on or before May 19, 2009.

PSNH plans to schedule a meeting of the consulting parties to discuss the plan in late March or early April, and will be contacting you shortly regarding this meeting. Parties desiring additional information or interested in meeting regarding the plan prior to that time may contact me at 603-634-2936. If you have any questions regarding the above, please let me know.

Very truly yours,

A handwritten signature in black ink, appearing to read "James J. Kearns". The signature is written in a cursive, flowing style with a long horizontal line extending from the end.

James J. Kearns  
Project Manager



SERVICE LIST  
Merrimack River Project  
FERC Project No. 1893  
Shoreline Management Plan  
Consulting Parties

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U.S. Fish and Wildlife Service  
300 Westgate Center Drive  
Hadley, MA 01035-9587

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U.S. Fish and Wildlife Service  
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NHDES Shoreland Program  
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Concord, NH 03302-0095

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Executive Director  
NH Fish and Game Department  
11 Hazen Drive  
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U.S. Fish and Wildlife Service  
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Concord, NH 03302-0095

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Wetlands Program  
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Harry T. Stewart,  
Director, Water Division  
NHDES  
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Concord, NH 03302

Jocelyn Degler  
NHDES  
29 Hazen Drive; PO Box 95  
Concord, NH 03302-0095

Public Service Company of New Hampshire  
Merrimack River Hydroelectric Project  
FERC Project No. 1893

**NOTICE OF AVAILABILITY OF**  
**DRAFT SHORELINE MANAGEMENT PLAN AND**  
**REQUEST FOR COMMENTS**

The Merrimack River Project (FERC Project No. 1893) is a federally licensed hydroelectric project owned and operated by Public Service Company of New Hampshire (PSNH). The project includes the Amoskeag, Hooksett and Garvins Falls Dams. The project boundary extends along the shoreline from the islands below the Amoskeag Dam in Manchester, New Hampshire to the breached Sewall's Falls dam in Concord, New Hampshire, in the cities of Manchester and Concord, and the towns of Hooksett, Allenstown, Pembroke and Bow, New Hampshire.

On May 18, 2007 the Federal Energy Regulatory Commission (FERC) issued a new license for the 29.9-megawatt (MW) project. Development of a Shoreline Management Plan (SMP) is required by the terms and conditions of the license. Article 407 of the project license requires PSNH to develop and file an SMP with FERC, prepared in consultation with agencies and interested parties.

FERC typically requires SMPs for projects with significant undeveloped segments of shoreline in order to assure management of shoreline use within the project boundary. FERC's intent is that licensees develop an SMP that provides a comprehensive set of management guidelines and tools necessary to manage various shoreline uses within a project boundary in a manner that affords protection while addressing both public access needs and project operations and maintenance.

PSNH has prepared a draft SMP, incorporating specific requirements identified in Article 407. The draft SMP, shoreline classification maps and additional information regarding SMP development is available for review and comment at [www.psnh.com](http://www.psnh.com). Paper copies of the SMP may be requested through [smp@psnh.com](mailto:smp@psnh.com). PSNH will address comments received in the Final SMP, which will be filed with FERC for review and approval on or before May 19, 2009.

Comments regarding the draft SMP are due on or before **April 17, 2009**. Comments may be filed at [smp@psnh.com](mailto:smp@psnh.com) or may be mailed to PSNH, 780 North Commercial Street, Manchester, N.H. 03101, Attention: James J. Kearns. Parties desiring additional information or interested in meeting regarding the plan should contact PSNH at [smp@psnh.com](mailto:smp@psnh.com).

SERVICE LIST  
Merrimack River Project  
FERC Project No. 1893  
Shoreline Management Plan  
Letter Notice List

Carlos P. Baia  
Deputy City Manager-Development  
41 Green Street  
Concord, NH 03301

Conservation Commission  
City of Concord  
41 Green Street  
Concord, NH 03301

Zoning Board of Adjustment  
City of Concord  
41 Green Street  
Concord, NH 03301

Planning Board  
City of Concord  
41 Green Street  
Concord, NH 03301

Jim Pitts  
Town Manager  
Town of Bow  
10 Grandview Road  
Bow, NH 03304

Nancy Rheinhardt, Chair  
Bow Conservation Commission  
10 Grandview Road  
Bow, NH 03304

Harry Hadaway, Chair  
Bow Zoning Board of Adjustment  
10 Grandview Road  
Bow, NH 03304

Arthur Cunningham, Chair  
Bow Planning Board  
10 Grandview Road  
Bow, NH 03304

David Jodoin  
Town Administrator  
Town of Hooksett  
35 Main Street  
Hooksett, NH 03106

Jo Ann Duffy  
Town Planner  
Town of Hooksett  
35 Main Street  
Hooksett, NH 03106

