

# Housatonic River Project Shoreline Management Plan

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Prepared for:



Northeast  
Generation Services

Prepared by:



## **ACKNOWLEDGEMENTS**

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# List of Acronyms

ADA	Americans with Disabilities Act
ADK	Adirondack Mountain Club
AMC	Appalachian Mountain Club
ATC	Appalachian Trail Conservancy
CLA	Candlewood Lake Authority
CTDEP	Connecticut Department of Environmental Protection
DEP	Department of Environmental Protection
FERC	Federal Energy Regulatory Commission
GIS	Geographic Information System
HVCEO	Housatonic Valley Council of Elected Officials
HRC	Housatonic River Council
HVA	Housatonic Valley Authority
LAC	Lake Advisory Committee
LLA	Lake Lillinonah Authority
LZA	Lake Zoar Authority
NGC	Northeast Generation Company
NGVD	National Geodetic Vertical Datum
NPS	National Park Service
RAC	River Advisory Committee
RM	River Mile
RMP	Recreation Management Plan
SMP	Shoreline Management Plan

# Glossary of Terms

Active Erosion	Areas that are 1) bare and void of vegetation or other stabilizing material, or 2) experiencing undercuts and/or sloughing off of the parent material in a manner that is likely to cause seriously damaging environmental impacts.
Abutting or Lakefront Property Owner	An individual, group, or entity that has title to land that abuts project land.
Annual Administrative Fee	A fee charged on an annual basis for the management of non-project use of Project Owner property.
Boat Slip (Slip)	A designated watercraft docking area confined on at least two sides by sections of a dock, pier or piling. One boat slip can accommodate only one boat at a time.
Bulls Bridge Development	That portion of the Housatonic River Project located in the vicinity of Bulls Bridge, including applicable lands, waters, and hydroelectric facilities.
Canopy Tree	A deciduous shade tree planted at least two and one half inches (2 1/2") in caliper measured at three feet (3') off the ground with a mature height of at least thirty-five feet (35').
Carrying Capacity	A determination of the type and level of visitor use that can be accommodated while sustaining the desired resource and social conditions.
Clean Water Act (CWA)	Federal legislation that, among other things, gives states the authority to certify that projects licensed and approved by federal agencies meet state water quality standards.
Commercial Facilities	Shoreline facilities operated on a for-profit basis (e.g., marinas, boat ramps)
Community Dock	A boat dock, pier or boat house containing three or more slips directly related and adjunct to a subdivision, cluster development, condominium, or planned development, owned and/or controlled by the owners of the lots of such subdivision or development, and which may be used adjunct to the use of the individual lots or units within the subdivision or development and which has a commonly owned or shared walkway.
Conservation Restriction	A restriction placed on real property via a recorded instrument for the purpose of conserving land resources.
Courtesy Pier	An access dock with no slips for use while launching or retrieving boats.
Deeded Rights	Rights for use of Project lands retained through a property deed. These may include rights to a dock of simple construction, rights to pass and re-pass, and rights to stabilize the shoreline.

Disturbed Lands:	Project lands that have been largely cleared of native vegetation and/or otherwise altered by human activity.
Dock of Simple Construction	A floating platform of not more than 320 square feet that extends over water is connected to the shore via a catwalk of not more than four (4) feet wide, and is used to secure, protect, and provide access to boats or personal watercraft or is used for recreational purposes (e.g. fishing, wildlife viewing, etc.).
Evergreen Tree	A coniferous species tree planted at least six feet (6') in height at the time of planting.
Extended Property Lines	A linear extension of the property lines of abutting property owners across the FERC project boundary and into the water.
Facilities	Man-made features constructed to enhance access and use of project lands, including but not limited to docks, boat ramps, picnic tables, walkways, sheds, patios, and seawalls.
Falls Village Development	That portion of the Housatonic River Project located in the vicinity of Falls Village, including applicable lands, waters, and hydroelectric facilities.
Flowage Easement	Legal permission to inundate/cover property with water.
Footprint	The outer dimensions of a dock's deck area and slip(s).
Ground Cover	Native plant materials generally not in excess of ten inches (10") high and used for their soil stabilization, habitat and wildlife benefit characteristics.
Housatonic River Project	Lands, waters, and hydroelectric facilities licensed by the FERC as Project No. 2576, including the Falls Village Development, Bulls Bridge Development, Rocky River Development, Shepaug Development, and Stevenson Development.
Lawn	An area planted and maintained in perennial grass.
Marina	A facility situated on a lakeshore that provides launching and secure moorings for water-borne craft and/or supplies, fuel, and marine equipment sales and repair services.
Native Meadows	Meadow areas comprised of perennial grasses and wildflowers.
Paths	A 4-foot meandering walkway for foot travel only to gain access to licensed structures (e.g. dock) on project lands.
Personal Watercraft	A motorboat less than sixteen feet in length which uses an inboard motor powering a jet pump, as its primary motive power and which is designed to be operated by a person sitting, standing, or kneeling on, rather than in the conventional manner of sitting or standing inside, the vessel.
Pier	A platform extending from a shore over water and supported by piles or pillars, used to secure, protect, and provide access to boats or personal watercraft or for recreation (e.g. fishing, wildlife viewing, etc.)

Point Discharge:	A discharge into Project waters via a defined pipe or other means of conveyance.
Pre-existing Structures:	Structures owned by abutting property owners or community associations that were constructed within the Project boundary prior to December 31, 2005, and structures owned by individuals that possess an easement or other legal right of access to the Project that were constructed within the Project boundary prior to December 31, 2000.
Project Boundary	A jurisdictional line established by the FERC to enclose the lands, waters, and structures needed to operate a licensed hydroelectric project. Also referred to as FERC Project boundary.
Project Land	All lands within the FERC designated Project boundary.
Project Owner	The entity that owns the FERC project property, equipment, facilities, and other parts of the hydroelectric developments that comprise the Housatonic River Project, or the entity's agent.
Public Use Area	An area or facility that is open to the public with equal and unobstructed use of such facilities to all members of the public without regard to race, color, religious creed or national origin. Such uses may be subject to specific operating hours or a reasonable fee for use.
Registered Boats:	To include all crafts with a motor and all crafts greater than 19.5', as defined by the State of Connecticut
Registration Fee:	A fee charged for the licensing of an existing structure located on land owned by the Project Owner.
Retaining Wall	A wall of stone, concrete, wood, or other sturdy material built to support a structure, maintain level ground, and or prevent erosion.
Rip-rap	Method of stabilization of a bank or slope through placement of rock.
Rocky River Development	That portion of the Housatonic River Project comprising Candlewood Lake, including applicable lands, waters, and hydroelectric facilities.
Seawall	A wall of stone, concrete, wood, or other sturdy material built along the shoreline to prevent erosion.
Set Back	A distance from the extended property lines in which construction of facilities is not allowed.
Shepaug Development	That portion of the Housatonic River Project comprising Lake Lillinonah, including applicable lands, waters, and hydroelectric facilities.
Shoreline Stabilization	Any activity intended to reduce the amount of erosion at the water's edge (e.g. sea walls, rip-rap, vegetation)
Shoreline Development	A general reference to structures and/or facilities and uses including residential, commercial, industrial, and recreational amenities located within or adjacent to the Project boundary.
Shoreline Structure	A man-made feature constructed within the project boundary (e.g. docks, sheds, seawalls, patios, stairs, etc.).

# Executive Summary

This Shoreline Management Plan (SMP or Plan) addresses the future management of shoreline lands associated with Housatonic River Project, which includes five separate hydroelectric developments in the state of Connecticut licensed by the Federal Energy Regulatory Commission (FERC Project No. 2576).

The SMP provides a comprehensive plan for managing shoreline uses consistent with specific FERC license requirements for protecting and enhancing the environmental values of the Project, while operating and maintaining the Project for power generation.

The SMP was prepared collaboratively with interested stakeholders and the public over a twelve month period to create a plan that effectively balances conservation and development of the Project shoreline. The Plan consists of a series of policies, programs, and actions specifically designed to achieve a set of agreed upon long-term goals and objectives.

In addition to meeting the explicit requirements of the FERC license, programs have been developed to improve coordination and consistency between the multiple Federal, State, and local entities responsible for managing shoreline lands and resources, and to strengthen the commitment of both local property owners and the public to protect them.