Hooksett Conservation Commission  
35 Main Street  
Hooksett, NH 03106

Hooksett Zoning Board of Adjustment  
35 Main Street  
Hooksett, NH 03106

Hooksett Planning Board  
35 Main Street  
Hooksett, NH 03106

Kelley Collins  
Town of Allenstown  
16 School Street  
Allenstown, NH 03275

Conservation Commission  
Town of Allenstown  
16 School Street  
Allenstown, NH 03275

Zoning Board of Adjustment  
Town of Allenstown  
16 School Street  
Allenstown, NH 03275

Planning Board  
Town of Allenstown  
16 School Street  
Allenstown, NH 03275

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Town Administrator  
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311 Pembroke Street  
Pembroke, NH 03275

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Town of Pembroke  
311 Pembroke Street  
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Zoning Board of Adjustment  
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311 Pembroke Street  
Pembroke, NH 03276

Planning Board  
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One City Hall Plaza  
Manchester, NH 03101

Pam Goucher  
Planning Director  
City of Manchester  
One City Hall Plaza  
Manchester, NH 03101

Manchester Conservation Commission  
c/o City Clerk's Office  
One City Hall Plaza  
Manchester, NH 03101

Zoning Board of Adjustment  
City of Manchester  
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Central NH Regional Planning  
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Sandra Crystal  
Concerned Citizens of Bow  
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Concord, NH 03302

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Greater Concord Chamber of  
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40 Commercial Street  
Concord, NH 03301

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Mary Stuart Gile  
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Concord, NH 03301-6930

Tara G. Reardon  
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Robert W. Williams  
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Concord, NH 03301-5410

Jessie L. Osborne  
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Chip L. Rice  
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Mary Jane Wallner  
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Rick H. Watrous  
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Sylvia B. Larson  
23 Kensington Road  
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# MANCHESTER WATER WORKS

281 LINCOLN ST., MANCHESTER, NEW HAMPSHIRE 03103-5093 Tel. (603) 624-6494

April 9, 2009

Mr. James J. Kearns  
Public Service Co. of New Hampshire  
780 N. Commercial St.  
Manchester, NH 03101

**RE: COMMENTS RELATIVE TO THE DRAFT SHORELAND MANAGEMENT PLAN**

Dear Jim:

The primary concern Manchester Water Works (MWW) has relative to the draft Shoreland Management Plan (SMP) is similar to the comment we provided on May 31, 2007, relative to the FERC order of May 18, 2007 issuing PSNH a new license to operate its Merrimack River hydro facilities. As in the Licensing Order, there is no note relative to the PSNH/MWW Water Diversion Agreement Amendment of May 25, 2005. Table 7.1-1 identifies uses allowed within the project boundary under Article 710 of the project license and indicates "water intake or pumping facilities that do not extract more than 1 MGD from a project impoundment is an allowable use without prior approval from FERC". Page 7-5 of the plan also states that "The decision whether to grant or deny a permit is based on review of the probable impact of the proposed activity and its intended use" and lists one of the proposed activities as "water supply and conservation". MWW believes that the PSNH/MWW Water Diversion Agreement of May 25, 2005 should be referenced and taken into account in the SMP.

Appendix E of the SMP on a page titled Summary Site Review and Feasibility Assessment describes the Manchester Water Works' property as site 20. The description states "Lot 11 is the site of a water pumping station with a pipe under the river connecting Hooksett to Manchester". The description also indicates that "Lot 12 is believed to be undevelopable". In order to be consistent with the Water Diversion Agreement Amendment, this language should be revised to state that "Lot 12 will be the future site of a Water Treatment Plant and Lot 11 will be the future site of a water intake facility with pipe under the river connecting Hooksett to Manchester".

The final revision we would suggest is on page 5-2 adding the word "public" so the second sentence reads "Accordingly, the integrated use classification acknowledges and accommodates the presence of existing and allows for potential future private, "public" and commercial shoreline uses".

MWW is still concerned that the Water Diversion Agreement as amended remains valid, it constitutes a FERC approved reasonable use of project waters, and that its provisions also be stated in the Shoreline Management Plan.

Sincerely,

Robert Beaurivage, P.E.  
Assistant Director

cc: Thomas M. Bowen, P.E.  
David Paris  
Richard Samuels, Esq.

**BOARD OF WATER COMMISSIONERS**

LOUIS C. D'ALLESANDRO  
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THOMAS M. BOWEN, P.E.  
Director and Chief Engineer

ROBERT BEAURIVAGE, P.E.  
Asst. Director

To:  
Mr. James J. Kearns  
PSNH  
780 North Commercial Street  
Manchester, NH 03101

April 14, 2009

From:  
Edward Valade  
87 Kimball Drive  
Hooksett, NH 03106  
603 644 0157

The following are my comments to the "Draft Shoreline Management Plan" (SMP)

The two most important parts of the SMP, Table 5.1-1 Allowable Uses by Shoreline Classification and the Shoreline Management Classification Maps Appendix A are depicted in such a way as to be confusing.

The color coding for Table 5.5-1 has Integrated Use as blue, Resource Management as Green and Project Works as red.

The color coding for the Appendix A maps indicates Integrated Use as green, Resource Management as red and Project Works as blue.

To eliminate any possible confusion, the color coding should be consistent.

Table 5.5-1 indicates a footnote 11 under the heading of "Structures to Accommodate private/residential water withdrawal". I could not find a footnote 11.

Footnote 5 of Table 5.5-1 indicates a link to DES Wetland Bureau Fact Sheets. I found this link no longer available, and was sent to the DES homepage.

Section 5.0 defines the three classifications used in the SMP, but not how the classification criteria was applied. For example, my property on 87 Kimball Drive as shown on map 7 is classified as Resource Management. This classification indicated my property is either a wetland, steep slope, or sensitive area, etc. I believe this classification does not apply to my Merrimack River shore frontage. The footnotes at the bottom of page 5-5 appear to indicate what document was used to determine the classification, but the footnotes should be revised to include where to obtain this information. Without being able to obtain this information, I can not understand why the SMP defines my river frontage as a Resource Management area.

Section 5.5.2.2 states: "While segments of the Project boundary classified as Resource Management are relatively limited," the maps of Appendix A indicate that the vast majority of the Merrimack River shoreline is classified as Resource Management. Could there possibly be an error in the SMP caused by the color coding between the maps and Table 5.5-1, or is this statement incorrect?

Additional Comments:

I believe PSNH did not sufficiently inform the Merrimack River property owners and concerned individuals about the SMP and the implication it will have on them. This is especially true if the majority of the river is classified as Resource Management. My reason for the statement is based on the following;

My wife and I attended the preliminary meeting held at the NH Fish & Game building in the spring of 2008. We signed an attendance sheet and were told by a PSNH representative that we would be kept informed on the progress of the SMP and be made aware of the draft SMP. This did not happen. I just happened to see the legal notice for the draft SMP among the numerous mortgage foreclosures in the Manchester Union Leader.

I had a problem downloading the SMP from the PSNH website, and requested by e-mail to [SMP@psnh.com](mailto:SMP@psnh.com) a copy of the SMP as indicted in the legal notice. I did not receive a SMP copy and sent a follow up e-mail again requesting a copy of the SMP, plus a reply from PSNH indicating they received my request. To date I have not received a reply. I had to use a neighbor's computer to review the SMP

During the proposed Merrimack River draw down of 2007 and the actual draw down in 2008, PSNH informed the Merrimack River property owner by taking out specific advertisements in the Union Leader. This draw down having only a summer's impact on the river property owners was publicized. The SMP which will have a major impact forever on the property owner is not being brought forward in the same manner as the river draw down notification.

Is it possible to send me a copy of the draft SMP, and to keep me up-to-date on the on scheduled public meetings and the progress, including any revision to the draft SMP?

Ed Valade

Edward Valade 4/14/09

---

**Subject:** FW: PSNH Shoreline Management Plan

"Carol B  
Henderson"  
<Carol.Henderson@  
wildlife.nh.gov>  
04/16/2009 10:59  
AM

<smp@nu.com>  
Curtis R. Mooney/NUS@NU  
Subject  
PSNH Shoreline Management Plan

To  
cc

Dear Mr. Kearn:

I have reviewed the draft PSNH Shoreline management plan and I offer the following comments:

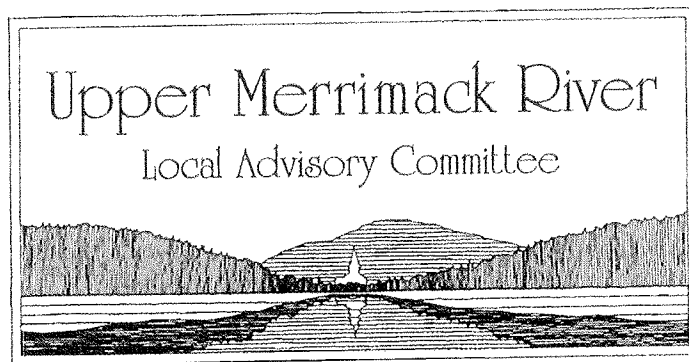
1. Pg 4, #4 of the Bald Eagle Management Plan- referring to proposed uses within the Integrated areas. Although proposed uses will be reviewed by PSNH and DES for projects requiring a Wetlands permit, there still is a potential for large trees to be cut because of a proposed water dependent structure permitted under 483-B:9 (c). My suggestion would be to add "review and/or locate water dependent structures to minimize impacts to all large trees prior to the approval of the water dependent structure.". This would help avoid and protect any potential uses of large trees by eagles for roosting. This should also be mentioned in Section 5 of the Shoreline Management Plan;
2. Page 5-9, Section 5.2 -Prohibited Activities -I agree with the provisions in this section as it relates to native shoreline and aquatic plants; however, there should be some thought on the management of invasive species that may occur in the river, i.e. rock snot (*Didymosphenia geminata*). There should be some reference that PSNH would work in concert with DES's, Exotic species program regarding aquatic plants etc, which may involve herbicide treatments for eradication or other mechanical instruments for controlling aquatic invasive plants. This section would eliminate any type of control methods, including the exotics. Also, there should be some discussion and/or suggestions for the control of terrestrial plants in the draft management plan, which is presently missing.

Overall, I think that the draft management plan addresses many of the important concerns for management of the Project Boundary under PSNH jurisdiction for the Merrimack River. If there are any questions or concerns regarding these comments, I will be more than happy to provide further clarification on this draft plan at the scheduled meeting with staff from PSNH and others on April 29th, 2009. Thank you for the opportunity to provide comments and I look forward to the meeting on the 29th. Regards, Carol Henderson, NH Fish and Game

\*\*\*\*\*

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\*\*\*\*\*



BOSCAWEN  
BOW  
CANTERBURY  
CONCORD  
FRANKLIN  
NORTHFIELD

UMRLAC, PO Box 3019, Boscawen, NH 03303

April 16, 2009

Mr. James J. Kearns  
Public Service Company of New Hampshire  
Via email

RE: Merrimack River Project – FERC Project NO. 1893 -- Draft Shoreline Management Plan

Dear Mr. Kearns,

At its April 13, 2009 meeting, the Upper Merrimack River Local Advisory Committee (UMRLAC) reviewed the *Shoreline Management Plan for Merrimack River Project* (SMP), prepared by Public Service Company of New Hampshire (PSNH). UMRLAC's questions and requests are as follows:

1. Under Section 1.2, the second paragraph states, "Major tributaries in the Project vicinity include the Turkey River (drainage area of 91.4 sq. mi.), which enters the Merrimack River from the east just below Garvins Falls Dam." Given the drainage area size and location, this appears to be a reference to Soucook not the Turkey River.
2. Section 4.3 – Recreation: UMRLAC requests that PSNH incorporate a portage improvement directive within the body of the SMP for the Garvins Falls Project site in Bow. The current portage opportunities at this site are not consistent with creating recreational connectivity along the Merrimack River at Garvins Falls.
3. Section 5.1.1.2 discusses PSNH review and approval of uses within the FERC Project boundary. How are permits for structures, and uses within the Project area submitted to PSNH, and how do potential applicants know about this requirement? The UMRLAC has not seen PSNH listed on any recent permit application notification lists that involved multiple reviewers and approvals. The recently approved Concord Crew Club structure in Concord is a good example. Did this project require PSNH approval?
4. Was the *Upper Merrimack Management and Implementation Plan* (September 2007, [www.merrimackriver.org](http://www.merrimackriver.org)) considered in the SMP process? The UMRLAC requests that the Plan be referenced in the SMP and that PSNH identify and include alignment of the SMP goals and objectives with those of the Management Plan. The UMRLAC would be happy to work with PSNH on this task.

The UMRLAC appreciates the opportunity to submit these comments based upon the review of the SMP and looks forward to a response from you. Thank you.

Sincerely,

Michele L. Tremblay  
Chair

CC: Steve Couture, Rivers Coordinator NHDES



# MANCHESTER WATER WORKS

281 LINCOLN ST., MANCHESTER, NEW HAMPSHIRE 03103-5093 Tel. (603) 624-6494

April 9, 2009

Mr. James J. Kearns  
Public Service Co. of New Hampshire  
780 N. Commercial St.  
Manchester, NH 03101

**RE: COMMENTS RELATIVE TO THE DRAFT SHORELAND MANAGEMENT PLAN**

Dear Jim:

The primary concern Manchester Water Works (MWW) has relative to the draft Shoreland Management Plan (SMP) is similar to the comment we provided on May 31, 2007, relative to the FERC order of May 18, 2007 issuing PSNH a new license to operate its Merrimack River hydro facilities. As in the Licensing Order, there is no note relative to the PSNH/MWW Water Diversion Agreement Amendment of May 25, 2005. Table 7.1-1 identifies uses allowed within the project boundary under Article 710 of the project license and indicates "water intake or pumping facilities that do not extract more than 1 MGD from a project impoundment is an allowable use without prior approval from FERC". Page 7-5 of the plan also states that "The decision whether to grant or deny a permit is based on review of the probable impact of the proposed activity and its intended use" and lists one of the proposed activities as "water supply and conservation". MWW believes that the PSNH/MWW Water Diversion Agreement of May 25, 2005 should be referenced and taken into account in the SMP.