Under the SMP, permission for certain types of use and occupancy of Project lands and waters, consistent with protecting and enhancing the scenic, recreational and other environmental values is managed through a comprehensive Licensing Program. The Program includes allowances for the continuation of pre-existing uses and provides for new uses consistent with the Plan's stated goals and objectives.

The Plan also provides Shoreline Development Guidelines that guide future decision making and serve as a reference to assist users of the Plan as well as local land use authorities.

Examples of planned SMP implementation actions include:

- Development of coordinated database and Geographic Information System (GIS) tools that can streamline data sharing, access to information regarding approved shoreline activities, and development of a system to improve land management efficiency;
- Establishment of River and Lake Advisory Committees that can serve as forums for coordination, information sharing, and program development;
- Conservation of open space lands for greenway and trail development;
- Establishment of standard application procedures for licensing all pre-existing and proposed new shoreline structures;
- Measures to enhance recreational opportunities while also protecting critical habitats;
- Installation of erosion control measures at existing public access areas to reduce run-off;
- Establishment of vegetated buffers;
- Removal of unauthorized moorings; and
- Implementation of education and outreach programs.

# 1.0 Introduction

On June 23, 2004 the Federal Energy Regulatory Commission (FERC) granted Northeast Generation Company (NGC) a new license for its Housatonic River Project (FERC No.2576) located in the State of Connecticut. Article 407 of the new FERC license requires that NGC develop a comprehensive Shoreline Management Plan (SMP) for reservoir and riverfront lands associated with the Project (see Appendix A).

The Housatonic River Project encompasses five hydroelectric generating stations and their associated reservoirs as shown in Figure 1.1, and described in Section 2 of this Plan. All lands within the Project boundary up to 200 feet from the water's edge, measured horizontally from the high water mark, are subject to the goals, policies, and programs outlined herein. For the purposes of this SMP, the owner of the lands and hydroelectric facilities associated with the Housatonic River Project is referred to as the "Project Owner".

## 1.1 Purpose and Scope

The purpose of the SMP is to address conservation and development of Project shoreline lands consistent with Project and non-project needs and demands. The SMP is to serve as a comprehensive plan for managing multiple uses including protection and enhancement of the environmental values while safely operating and maintaining the Project for power generation.

The SMP describes: (1) the purpose and scope of the plan; (2) how the plan was prepared including identification of the entities involved in its preparation; and (3) the Project Owner's policies and programs regarding shoreline use, including a shoreline use classification system, and associated licensing and property-conveyance procedures.

The SMP also describes how the plan will be implemented, including: (1) guiding prospective applicants for non-project uses of lands in developing their proposals to meet plan provisions; (2) reviewing pending proposals for use of lands to

determine their consistency with the plan's policies, classifications, prescriptions, and application requirements; and (3) monitoring existing shoreline activities to ensure their compliance with the plan.

## 1.2 Plan Development

The process for developing the SMP involved two distinct phases as shown in Figure 1.2. Phase 1 focused on stakeholder outreach and issue scoping while Phase 2 focused on development of management solutions and Plan provisions. Each phase of the process was structured around a series of stakeholder workshops and public meetings with the intent of working collaboratively to develop a consensus-based plan. Table 1.1 provides a listing of stakeholder representatives involved in workshops. To aid in the development of the SMP, NGC hired a third party facilitator who assisted in guiding the process. A project website ([www.essexpartnership.com/hrp.asp](http://www.essexpartnership.com/hrp.asp)) was also established to aid the overall SMP development process. The website was designed to serve as a forum for disseminating information to, and accepting input from the stakeholder teams and other members of the public as the SMP was being developed. The Plan development process is described in more detail in Appendix H.

## 1.3 Plan Organization

The Plan is organized as follows:

Section 1 – Introduction, provides the purpose of the plan, how it was developed and its organization.

Section 2 – Background, provides background information regarding shoreline management at the Housatonic River Project, including a description of Project lands and existing land use patterns, information on land ownership and existing deeded rights. Section 2 also provides a brief description of other entities with responsibilities for managing land and water uses and a listing of existing relevant management plans.

Section 3 – Goals and Policies, outlines the overall goals and policies of the SMP that will guide

management and decision making regarding future uses of shoreline lands.

Sections 4 through 7 describe each of the five developments and the SMP policies and programs associated with each. Specific development guidelines are provided in Appendix D of the Plan.

Section 8 – Implementation Plan, outlines how the plan will be implemented, including provisions for monitoring and enforcement.

## 1.4 Commonly Used Terms

*Abutting Property Owner:* An individual, group, or entity that has title to land that abuts Project land.

*Annual Administrative Fee:* A fee charged on an annual basis for the management of non-project use of Project Owner property.

*Conservation Restriction:* A restriction placed on real property via a recorded instrument for the purpose of conserving land resources.

*Deeded Rights:* Private property rights specifically established in a recorded instrument. These rights may include rights to construct and maintain structures such as docks and seawalls on lands within the Project boundary owned by the Project Owner.

*Disturbed Lands:* Project lands that have been largely cleared of native vegetation and/or otherwise altered by human activity.

*Dock of Simple Construction:* A floating platform of not more than 320 square feet that extends over water, is connected to the shore via a catwalk of not more than 4 feet wide, and is used to secure, protect, and provide access to boats, personal watercraft, or is used for recreational purposes (e.g. fishing, wildlife viewing, etc.).

*Extended Property Lines:* A linear extension of the property lines of abutting property owners across the FERC project boundary and into the water.

*Project Boundary:* A jurisdictional line established by the FERC to enclose the lands, waters, and structures needed to operate a licensed hydroelectric project. Also referred to as FERC Project boundary.

*Point Discharge:* A discharge into Project waters via a defined pipe or other means of conveyance.

*Pre-existing Structures:* Structures owned by abutting property owners or community associations that were constructed within the Project boundary prior to December 31, 2005, and structures owned by individuals that possess an easement or other legal right of access to the Project that were constructed within the Project boundary prior to December 31, 2000.

*Project Land:* All land within the FERC designated Project boundary.

*Project Owner:* The entity that owns the FERC project property, equipment, facilities, and other parts of the hydroelectric developments that comprise the Housatonic River Project, or the entity's agent.

*Registered Boats:* To include all crafts with a motor and all crafts greater than 19.5', as defined by the State of Connecticut

*Registration Fee:* A fee charged for the licensing of an existing structure located on land owned by the Project Owner.

*Seawall:* A wall of stone, concrete, wood, or other sturdy material built along the shoreline to prevent erosion.

*Set Back:* A distance from the extended property lines in which construction of facilities is not allowed.

*Shoreline Development:* A general reference to structures and/or facilities and uses including residential, commercial, industrial, and recreational amenities located within or adjacent to the Project boundary.

*Shoreline Structure:* A man-made feature constructed within the Project boundary (e.g. docks, sheds, seawalls, patios, stairs, etc.).

*Use and Occupancy:* In reference to FERC regulated lands, utilization or placement of structures within the Project boundary.

*Vegetated Buffer Zone:* An area adjacent to the water intended to provide for and maintain the environmental and/or aesthetic integrity of the shoreline. The area may or may not currently support native vegetative cover.