Appendix E of the SMP on a page titled Summary Site Review and Feasibility Assessment describes the Manchester Water Works' property as site 20. The description states "Lot 11 is the site of a water pumping station with a pipe under the river connecting Hooksett to Manchester". The description also indicates that "Lot 12 is believed to be undevelopable". In order to be consistent with the Water Diversion Agreement Amendment, this language should be revised to state that "Lot 12 will be the future site of a Water Treatment Plant and Lot 11 will be the future site of a water intake facility with pipe under the river connecting Hooksett to Manchester".

The final revision we would suggest is on page 5-2 adding the word "public" so the second sentence reads "Accordingly, the integrated use classification acknowledges and accommodates the presence of existing and allows for potential future private, "public" and commercial shoreline uses".

MWW is still concerned that the Water Diversion Agreement as amended remains valid, it constitutes a FERC approved reasonable use of project waters, and that its provisions also be stated in the Shoreline Management Plan.

Sincerely,

Robert Beaurivage, P.E.  
Assistant Director

cc: Thomas M. Bowen, P.E.  
David Paris  
Richard Samuels, Esq.

**BOARD OF WATER COMMISSIONERS**

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Director and Chief Engineer

ROBERT BEAURIVAGE, P.E.  
Asst. Director

---

**Subject:** FW: Comments on the SMP from the Concord Conservation Commission

From: Woodward, Douglas  
Sent: Thursday, April 16, 2009 5:01 PM  
To: 'smp@psnh.com'  
Subject: Comments on the SMP from the Concord Conservation Commission

Dear Mr. Kearns:

the following comments on the SMP were prepared by, and are submitted on behalf of, the City of Concord Conservation Commission:

1. On page 1-3, under Section 1.2, second paragraph, third sentence: The Turkey River enters the Merrimack from the west above the Garvins Falls Dam (not from the east below the dam). No mention is made of the Soucook River (a NH 4th order stream) which enters the Merrimack from the east below the Garvins Falls Dam.
2. On page 4-1, under Section 4.1.1, first paragraph, first sentence: "...smallmouth and largemouth bass..."
3. On page 7-9 and 7-10, under 7.7.3, first paragraph, third sentence: The local conservation commissions do not grant approvals, they are advisory only. Local approvals may be vested in the planning board.

Thank you for your consideration,

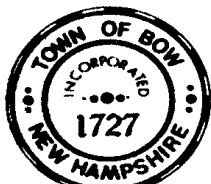
Douglas G. Woodward  
City Planner  
City of Concord, NH  
603-225-8515

\*\*\*\*\*  
This e-mail, including any files or attachments transmitted with it, is confidential and intended for a specific purpose and for use only by the individual or entity to whom it is addressed. Any disclosure, copying or distribution of this e-mail or the taking of any action based on its contents, other than for its intended purpose, is strictly prohibited. If you have received this e-mail in error, please notify the sender immediately and delete it from your system. Any views or opinions expressed in this e-mail are not necessarily those of Northeast Utilities, its subsidiaries and affiliates (NU). E-mail transmission cannot be guaranteed to be error-free or secure or free from viruses, and NU disclaims all liability for any resulting damage, errors, or omissions.  
\*\*\*\*\*



# TOWN OF BOW

*Planning Board*



Municipal Office Building  
10 Grandview Road  
Bow, NH 03304

Tel: (603) 225-3008  
Fax: (603) 225-5428  
commdevel@bow-nh.gov  
planassist@bow-nh.gov

April 17, 2009

Mr James J Kearns, Project Manager  
Hydro Re-licensing  
Public Service Company of New Hampshire  
780 N Commercial Street  
Manchester, NH 03101

Re: Comments on Draft Shoreline Management Plan for PSNH Merrimack River  
Hydroelectric Project – FERC Project No. 1893

Dear Mr Kearns:

At its April 16, 2009 meeting the Bow Planning Board authorized me to submit comments on its behalf on the draft shoreline management plan. The Board is interested in the effect of the plan on the use of land within the Town of Bow and on uses within our wetlands conservation district, which extends landward 75' from the Merrimack River. Our comments are:

1. The plan needs an accurate, complete, and clear project boundary map. We found the two sets of maps in the plan to be somewhat confusing. The boundary map indicates that virtually no land above the ordinary high water mark is within the project boundary, but the second set of maps depicts several areas extending 200' or more beyond the project boundary. Please clarify whether such areas on the second set of maps are within the project boundary.
2. The plan should be clear and concise as to which type of management will be applied to land and the shoreline in Bow. For example, the map seems to indicate that almost all shoreline in Bow is in the Resource Management category, but the document states that "segments of the project boundary classified as Resource Management are relatively limited." We found that confusing.
3. The plan indicates that the shoreline and roosting areas at the north end of the Merrimack Generating Station will be protected, but is not clear as to the effect of such protection. As noted in 2 above, the Bow Planning Board is interested in how all lands and shorelines in Bow will be managed and protected.

- continued -

James J Kearns, Public Service Company of New Hampshire  
Comments on Draft Shoreline Management Plan  
April 17, 2009  
page 2 of 2

Please address our comments in the plan that is transmitted to FERC next month.

Thank you for the opportunity to comment and for providing the complete plan to the Town of Bow.

Sincerely,

Arthur J Cunningham, Chair

xc: Planning Board



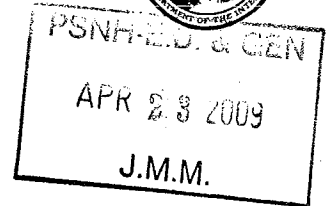
NOTED

MAY 1 2009

GUNDERSEN

REC'D MAY - 4 2009  
United States Department of the Interior

FISH AND WILDLIFE SERVICE  
New England Field Office  
70 Commercial Street, Suite 300  
Concord, New Hampshire 03301-5087  
<http://www.fws.gov/northeast/newenglandfieldoffice>



*Forward to  
R. Gundersen*

*cc: W. SMAGOLA*

*J. KEARNS*

April 21, 2009

REF: FERC No. 1893

Public Service Company of New Hampshire

*S. SHIVECY*

Mr. James Kearns

Public Service Company of New Hampshire

P.O. Box 330

Manchester, NH 03105-0330

*C. MOONEY*

*ORIG: ENTRACK*

Dear Mr. Kearns:

This responds to the Draft Shoreline Management Plan (SMP) for the Merrimack River Project, located on the Merrimack River in New Hampshire, distributed by letter dated March 2, 2009.

We have reviewed the plan and have the following comments.

### General Comments

In general, we are pleased that the proposed Shoreline Management Plan has identified most of the shoreline in the project area as being in the Resource Management category. We believe that this is appropriate and recognizes the environmental and aesthetic benefits of retaining the undeveloped character of most of the shoreline at all three of the project impoundments. We also concur with the restrictions identified for the Resources Management category, specifically the prohibition of certain activities even if permits are issued by other parties. This approach assures that the whole project area, regardless of jurisdiction, receives adequate resource protection.

### Specific Comments

#### Section 5.1.1.3 Case by Case Review for Bald Eagles

This section outlines the proposed process for reviewing permit applications if proposed projects are in active nesting and/or roosting areas. It is not clear if PSNH will consult with the Service, New Hampshire Fish and Game Department (NHFGD), or New Hampshire Audubon in its assessment of these impacts. We recommend that such consultation be undertaken to assure that the proposals are fully assessed and that the most-recent information on important eagle sites are used in the assessment.

### 5.1.2 Resource Management

We have reviewed the maps depicting the classification of shoreline lands in the project area. In general, we concur with the classifications. However, we question one shoreline section: on the east side of the Merrimack River in Concord, New Hampshire, south of the Loudon Road shopping plaza.

This section is labeled as in the "Integrated Use" classification. However, a Concord Monitor article on January 8, 2009 (copy attached) described a plan by the City of Concord's Conservation Commission to conserve 112 acres of riverfront farmland located in this area. Initially, one parcel, the 29-acre Bartlett/Larrabee parcel located immediately behind the Loudon Road shopping plaza, is targeted for conservation by the Conservation Commission. The City also owns another open-space parcel downstream. As these lands appear to be targeted as conservation lands, a more appropriate classification for the shoreline sections of these parcels is Resource Management.

### 5.3 Shoreline Management Classification System

This section describes how some areas were classified as Integrated Use because of existing uses that preclude the Resource Management classification. We would suggest that as an alternative to classifying an entire shoreline segment as Integrated Use due to one or two characteristics, PSNH consider a form of "grandfathering" to allow a non-conforming use or structure, but otherwise apply the Resource Management classification to restrict additional activities that could more dramatically impact the character and resources associated with that segment.

#### Table 5.1-1 Allowable Uses by Shoreline Classification

We note from the table that vegetation removal is not regulated in the Integrated Use sections. While some authorized activities may require removal of vegetation, including the removal of large trees, having no restriction on vegetation removal in the Integrated Use sections could lead to extensive cleared areas of shoreline, affecting aesthetics and potentially facilitating erosion of river banks. While the footnote indicates that other county and state regulators "may" regulate vegetation removal, this does not guarantee any proposals will be so reviewed and regulated. PSNH should consider having approval of vegetation removal as part of the SMP. One alternative is for the SMP to establish a limit on the length of shoreline or degree of vegetation removal above which a project cannot be undertaken without approval. Vegetation clearing beyond those limits would be subject to approval.

### 7.4 Grandfathered Uses

The second paragraph of this section includes a sentence that starts with "Regardless of ownership". Nowhere in the rest of this section does it indicate that grandfathering only pertains to the current owner, although this may be an appropriate option in some instances. However, as written, this language is confusing and should be clarified.

#### 9.0 Monitoring/Amendment Process

This section reviews the processes by which PSNH will monitor and amend the SMP. While we understand the need to assure that the plan remains relevant to changing uses and public values, we are concerned that the discussion suggests that areas can be moved from the Resource Management classification if land use or ownership changes and private interests seek such changes.

The major purpose of the SMP is to assure reasonable protection of the public's river resources. PSNH argued in the licensing proceedings for the project that substantial land protection beyond their property provided ample protection of riparian and shoreline areas without the need for acquisition of additional lands by PSNH for that purpose. In response to this issue, the Federal Energy Regulatory Commission required the SMP to manage shoreline development.

We believe the classifications given to shoreline areas in the proposed SMP meet that goal. However, if changes to the classifications are made in response to narrow specific private interests, the plan will not, in the long term, protect the public's interest in the aesthetic and natural resource benefits of undeveloped shorelines.

#### 9.3 Triggers for SMP Amendment

While it may be appropriate to review the plan in response to the criteria set forth in this section, we do not believe that these criteria necessarily justify that an amendment is needed. Conversion of lands adjacent to the project's reservoirs and river reaches from open space to residential or commercial development does not preclude retaining an undeveloped shoreline adjacent to those lands.

#### 9.4 Amendment Process

We concur with the proposal for PSNH to consult with state and federal agencies regarding review of changes to land use and decisions on the appropriateness of modifying the SMP. The plan should, however, specify that the U.S. Fish and Wildlife Service, NHFGD and the New Hampshire Department of Environmental Services (both the Wetlands and River Management and Protection sections) will be consulted in these cases.

#### Appendix C Bald Eagle Management Plan

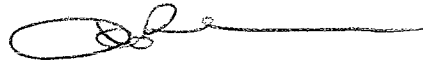
Michael Amaral of this office participated in a meeting to discuss this portion of the SMP. Verbal comments were provided by Michael, NHFGD and New Hampshire Audubon. We will not reiterate those comments in this letter, but urge PSNH to incorporate changes to the SMP that were recommended at that meeting.

Mr. James Kearns  
April 20, 2009

4

Thank you for the opportunity to comment on the draft SMP. If you have any questions, please contact me at 603-223-2541, extension 15.

Sincerely yours,

A handwritten signature in black ink, appearing to read "John P. Warner", with a long horizontal line extending to the right.

John P. Warner  
Acting Supervisor  
New England Field Office

Attachment

---

**Subject:** FW: SMP comments

Sandy Crystall  
<scrystall@gmail.  
com>

James J. Kearns/NUS@NU

To

cc

04/30/2009 09:54  
PM

Subject

SMP comments

Dear Mr. Kearns:

Thank you for contacting me this week about the absence of comments from the Concerned Citizens of Bow. I had a presentation in Bow last night and I was not able to take a look in my email to locate the comments I sent earlier.

Herein are the Concerned Citizens of Bow comments on the Shoreline Management Plan.

Comments on the Draft Shoreline Management Plan (Feb 2009) prepared as part of FERC Project 1893.

1. Although the "project boundary" is indicated on the proposed monitoring location maps in Appendix A. The FERC order/license mentions several areas where the boundary extends 200 feet or more beyond the shoreline to ensure adequate protection of environmental resources. This should be depicted on a map to facilitate review of the draft SMP and enable future implementation of the SMP - especially on the maps that show the various classifications. It would also be useful to incorporate the parcel data layer that is available from the town of Bow into your GIS, and display that on the appropriate maps as well.
2. Standard Terms section:

"Project boundary" is defined in the standard terms list as:

The boundary defined in the license issued by FERC for the

Project as needed for Project operations. For the Merrimack River Project, the boundary generally follows contour elevations or is identified by metes and bounds.