Individual	Organization
Greg Ballard	Friends of the Lake
Howie Berger	Candlewood Lake Authority
Jon Chew	Housatonic Valley Council of Elected Officials
Jennifer Clarke	Clarke Outdoors
John Dunne	Millstone Ridge Tax District
Brian Emerick	Connecticut Department of Environmental Protection
Peter Eng	Town of New Milford Planning Commission
Jim Ferlow	Town of New Milford IWWC Enforcement Officer
William Foreman	Connecticut Department of Environmental Protection
Robert Gates	Northeast Generation Services (NGS)
Melissa Grader	U.S. Fish and Wildlife Service
Edward Hayes	Holiday Point Homeowners
Bob Head	Northeast Generation Services (NGS)
Judith A. Herkimer	Housatonic Environmental Action League
George Knoecklein	Lake Zoar and Lillinonah Authority
Joe Kotulicm	Pomperaug Social Club
Elaine LaBella	Housatonic Valley Association and Appalachian Mountain Club
Chuck Lee	Connecticut Department of Environmental Protection
Ed Lundblad	Lake Zoar Homeowner
Eleanor Mariani	Connecticut Department of Environmental Protection
Larry Marsicano	Candlewood Lake Authority
Jim Marquis	Candlewood Lake Users and Boaters Association
Harold Mayer	Candlewood Lake Authority
Dan McGuinness	Northwestern Connecticut Council of Governments (NWCCG) and
	Housatonic River Commission (HRC)
Kevin Mendik	National Park Service
Andrea O'Connor	Town of Sherman First Selectman
Ron Oliveri	Town of New Fairfield Selectman
Steve Paduano	Town of New Milford Zoning Commissioner
Michael Payton	Connecticut Department of Environmental Protection
Susan Peterson	Connecticut Department of Environmental Protection
Bryan Piepho	Lake Lillinonah Authority
Bill Schappert	Town of Brookfield
Ann Schiessl	Lake Lillinonah Authority
Delores Schiesel	Town of Kent
William Soracin	Lake Zoar Authority
Val Stori	Appalachian Trail Conservancy
Mark Toussaint	Candlewood Lake Authority
George Walker	Friends of the Lake

**Table 1.1 – Stakeholder Workgroup Participants**

## 2.0 Background

The following provides background information on the Housatonic River Project, including information on land ownership and existing property rights which influence land management activities. The information provides context for understanding the goals and policies of the Shoreline Management Plan (SMP). Additional information regarding existing conditions, including an inventory of existing shoreline development and aesthetic resources, local zoning, and existing management plans and regulations is provided in Appendices C and E.

### 2.1 Housatonic River Project

The Housatonic River Project encompasses five hydroelectric generating stations and their associated reservoirs:

- Falls Village Development
- Bulls Bridge Development
- Rocky River Development - Candlewood Lake
- Shepaug Development - Lake Lillinonah
- Stevenson Development - Lake Zoar

The five developments comprising the Housatonic River Project were constructed from the early 1900's to the late 1950's. The project received its first FERC license in 1981. The FERC boundary for each of the five developments is shown in Figures 2.1 through 2.5.

### 2.2 Land Use

The Housatonic River Project encompass lands located within fourteen different towns. Development and land use patterns differ considerably for each development based on the physical characteristics of the shoreline and the time of construction. Historically, shoreline uses associated with the Falls Village and Bulls Bridge developments have been related to recreation and conservation. Project lands in these areas are rural with no waterfront development or structures such as docks and seawalls. The three lakes formed in the southern portion of the river, Candlewood Lake, Lake Lillinonah, and Lake Zoar, have significant shoreline residential development in comparison to the

northern developments of Falls Village and Bulls Bridge. Candlewood Lake is the largest lake in Connecticut, and has long been a destination location. Historically, adjacent lands have been developed for residential use, with associated waterfront access that include docks and other shoreline structures. The shorelines of Lakes Lillinonah and Zoar have also been developed for residential use, but to a lesser degree than Candlewood, due to steep slopes and the presence of large blocks of State land in those areas.

### 2.3 Land Ownership and Deeded Rights

Most of the lands within the Project boundaries at Falls Village, Bulls Bridge, Candlewood Lake, and Lake Lillinonah are owned by the Project Owner. At Lake Zoar, much of the lands within the Project boundary are not owned by the Project Owner, though the Project Owner has retained flowage easements required for the operation of the Project. When lands were purchased for the construction of Candlewood Lake, many landowners retained the right to a dock of simple construction, the right to construct protective seawalls and the right to pass and re-pass across Project Owner property to access the lake. Much of the shoreline development around Candlewood Lake has occurred in accordance with these existing property rights prior to FERC licensing. The Project Owner can not deny these rights, but can reasonably regulate the manner in which the rights are exercised.

### 2.4 State and Local Management and Enforcement Responsibilities

The Housatonic River Project is operated under Federal jurisdiction via a license from the FERC. The FERC license requires that the licensee maintain adequate control of the Project shoreline to protect project purposes, including protection of scenic, recreational, and environmental resources.

Prior to the first FERC license, the Project Owner maintained a program of leases for regulating shoreline uses. Subsequent to receiving its first FERC license

in 1981, the Project Owner established a program for licensing non-project uses, but the program did not cover all uses, including historic uses established prior to 1988. Under the new SMP Licensing Program, both past and future uses of Project shorelines will be licensed and managed.

In addition to the responsibilities established by virtue of the FERC license, several State and local entities exercise jurisdiction over Project lands and waters. These entities and their respective responsibilities include:

- *Connecticut Department of Environmental Protection* – Has responsibility for enforcing state environmental laws as well as boating regulations; providing lake patrol officers on Candlewood Lake, Lake Lillinonah, and Lake Zoar who enforce State boating regulations; maintaining and enforcing regulations regarding boat speed limits, the placement of navigational markers, (including hazard markers and no wake zone markers), the placement of designated swim areas; and permits and regulates all fishing tournaments on the lakes.
- *State-chartered Lake Authorities* – Three separate State-chartered lake authorities exist for Lake Candlewood, Lake Lillinonah, and Lake Zoar. Specific responsibilities identified by legislation include: (1) controlling and abating algae and aquatic weeds in cooperation with the Commissioner of Environmental Protection; (2) studying water management including, but not limited to, water depth and circulation and make recommendations for action to its member towns; (3) acting as an agent for member towns with respect to filing applications for grants and reimbursements with the Department of Environmental Protection and other State agencies in connection with State and Federal programs. In furtherance of their authorized functions, the Lake Authorities have performed a number of activities, including monitoring water quality, enforcing boating safety laws on the water, sponsoring annual clean-up events, and supporting public education programs. The powers of

the Candlewood Lake Authority (CLA) were broadened by special legislation in 2005 to include: (1) assisting towns with lake, shoreline and watershed management to preserve and enhance the recreational, economic, scenic, public safety and environmental values; and (2) providing environmental support for Candlewood Lake by undertaking and coordinating educational initiatives on lake and watershed protection.

- *Local Planning and Zoning Commissions* – Local planning and zoning commissions establish and enforce local land use regulations and building codes that are locally enforced.
- *Inland Wetlands and Watercourses Commissions* – Established to enforce State and local regulations regarding the protection of wetlands.
- *State and local health departments* – State and local health departments establish and enforce regulations designed to protect public health and safety, including regulations governing the installation and maintenance of septic systems.

The local health departments, planning and zoning commissions, and inland wetland commissions are typically all involved in the review and permitting of proposed construction and land disturbing activities.

## 2.5 Existing Plans and Regulations

Several plans and regulations exist regarding management of the Housatonic River, including related compliance plans required by the new FERC license for the Project. Relevant documents and regulations include the following:

### a. FERC License Compliance Plans

- Recreation Management Plan (NGC)
- Historic Properties Management Plan (NGC)
- Critical Habitats Management Plan (NGC)
- Debris Management Plan (NGC)
- Littoral Zone Monitoring Plan (NGC)
- Nuisance Plant Monitoring Plan (NGC)

- b. U.S. Army Corps of Engineers Permit Regulations
- c. Regional Planning Documents
  - Housatonic River Commission’s Draft River Management Plan (HRC)
  - Blueprint for Candlewood Lake
  - Action Plan for Preserving Candlewood Lake (Candlewood Lake Authority)
- d. Relevant State Regulations
  - State Boating Laws and Regulations
  - Fishing Regulations
  - Stream Channel Encroachment Program
  - Health Code
- e. Local Regulations
  - Inland Wetlands and Watercourses
  - Zoning
  - Planning and Subdivision
  - Building Codes

Connecticut State statutes (Chapter 126, Section 8-23) require that local planning and zoning commissions prepare and adopt individual plans of conservation and development for their municipality.

These plans are intended to guide future growth within the municipality and provide a long term vision for community development. Many communities along the Housatonic River have completed, or are in the process of completing Plans of Conservation and Development (PC&D). Municipalities that have a PC&D include Canaan, Cornwall, North Canaan, Salisbury, Sharon, Sherman, Southbury, Oxford, Monroe, Kent, New Milford, Danbury, and Newtown. The towns of Canaan, Cornwall, North Canaan, Salisbury, and Sharon also have established local overlay zones along the Housatonic River specifically designed to protect and enhance the environment. The town of Brookfield has also established a watershed overlay zone for Candlewood Lake that provides for stricter regulatory controls within that watershed. Overlay zones provide geographically specific zoning regulations developed for the protection of specific resources such as aesthetics or groundwater.

Existing planning documents and regulations that are relevant to the SMP are briefly summarized in Appendix C.

## 3.0 SMP Goals and Policies

### 3.1 SMP Goals and Objectives

The following goals and objectives shall serve to guide management of all shoreline lands within the FERC Project boundary.

**Goal A** Allow for and maintain safe public access to lake shoreline and riverfront lands and waters.

Objectives:

- A.1 Reduce crowding and user conflicts.
- A.2 Improve parking and visitor safety at the Bulls Bridge Scenic Area.
- A.3 Remove unauthorized moorings at all developments.

**Goal B** Promote the conservation of land and water resources associated with the Project's lake shoreline and riverfront properties in order to improve water quality and other natural and cultural resources including fish and wildlife habitat, recreation, aesthetics, and historic features.

Objectives:

- B.1 Minimize disturbance of existing native vegetation on undeveloped Project lands owned by the Project Owner.
- B.2 Establish native vegetated buffers on previously cleared Project lands through a combination of licensing, education and outreach.
- B.3 Identify opportunities for conservation restrictions on undeveloped Project lands for greenways and trail developments, protection of wildlife habitat and protection of aesthetic resources.

**Goal C** Provide for the stewardship and development of shoreline and riverfront areas and facilities that are consistent with both Project and non-project needs and demands.

Objectives:

- C.1 License all existing and new structures on Project lands that extend into the water and all existing structures on lands owned by the Project Owner.
- C.2 Ensure all licensed structures on Project land are accurately recorded and mapped, including location, size, dimensions, and materials.
- C.3 Establish standing River and Lake Advisory Committees.
- C.4 Work with other governmental bodies to improve coordination and establish consistent policies.

**Goal D** Promote education and public awareness of lake and shoreline resource protection and management programs.

Objectives:

- D.1 Promote through public education the importance of vegetated buffers.
- D.2 Establish outreach materials to increase awareness of licensing requirements and development guidelines.

### 3.2 SMP Policies Applicable to all Developments

Management of shoreline lands associated with the Housatonic River Project shall be guided by a set of Shoreline Management Policies as outlined below. These policies were developed and established to address specific shoreline management issues and/or requirements of the FERC license order and are intended to achieve the goals of the SMP. The policies outlined below apply to all five developments. Additional policies, programs, and actions specific to each development are described in Sections 4 through 7 of this SMP. Specific guidelines for shoreline developments are detailed in Appendix D.

None of the policies listed below are intended to

preclude the exercise of existing property rights by adjacent landowners, including deeded access rights to Project lands. However, the policies may affect the manner in which adjacent property owners may exercise their existing rights.

Pre-existing uses of Project lands shall be recognized and licensed by the Project Owner per the policies outlined below and the guidelines provided in Appendix D of this SMP. In cases where such uses present a hazard or impediment to navigation, an environmental concern, or violate local, State, or Federal law, the Project Owner shall seek to modify the use to remedy the concern.

3.2.1 ***Use and Occupancy of Project Lands*** Use and occupancy of Project lands owned by the Project Owner, as well as Project lands at the water's edge, must be approved by the Project Owner through a written license or lease. Pre-existing structures will be approved in accordance with this SMP through a formal registration process. New construction shall be evaluated through a formal licensing process and shall be contingent upon the applicant receiving applicable State and local permits. Unless explicitly allowed by an existing agreement, docks and other facilities constructed on Project lands shall be for the use of the licensed party and **shall not be rented or used for commercial activity** per local zoning ordinances that prohibit unlicensed commercial activity in residential areas. No habitable structures shall be allowed on Project lands.

3.2.2 ***Shoreline Vegetation*** Removal of native trees, shrubs and other vegetation located within the Project boundary on lands owned by the Project Owner shall not be allowed without prior approval from the Project Owner, and applicable permits from local land use commissions. The Project Owner shall allow limited removal of vegetation for the construction and installation of docks and other approved structures in accordance with the Shoreline Development

Guidelines and an approved landscape plan. Individuals shall be required to plant or pay for the planting of vegetation in the event that native vegetation is removed without a license from the Project Owner, unless the Project Owner in its sole discretion determines to waive the requirement. Planting plans must be submitted and approved by the Project Owner prior to planting on Project lands owned by the Project Owner. This policy is not intended to apply to diminimus pruning, mowing, weeding, or planting of small garden plants.

3.2.3 ***Vegetated Buffer Zones*** Vegetated buffer zones shall be established around reservoir and riverfront shorelines of up to 200 feet measured horizontally from the high water mark on lands owned by the Project Owner within the Project boundary. Where lands within a buffer zone have been disturbed, (other than for Project operations), the Project Owner shall implement requirements and procedures designed to re-establish native vegetation. Within the constraints of the Project boundary, 200 foot buffer zones are established for all lands designated in this SMP as Conservation Lands. Fifty (50) foot buffer zones are established for all other shoreline designations.

3.2.4 ***Pre-existing Shoreline Structures*** Existing docks and other structures located within the Project boundary must be registered with the Project Owner and receive a license or lease for continued use and occupancy. If an existing structure within the FERC Project Boundary is being replaced or being modified with regard to size, location, or configuration a new license will be required and the structure must conform to the Shoreline Development Guidelines.

3.2.5 ***Development Guidelines*** All applications for new uses and occupancies of Project lands, including alterations to the size, location, or

configuration of existing structures shall be reviewed in accordance with the Shoreline Development Guidelines detailed in Appendix D of this SMP. Among other things, these Development Guidelines include regulations regarding:

- vegetation removal;
- buffer plantings; and
- docks and appurtenant structures;

3.2.6 **Septic Systems** New septic systems shall not be allowed on Project lands. Existing septic systems shall be recognized as structures and regulated in accordance with State and local health codes.

3.2.7 **Storm Drains and other Conveyances** Pipes and other conveyances that cross Project lands and either discharge into Project waters or withdraw water from the Project, as well as other easements or rights-of way must be approved by the Project Owner in accordance with Article 413 of the new FERC license. New point discharges shall not be allowed on Project lands unless they adhere to current State stormwater guidelines. If new discharges are requested, or if alterations to an existing discharge are observed, the Project Owner shall notify State and local authorities that regulate such uses. With regard to existing storm drains, the Project Owner shall conduct an inventory of existing pipes and storm drains draining into Candlewood Lake, Lake Lillinonah, and Lake Zoar and provide the information to local municipalities and other applicable entities with jurisdiction for stormwater management.

3.2.8 **Designated Swim Areas and Floating Platforms** Swim areas shall only be allowed with applicable State DEP approval. Floating platforms anchored to the bottom shall only be allowed within State approved swim areas. Inflatable floating trampolines may only be on the water

during daylight hours and may not be located more than 30 feet from shore.

3.2.9 **Moorings** Except as previously licensed, moorings shall be prohibited at all developments. All existing, unlicensed moorings shall be removed. New moorings may be permitted on a case-by-case basis for situations where site conditions are not conducive to installation of docks in order to accommodate individuals and communities with deeded rights. Moorings shall not be used as marker buoys to demark swimming areas or prevent boats from traveling near the shoreline. All new moorings and any hazard markers must be approved by the DEP in accordance with applicable State regulations.

3.2.10 **Docks** Pre-existing docks shall be allowed to remain in their present condition and can be replaced in-kind, but must conform to new flotation and buffer planting requirements as outlined in the Shoreline Development Guidelines at the time of replacement. Any change in the size, location, or configuration of a pre-existing dock shall require a new license and conformance to the Shoreline Development Guidelines. New docks and additional boat slips shall not be allowed on Candlewood Lake except as provided for by existing deeded rights and/or existing lease or license agreements. All new docks or boat slips must conform to the Shoreline Development Guidelines. Licenses for residential docks shall be for the mooring of not more than two (2) registered boats and two (2) personal watercrafts. Guests shall be allowed, but not for more than 30 days. Registered boats utilizing a licensed dock on a regular basis must be listed on-file with the license for that dock. For pre-existing docks, any unencapsulated foam must be replaced within 10 years, or sooner if the license is transferred or the dock is

replaced, or modified. For new construction, one dock of simple construction shall be allowed per abutting parcel.