However several areas have requirements beyond the elevation specified. The definition should reflect this expanded requirement:

FERC License, paragraph 39, pages 11-12: As discussed below in this order, we are requiring that five areas of bald eagle habitat, in addition to PSNH's proposed area at the Garvins Falls development, be included in the project and protected under the licensee's proposed shoreline management plan. The Garvins Falls area would be a 200-foot-wide buffer extending along about 2.9 miles of shoreline. The other areas are of varying sizes, but they also would include lands extending up to 200 feet from the shoreline.

Ordinary high water is not a term in the DES Wetlands rules, Env-Wt 100-800. If you are referring to a "jurisdictional" boundary or area, the law or rule that makes it jurisdictional needs to be provided.

Of the three Shoreline Management Classification categories, "Integrated Management" is the only classification term that was not defined in that section.

3. There is no mention of the Upper Merrimack (Garvins Falls and north) being part of the state's designated rivers program under RSA 483, the Rivers Management & Protection Act.. This needs to be added to the SMP and incorporated in the processes. The Upper Merrimack Local Advisory Committee has a role in several river-protection related processes including the state Wetlands permitting process.  
[http://des.nh.gov/organization/divisions/water/wmb/rivers/merri\\_river\\_upper.htm](http://des.nh.gov/organization/divisions/water/wmb/rivers/merri_river_upper.htm)
4. In section 7.7.3, there is some mention of municipal zoning, however, it is very limited and refers only to floodplain regulation. Many municipalities, such as Bow, have buffers to wetlands and surface waters in their zoning ordinances, in addition to floodplain regulations. It would be useful to provide an overview of what the municipalities regulate locally. Such information can be obtained from the state Office of Energy and Planning's website, as well as individual municipalities' websites.
5. Section 4.0 Environmental, Cultural and Recreational Resources

The Aquatic Resources section only discusses anadromous fish. It does not mention any other important species in the river, such as the state-listed endangered brook floater mussel or the species on which the larval mussels depend. Rare Plants, Rare Animals, and Exemplary Natural Communities in New Hampshire Towns, January 2009; <http://www.nhdf1.org/library/pdf/TownLists.pdf>; and Upper Merrimack River web page on DES website:  
[http://des.nh.gov/organization/divisions/water/wmb/rivers/merri\\_river\\_upper.htm](http://des.nh.gov/organization/divisions/water/wmb/rivers/merri_river_upper.htm)

The Terrestrial Resources section makes little mention of the information gathered, other than listing how many things were found. There is no mention of the rare plant species in the project area. The specific resources should be described in this section.

7. Section 5.0 Shoreline Management Guidelines for Project Lands



Once again, the project boundary should be depicted on a map within the SMP so that all reviewing the plan can understand where it applies -especially in those areas where the boundary extends landward of the shoreline by 200 feet or more.

The lengths of shoreline under each of the three classifications needs to be quantified. With the GIS, that should be easy to accomplish. This will allow some better understanding of how much area is subject to each classification category and ensure the long term protection of important areas. Without a color printed page, or viewing the current maps on a computer screen, it is difficult to evaluate the shoreline resources by classification-how much is covered under what classification. Also, in section 5.1.2.2 Permitting Uses within the Resource Management Classification, it is stated that "segments of the Project boundary classified as Resource Management are relatively limited." By viewing the map legend, the red line along the shoreline represents the Resource Management classification, which appears to be the majority of the lengths of shoreline, at least through the river segment that Bow borders. The statement does not appear to be consistent with the maps. In addition, the areas that were exceptions to the classification should be identified as such. Once cannot review which ones are in the category without them being called out in some fashion.

The effect of the state and federal permitting authorities and what is jurisdictional needs to be corrected as there are various errors. The state's Shoreland Protection Act does not protect any dead trees, nor does it protect any specific tree from being cut, even if it is suitable for eagle habitat. Contact appropriate people at DES to correct the information about the Shoreland Protection Act and the Wetland Dredge and Fill Law (and the role of the US Army Corps of Engineers). It would be helpful to refer to the statutes and rules in their regulatory terms (RSA 482-A, etc.). (The sections in greatest need of correction in this regard include but may not be limited to sections 3.1, 5.0, 7.2, and 7.7.)

#### 8. Appendix E Habitat Parcel Feasibility Assessment

On page 7 of the Draft Report on the Feasibility of Habitat and Species Protection, it is indicated that PSNH will protect the section of shoreline at the north end of the Merrimack Generating Station property. There is no indication as to how this protection will be effected.

9. The allowable uses by shoreline classification (on page 5-8) should refer to the DES wetlands rules rather than fact sheets. The DES website address changed last September and needs to be corrected (des.nh.gov).

Sincerely,

Sandra Crystall on behalf of the Concerned Citizens of Bow