- 3.2.11 **Seawalls and Retaining Walls** Seawalls shall be located at the existing shoreline only. Seawalls and upland retaining walls shall be constructed for the purpose of preventing direct run-off into the lake, and for the purpose of filtering out contaminants and pollutants before they enter the Lake. Seawalls shall be constructed in such a manner that they dissipate and/or absorb wave action energy and prevent any subsequent erosion of the shoreline. Upland retaining walls may not be located in such a manner as to increase the grade angle of the existing slope to more than 15% to the lake side of the wall. Within designated Conservation Lands, any protective walls on the shoreline shall be for erosion control only, and shall consist of rip-rap and/or bioengineering techniques.

- 3.2.12 **Fire Hydrants** Existing hydrants and provisions for the establishment of new hydrants shall be allowed and licensed to ensure adequate emergency service for towns and adjacent community associations.

- 3.2.13 **Campfires** Campfires shall not be allowed on Project lands.

### 3.3 Shoreline Classification System

All shoreline lands shall be designated and managed according to a standardized classification system as outlined in Table 3.1 based on their physical characteristics and existing uses.

Classification	Definition
Conservation Lands	<p>Undeveloped Project lands and islands owned by the Project Owner or conservation organization that are to be maintained and managed as green space for the purposes of conserving important natural and cultural resource values such as fish and wildlife habitat, open space, and/or aesthetic resources. These lands include properties currently protected through legal conservation restrictions as well as undeveloped lands not currently protected. These lands are defined largely by their natural, undisturbed state and may contain unique resources such as archaeological resources; sites/structures listed on, or eligible for listing on the National Register of Historic Places; wetlands; floodplains; and/or rare, threatened, or endangered species habitat.</p>
Privately Owned Undeveloped Lands	<p>Undeveloped project lands that are not owned by the Project Owner.<sup>9</sup> These lands shall be managed as open space, but may be converted to residential or other uses depending on the desires of the land owner and applicable local regulatory bodies. These lands are candidates for voluntary conservation restrictions.</p>
Recreation Lands	<p>Project lands managed for either informal or developed recreation activity. This includes land that is developed for public recreation, such as State Parks, Town Beaches, and Project recreation facilities. Two distinct sub-classifications shall be recognized:</p> <ul style="list-style-type: none"> <li>• Project and State Recreation Areas</li> <li>• Town Beaches</li> </ul>
Residential Lands	<p>Project lands characterized by existing or potential future private waterfront development such as docks, seawalls, foot paths, steps, patio areas, or other non-permanent structures. These lands shall be managed to allow for use by adjacent property owners, including the exercise of existing deeded rights. All structures located on project lands must be licensed by the Project Owner and adhere to established development guidelines and vegetative buffer requirements. New docks shall not be allowed on Residential Lands unless they are supported by existing deeded rights. Two distinct sub-classifications shall be recognized:</p> <ul style="list-style-type: none"> <li>• <i>Single-family Development</i> – Project lands adjacent to single-family residential development</li> <li>• <i>Community Development</i> – Project lands adjacent to private residential properties that are part of a larger community development</li> </ul>
Commercial/ Institutional Lands	<p>Project lands characterized by commercial or institutional uses, including commercially operated marinas. These lands shall be managed to allow for continued commercial or institutional use, including the exercise of existing deeded access rights. All structures on project lands shall be licensed by or leased from the Project Owner and adhere to established development guidelines and vegetative buffer requirements.</p>
Project Operation Lands	<p>Project lands used for project operations. This includes land used for generation facilities, switchyards, transmission facilities, right-of-way areas, and other associated activities.</p>

**Table 3.1 – Shoreline Classification System**

## 4.0 Falls Village and Bulls Bridge Developments

The following presents information specific to the Falls Village and Bulls Bridge developments. The two developments are discussed together for the purpose of this SMP because they exhibit similar land use and development characteristics. A brief description of the projects is presented first followed by a summary of SMP policies and actions specific to Falls Village and Bulls Bridge.

### 4.1 Description of the Projects

Constructed in 1912, the Falls Village development is located approximately seven (7) miles downstream of the Massachusetts/Connecticut border at river mile (RM) 78 in the towns of Canaan, North Canaan, and Salisbury, Connecticut. The development has a small impoundment behind a concrete dam with a canal intake leading to the power canal. The impoundment is approximately four (4) miles long with a surface area of the 150 acres at a normal maximum operating elevation of 632.2 ft NGVD. There is a 0.3 mile-long bypass reach below the impoundment that is characterized by a substrate of primarily bedrock, boulder, and cobble, which includes the "Great Falls of the Housatonic," a natural falls nearly 60-ft high. The project boundary around the Falls Village development is approximately eighteen (18) miles in length.

The Bulls Bridge development, constructed in 1903 is located about twenty-five (25) miles downstream of the Falls Village development at RM 53 in the towns of Kent and New Milford, Connecticut. The development has a small impoundment behind two concrete dam sections with a canal overflow and intake structure leading to a 1.9-mi-long power canal. The impoundment is approximately two (2) miles long with a surface area of the 120 acres, at a normal maximum operating elevation of 354.0 ft NGVD. There is a 1.9 mile-long bypass reach below the impoundment that consists of an upper 0.8 mile-long section that runs through a gorge, with substrates dominated by large boulders and bedrock, and a one (1) mile-long lower gradient section with a substrate of primarily small and large

boulders and cobble. The confluence of the Ten Mile River occurs along the bypassed reach 0.8 mi downstream of the dams. The project boundary around the Bulls Bridge development is approximately fifteen (15) miles in length.

Additional information regarding the project setting, existing land use and ownership; and natural, cultural, and aesthetic resources, is provided in Appendix E (Existing Conditions).

### 4.2 SMP Policies, Programs, and Actions

The following sections outline specific policies, programs, and actions for managing shoreline lands within the project boundary for the Falls Village and Bulls Bridge developments. A number of existing resource management plans have been prepared for the Falls Village and Bulls Bridge areas. These plans are reflective of the unique natural and cultural heritage resources present along the Housatonic River in these areas and the ongoing commitment of Federal, State, and local agencies as well as numerous conservation organizations to the protection of the natural and cultural resources in these areas.

The policies and programs outlined herein are intended to complement existing planning documents, including:

- Critical Habitats Management Plan for Falls Village and Bulls Bridge;
- Recreation Management Plan for the Housatonic River Project;
- Bulls Bridge Resource Management Plan (Draft); and
- Management Plan for the Robbins Swamp Natural Area Preserve

4.2.1 **Purpose and Intent** The purpose and intent of the policies and programs outlined herein for Project lands associated with the Falls Village and Bulls Bridge developments is to preserve their unique resources associated with these lands and maintain the existing rural character of the developments.

To achieve the above purposes, future management decisions and actions shall focus on the protection and conservation of natural heritage resources, including the following:

- protecting specific critical habitats as identified in the Critical Habitats Management Plan;
- managing visitor use, including measures to reduce congestion and resource impacts;
- improved education and signage; and
- improved public access, as outlined in the Recreation Management Plan and subsections below.

4.2.2 **Development Specific Policies** In addition to the policies established in Section 3.0 of this SMP, the following development specific policies shall be enforced at the Falls Village and Bulls Bridge developments:

- *Shoreline Designations* – Shoreline lands within the project boundary shall be managed in accordance with the shoreline designations shown in Figures 4.1 and 4.2 as defined in Section 3.3 of this SMP. These designations will guide future management decisions regarding the use and occupancy of shoreline lands associated with both the Falls Village and Bulls Bridge developments. The vast majority of the lands within the project boundary are designated as Conservation Lands in recognition of the unique natural, aesthetic, recreational, and cultural resources associated with both developments.
- *Motorized Uses* – Wheeled motorized vehicular use for recreational purposes shall not be allowed on project lands associated with the Falls Village and Bulls Bridge developments except within designated parking areas or roadways as allowed by the Project Owner.
- *Recreation Access* – Recreation access and facilities within the Falls Village and Bulls

Bridge developments shall be managed to reduce congestion, reduce non-point source run-off, and minimize potential impacts to critical habitats as detailed in the Recreation Management Plan and Critical Habitats Management Plan.

- *Shoreline Alterations* – Alterations, including removal of native vegetation and construction of new structures such as docks, seawalls, patios, and sheds shall not be allowed on project lands owned by the Project Owner except within existing designated recreation areas as shown in Figures 4.1 and 4.2. Shoreline alterations may be allowed on a case-by-case basis as necessary for example to address safety concerns such as the removal of hazard trees, and project operations.
- *Digital Mapping Data* – The Project Owner shall maintain a list of digital mapping data and make such data available upon request. Some data regarding historical and cultural resources, and sensitive species may be restricted for the purposes of protecting these resources.

4.2.3 **Land Conservation Program** The new license for the Housatonic River Project requires that the SMP identify conservation restrictions or other similar protective measures on those lands owned by the Project Owner within the Project Boundary that are not already dedicated to open space and provisions for identifying opportunities to provide conservation easements for greenway and trail development and improved public access within the Project Boundary.

**Action Plan:**

1. *Conserve Undeveloped Lands* – Under the SMP, undeveloped shoreline lands owned by the Project Owner will be managed for environmental protection and conservation (see Figures 4.1 and 4.2 Conservation Lands). Those lands

within the project that already have existing conservation restrictions, including scenic easements are shown in Figures 4.1 and 4.2.

2. *Allow for Conservation Easements* – The Project Owner shall entertain requests from appropriate State, Federal, and local entities regarding the purchase of conservation easements or other conservation restrictions for those project lands designated as Conservation Lands that are not already protected.
3. *Encourage Conservation Restrictions by Others* – In addition to activities to conserve Project lands owned in fee, the Project Owner shall encourage conservation restrictions on undeveloped project lands owned by other private individuals as well as large upland land holdings adjacent to the Project. The Project Owner will contact select adjacent property owners at the request of the NPS, resource agencies, or local municipalities to encourage conservation restrictions.

4.2.4 ***Vegetated Buffer Program*** Consistent with SMP policy 3.2.3, a vegetated buffer zone shall be established along riverfront lands associated with the Falls Village and Bulls Bridge developments. Where lands within the buffer zone have been disturbed, the Project Owner shall implement measures designed to re-establish native vegetation as appropriate. Figures 4.3 and 4.4 show Buffer Zone locations for the Falls Village and Bulls Bridge Projects respectively. In those instances where the Project Boundary is equal to mean high water, no vegetated buffer zone is identified.

Figures 4.5 and 4.6 show areas of disturbed project lands with the potential for re-vegetation at the Falls Village and Bulls Bridge developments respectively. Most of these disturbed lands are located in areas of moderate to heavy recreational use where vehicular and foot traffic have

resulted in the loss of native vegetation, soil compaction, and in some cases accelerated erosion of the shoreline.

**Action Plan:**

1. *Re-vegetate Disturbed Lands* – As a part of implementing the measures described in Section 4.2.5 below, as well as measures outlined in the Critical Habitats Management Plan, the Project Owner shall identify specific areas for re-vegetation with input from the River Advisory Committee (see Section 4.2.6), including representatives from the Housatonic River Commission, National Park Service, Housatonic Valley Association, Appalachian Trail Conservancy, and Connecticut Chapter of the Appalachian Mountain Club. One such area is located on National Park Service land along the western riverbank approximately 500 feet downstream of the roadway. The Project Owner will establish a rudimentary access trail to the river below and re-vegetate eroded areas associated with the access trail.

4.2.5 ***Erosion Control and Resource Protection Program*** During the development of the SMP, issues were raised regarding stormwater run-off and non-point source pollution associated with the recreation area parking lots and boat launching areas at Falls Village and Bulls Bridge. Issues were also identified regarding increasing recreation pressure at the Bulls Bridge Scenic Area. Specific actions to address these issues are listed below. These actions will be coordinated with implementation of the Recreation Management Plan (RMP) for the Housatonic River Project. Where necessary, the RMP will be modified to reflect the items listed below.

**Action Plan:**

1. *Re-grade Upper and Lower Falls Village Recreation Areas* – In addition to re-grading the parking and boat launch areas as

identified in the draft RMP, the Project Owner shall install pervious parking materials to reduce non-point source run-off into the river. Conceptual drawings will be prepared within three (3) months of FERC's approval of the SMP. Engineering site drawings will be prepared within six (6) months of the SMP approval, and construction will take place in the first full construction season following design approval and permitting. Plans will be shared with the River Advisory Committee (see Section 4.2.6) and finalized based on their input.

2. *Redesign Great Falls Overlook* – The Project Owner shall redesign the Great Falls overlook to enhance recreational experiences and protect rare plant species in the area within one year of the SMP approval by FERC. Conceptual drawings shall be prepared within three (3) months of SMP approval.

3. *Redesign Bulls Bridge Scenic Area* – During development of the SMP, considerable interest was expressed by a variety of stakeholders in re-designing the Bulls Bridge Scenic Area, including closing the existing parking area and building a new parking lot on the east side of the bridge near Highway 7. The Project Owner shall, within four (4) months of the date FERC approves the final SMP/RMP, submit a plan, prepared by a professional Landscape Architect and stamped by a registered professional engineer, developed with input from the River Advisory Committee, showing the following:

A. Proposed location, dimensions and all appurtenant information (including, but not limited to construction materials, landscaping, borders, fencing, grading, slope, drainage and parking capacity – method of delineating spaces for

passengers vehicles, two (2) handicapped spots and space for two (2) commercial vehicles) of a new unpaved parking area to be located on land owned by the Project Owner. Said parking area to be completed within one (1) year of the approval by FERC of the SMP/RMP.

B. New signage 1) directing traffic into the new parking lot, 2) noticing the closure of the existing lot on the island, 3) noticing the approach of two (2) one-lane bridges, and 4) requirement to yield to pedestrians. Other necessary signs to be determined with input from interested parties.

C. Plans to redesign the existing parking lot on the island for use as a staging area by commercial white-water operators from spring through fall, including plans to restrict access to the lot using a locked gate. The Plan would also include installation of barriers to prevent parking on the island with the exception of two (2) single handicapped spaces and restoration of disturbed areas using indigenous vegetation.

D. Measures to avoid potential impacts to Threatened & Endangered species as per the "Natural Heritage Occurrences" map prepared pursuant to Critical Habitat Management Plan required by license article 405.

4. *Provide Better Trail Definition* – Within six (6) months of Plan approval, season permitting, the Project Owner shall install barriers on project lands along pedestrian side trails that are adversely impacting critical habitats or causing accelerated erosion. The specific trails to be closed and types of barriers to be used shall be determined during implementation of

the SMP, with input from the River Advisory Committee (RAC).

5. *Improve Bulls Bridge Appalachian Spur Trail* – Within six (6) months of Plan approval, the Project Owner shall design and install appropriate rudimentary access facilities with erosion controls on National Park Service property that is immediately downstream of the Covered Bridge along the spur trail. This one site is used for put-in of boats, fishing, scenic viewing, and observation of boating activity. Design plans shall be developed with input from the River Advisory Committee (RAC) and NPS and shall be subject to final approval of NPS.
6. *Improve Signage at Bulls Bridge* – Within twelve (12) months of Plan approval, the Project Owner shall upgrade and add additional signage along hiking and portage trails as specified in the Recreation Management Plan. All new signage shall be designed in coordination with other re-development activities noted in this action plan.

The Project Owner shall develop conceptual design drawings for potential site layouts for a re-configured Bulls Bridge Scenic Area as well as other public access, erosion control, and safety improvements noted in the action plan items above with input from the River Advisory Committee (RAC) during implementation of the SMP. The draft RMP will be amended to reflect any modifications agreed to as part of the SMP process.

- 4.2.6 ***River Advisory Committee*** The Project Owner shall establish and convene a River Advisory Committee (RAC) as part of the implementation of the SMP. The RAC shall serve as a forum for sharing information and coordinating activities associated with implementation of the SMP and other related plans, including the Critical Habitats Management Plan and Recreation Management Plan.

Responsibilities of the RAC shall include:

1. Conducting ongoing and regular input from interested parties and Project-specific license implementation resource committees;
2. Coordinating implementation of the Recreation Plan with the SMP;
3. Sharing of information and criteria that is used to make resource decisions;
4. Clarifying resource priorities, as necessary;
5. Coordinating or conducting an assessment or with input that will help solve a particular problem or resolve key issues;
6. Coordinating implementation of the recreational enhancements;
7. Helping to prepare and review recreational use monitoring studies associated with the FERC Form 80 filings; and
8. Assisting with updates to the SMP and Recreation Plan.

The Project Owner will host the RAC meetings. The Project Owner will prepare a brief report of work completed between meetings, any study results found during the past years, and work anticipated over the coming years. RAC members may provide comments to the Project Owner concerning implementation; however, the RAC shall not have the authority to alter implementation plans or the Recreation Plan without the written agreement of the Project Owner. The Project Owner will, in its sole discretion, make any final decision regarding Recreation Plan implementation and revisions, subject to any necessary FERC approvals. RAC members to be invited to meetings will include:

- U.S. Fish and Wildlife Service;
- National Park Service;
- Connecticut Department of Environmental Protection;
- Housatonic Environmental Action League;

- Housatonic Valley Council of Elected Officials;
- Housatonic Valley Association;
- Appalachian Trail Conference;
- Appalachian Mountain Club;
- Housatonic River Commission (representing the towns of Cornwall, Kent, New Milford, Canaan, North Canaan, Salisbury, and Sharon);
- Adirondack Mountain Club;
- American Whitewater; and
- Trout Unlimited.

4.2.7 **Education Program** Article 407 of the new FERC license for the Housatonic River Project requires that the SMP include a public education component.

The Project Owner will work with the HRC, ATC, HVA, AMC, the Towns, and the State through the RAC to develop appropriate educational materials for dissemination at boat ramps and other public access points, and/or on the Internet.

The Project Owner shall also publish materials regarding the SMP and associated regulations on a project website.

The Project Owner shall utilize existing education programs, such as those provided by the Northwest Conservation District and other organizations to the extent possible.

As noted above in Section 4.2.5, the Project Owner shall develop and install signs at the Bulls Bridge area to improve user awareness and education.

## 5.0 Rocky River Development (Candlewood Lake)

The following presents information specific to the Rocky River development and Candlewood Lake. A brief description of the project is presented first, followed by a summary of SMP policies, programs, and actions for Candlewood Lake.

### 5.1 Description of the Project

The Rocky River development is a pumped storage facility located seven (7) mi downstream of Bulls Bridge at river mile (RM) 47. The project pumps water from the Housatonic River to Candlewood Lake. The Lake falls within the towns of Sherman, New Milford, Brookfield, Danbury, and New Fairfield, Connecticut. The Rocky River Dam and powerhouse create Candlewood Lake, with a surface area of approximately 5,580 acres at the normal maximum operating elevation of 428.1 ft NGVD, and a shoreline of approximately sixty (60) miles. Candlewood Lake is the largest lake in Connecticut and is one of the State's most important water resources.

Candlewood Lake was constructed in the early 1928 and operational in 1929 as the storage reservoir for the Rocky River Pump Storage Project. The Rocky River Project pre-dated the Federal Power Act and was not licensed by the Federal Energy Regulatory Commission (FERC) until 1981. Shoreline lands associated with Candlewood Lake are characterized largely by abutting residential and commercial development. There are over sixty (60) community associations located around the lake (see Figure 5.1) as well as numerous single family homes that abut Project lands. Most of the existing residential and commercial development around the lake was in existence before the Project was licensed by the FERC. Despite the existing development, approximately 30 percent of the shoreline remains undeveloped, providing for a diversity of landscape characteristics and recreational experiences.

Approximately 95% of the land within the Project boundary is owned by the Project Owner. This includes several small islands within the Lake, as well as the shoreline of a number of larger islands and peninsulas.

The CTDEP classifies Candlewood Lake water

resources as Class B\*. In the 1960s, during a period of extreme drought, Candlewood Lake was used to supplement public water supply to the town of Danbury, and has been the subject of local public water supply studies.

Additional information regarding the project setting, existing land use and ownership; natural, cultural, and aesthetic resources; existing shoreline management programs; and zoning is provided in Appendix E (Existing Conditions).

### 5.2 SMP Policies, Programs and Actions

The following sections outline specific policies, programs, and actions, for managing shoreline lands within the project boundary for Candlewood Lake. Because of the Lake's significance as the largest and most heavily utilized lake in the State, there has been considerable focus on the issues of lake and shoreline management, particularly in recent years. The Candlewood Lake Authority (CLA) has led two significant collaborative planning efforts (*Action Plan for Preserving Candlewood Lake* and *A Blueprint for Candlewood Lake*) designed to identify recommended management actions for improving the quality of the Lake (see Appendix C and E). There are also a number of existing State and local regulations that apply to Candlewood Lake, as well as several other FERC compliance plans as listed in Section 2.5 and summarized in Appendix C. Relevant existing planning documents and regulations include:

- Action Plan for Preserving Candlewood Lake;
- A Blueprint for Candlewood Lake;
- Recreation Management Plan;
- Littoral Zone Monitoring Plan;
- Nuisance Plant Monitoring Plan;
- State Boating Laws and Regulations;
- State Health Code;
- Inland Wetlands and Watercourses Regulations;

- Local Zoning; and
- Local Planning and Subdivision Regulations.

The SMP programs and actions outlined in the subsections below are intended to complement the above plans and regulations, and where possible, improve consistency with these existing documents and regulations.

5.2.1 **Purpose and Intent** Much of the shoreline of Candlewood Lake has been developed, and the popularity of the Lake has resulted in increased crowding and user conflicts indicative of intensive recreational use, both by lakefront property owners and by visitors from the local and regional area. The purpose and intent of the policies and programs outlined herein for Candlewood Lake are to:

1. conserve limited, undeveloped shoreline areas;
2. enhance environmental stewardship of developed shoreline lands; and
3. minimize future increases in crowding and user conflicts.

To achieve the above purposes, future management actions shall focus on the following:

- Conserving open space by designating the remaining large tracts of undeveloped project shoreline as Conservation Lands under the SMP, including certain project lands and islands owned by the Project Owner and the shoreline of Vaughn's Neck.
- Managing the use and occupancy of project lands through a comprehensive licensing program with allowances for pre-existing structures.
- Enhancing coordination and consistency, including creation of a standard set of Shoreline Development Guidelines and development of a Geographic Information System (GIS) and other tools to facilitate data sharing and coordinated workload activity planning.

- Protecting and establishing vegetated buffers, including incentives to encourage voluntary establishment of vegetated buffers on previously cleared shoreline lands, and a targeted re-vegetation program focused on specific disturbed lands.

- Creating and partnering on education and training opportunities for the public, contractors, and real estate agents regarding shoreline management, licensing requirements, and Shoreline Development Guidelines.

5.2.2 **Development Specific Policies** In addition to the policies established in Section 3.0 of this SMP, the following development specific policies shall be enforced at Candlewood Lake:

- *Shoreline Designations* – Shoreline lands within the Project boundary shall be managed in accordance with the shoreline designations shown in Figure 5.2 and defined in Section 3.3 of this SMP. These designations will guide future management decisions regarding shoreline lands.
- *Docks and Marinas* – Except as provided for by existing deeded rights and/or existing lease or license agreements, the Project Owner shall not allow additional docks or boat slips on Candlewood Lake in an effort to maintain the quality of the lake experience and avoid increases in crowding and associated user conflicts. Similarly, unless specifically approved by the FERC, the Project Owner shall not allow additional commercial, municipal, or lake association marinas, or additional slips at existing marinas with more than ten (10) slips at Candlewood Lake that would add boats to the lake.
- *Sanitation Facilities* – Through the terms of its license and lease agreements, the Project Owner shall require municipalities operating Town Parks and marinas operators to open existing sanitation

facilities to general public use. The Project Owner will develop public education and information materials identifying where available sanitation facilities are located around the lake.

- *Pump-out Stations* – All marinas and town parks shall be encouraged to install boat pump-out stations. Credits on lease and license fees will be provided for those individuals and municipalities that install boat pump-out stations, provided they are open to the general public.

5.2.3 **Land Conservation Program** Protection and conservation of open space lands was one of the highest priority issues identified by stakeholders and the public during meetings held on the development of the Shoreline Management Plan for Candlewood Lake. In particular, there have been long-standing concerns over the protection of Candlewood Mountain, Green Island, Deer Island, and Vaughn's Neck, which are large parcels of undeveloped land adjacent to or within the lake. These properties have been recognized as containing important aesthetic, recreational, and environmental values and have been the subject of considerable discussion over the past several years. The shoreline of these properties, below the 440 foot elevation, are within the Project Boundary and are owned by the Project Owner. The upland portions of Candlewood Mountain, Green Island, Deer Island, and Vaughn's Neck, above the 440 foot elevation, are outside the Project Boundary and are owned by Connecticut Light and Power (CL&P).

Discussions between CL&P, State legislators, and other interested parties regarding potential mechanisms to protect these CL&P properties, and other important CL&P owned open space lands within Connecticut, are occurring in parallel with development of this SMP. NGC worked with local legislators to create a forum for such collaboration.

A conservation restriction was established for the bed of Candlewood Lake itself in 2001. This existing conservation restriction is described in more detail in Appendix E.

**Action Plan:**

1. *Conserve Undeveloped Lands* – Under the SMP, undeveloped project lands owned by the Project Owner will be managed for environmental protection and conservation. (see Figure 5.2, Conservation Lands). The Project Owner shall not allow occupancy of such lands except in accordance with existing deeded rights, and such rights may be restricted with regard to the size, location, and configuration of access paths, dock, or shoreline stabilization structures. With regard to shoreline stabilization, only rip-rap or bioengineering techniques will be allowed as necessary to control erosion.
2. *Identify Opportunities for Conservation Easements* – In addition to Action 1 above, the Project Owner shall entertain requests from appropriate State, Federal, and local entities regarding the purchase of conservation easements or other conservation restrictions as desired by these agencies.
3. *Encourage Conservation Restrictions by Others* – In addition to activities to conserve project lands owned in fee, the Project Owner shall encourage conservation restrictions on undeveloped Project lands owned by other private individuals as well as large upland land holdings adjacent to the Project. The Project Owner shall review land ownership maps and identify specific undeveloped properties within the Project Boundary that it does not own, as well as large tracts of undeveloped land adjacent to the Project that represent key opportunities for greenspace or trail development. The Project Owner shall contact these property owners in writing and offer to

arrange for a meeting with the Housatonic Valley Association (HVA) and other appropriate local land trust groups to discuss the benefits of, and opportunities for placing conservation restrictions on their lands.

- 5.2.4 **Vegetated Buffer Program** Trees, shrubs and other vegetation growing below the 440 foot contour line play an important role in the overall environmental condition of the Lake, including helping to protect water quality, maintaining scenic beauty, and providing habitat for fish and wildlife.

The intent of the Vegetated Buffer Program is to achieve the benefits noted above through the protection of existing native vegetation *and* the re-vegetation of previously cleared shoreline lands with native plantings over time.

Consistent with SMP policy 3.2.3, Vegetated Buffer Zones shall be established along the shoreline of Candlewood Lake as shown in Figure 5.3. The Project Owner shall implement the measures described herein designed to re-establish native vegetation within these zones.

Protection of existing vegetated shorelines will be accomplished through implementation and enforcement of new SMP policies and guidelines which restrict removal of existing vegetation (see Section 3.2.2 and Appendix D) and new licensing provisions and procedures which require protection of existing vegetation when constructing new structures on Project lands (see Section 5.2.5).

Re-vegetation of the buffer zone will be accomplished through a combination of: (1) voluntary actions, promoted through education and incentives; (2) mandatory actions, implemented through the licensing program; and (3) targeted re-vegetation conducted by the Project Owner.

The Vegetated Buffer Program shall be implemented based upon "case-by-case"

analyses, rather than a one-size-fits all approach. Recognizing that each site may be different, the Program will allow for a mixing and matching of buffer plantings and mulching to accomplish program objectives. The Vegetated Buffer Program shall promote re-vegetation of land above the mean high water mark as well as promote the establishment and maintenance of lakeshore littoral zone habitat consistent with lake morphology, substrate type, and the constraints imposed by fluctuating pool elevations.

**Action Plan:**

1. *Protect Existing Vegetation* - In accordance with SMP Policy 3.2.2, removal of native vegetation located below the 440 foot contour shall not be allowed without prior approval from the Project Owner and any applicable permits from local land use commissions. The Project Owner shall allow limited removal of vegetation for the construction and installation of docks and other approved structures in accordance with the Shoreline Development Guidelines and approved landscape plan. Individuals will be required to plant or pay for the planting of vegetation in the event that native vegetation is removed without a license, unless the Project Owner in its sole discretion determines to waive the requirement. Planting plans must be submitted and approved by the Project Owner prior to planting within the Project boundary. This action is not intended to apply to diminimus pruning, mowing, weeding, or planting of small garden plants.
2. *Promote Re-vegetation of Disturbed Lands* – The Project Owner shall make progress toward revegetation of disturbed project lands within designated buffer zones through a combination of the following actions:

- A. *Voluntary Actions* – Where project lands have been previously cleared and structures such as seawalls and patios have been constructed, the Project Owner shall recommend and encourage private property owners to voluntarily re-vegetate project lands around such structures. This action shall be supported by a buffer education program, incentives, and buffer guidelines as described below.
- B. *Education* – The Project Owner shall establish a vegetated buffer education program, which will include development and dissemination of educational materials, workshops and seminars.
- C. *Incentives* – The Project Owner shall develop an incentive program through the reduction of licensing fees for buffer planting. The Project Owner shall also provide fee reductions for licensees that agree to designate their buffers areas “Demonstration Buffers” and allow for occasional scheduled viewing by the public for educational purposes.
- D. *Buffer Guidelines* - The Project Owner shall establish guidelines for installation of vegetated buffers including provisions for three levels of buffer development (see Table 5.1, Appendix D and G).
- E. *Mandatory Re-vegetation* – Re-vegetation of shoreline areas shall be required on Project lands owned by the Project Owner by adjacent landowner:
  1. within 5 years of a property transfer of adjacent property: and/or
  2. if an applicant is proposing a new structure.

The Project Owner will maintain a list of certified Landscape Architects that can assist applicants in developing planting plans tailored to the site conditions and certify the applicant’s planting for equivalency to a Level 2 or 3 buffer; or state that the planting plan is the best possible solution given the site specifics.

The Project Owner shall not require the removal of existing structures such as patios or beaches for the purpose of establishing such buffer plantings, but rather the plantings and mulching may be designed around the existing uses.
- 3. *Conduct Vegetation Mapping* – The Project Owner shall conduct a detailed assessment and mapping of shoreline vegetation to establish baseline conditions. Methods may include analysis of aerial or satellite imagery, field reconnaissance, and electronic photo documentation. The assessment shall be completed within five (5) years of the

<b>Buffer Level</b>	<b>Established trees and shrubs</b>	<b>Impervious Surface</b>	<b>Percent Native Vegetation</b>	<b>Aquatic Habitat</b>	<b>Littoral Zone Habitat</b>
1 minimum	No	less than 20%	5 – 50	No	No
2	Yes	less than 15%	50 – 75	Yes	No
3	Yes	less than 10%	75 – 100	Yes	Yes

**Table 5.1 – SMP Buffer Level Performance Criteria**

SMP being approved by the FERC and shall be conducted with input from the Lake Advisory Committee. Collected data shall be incorporated into the Candlewood Lake Watershed GIS system, if practicable.

4. *Re-vegetate Targeted Areas* – The Project Owner shall target select shoreline areas for re-vegetation where a clear environmental benefit would be evident, such as active erosion areas, and/or areas of clear educational value, where public access sites are highly visible. Figure 5.4 displays areas of disturbed project lands around Candlewood Lake, known or suspected areas of accelerated shoreline erosion identified by the CLA, and targeted re-vegetation sites that at this time the Project Owner believes represent particularly promising opportunities for re-vegetation for environmental reasons, educational reasons, or both. In concert with implementation of the Littoral Zone Monitoring Plan, and shoreline vegetation mapping as described above, the Project Owner shall map and photo document those areas shown in Figure 5.4 in greater detail. Based on this information, the Project Owner shall refine the list of potential sites and select targeted areas for re-vegetation. Within two years of approval of the SMP the Project Owner shall prepare planting plans and a schedule for re-vegetation of selected areas.

5.2.5 **Licensing Program** The purpose and intent of the licensing program is to provide provisions that allow for:

- reasonable use and occupancy of project lands;
- existing structures to remain where viable; and
- new structures to be constructed as appropriate.

In accordance with its FERC license, the Project Owner may, among other things grant permission for certain types of use and occupancy of project lands and waters if such use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the Project. The type of use and occupancy for which the Project Owner may grant permission without prior FERC approval under this SMP are:

1. landscape plantings;
2. non-commercial boat docks, or similar structures and facilities that can accommodate no more that adhere to Policy 3.2.10 and the Shoreline Development Guidelines (Appendix D);
3. embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline;
4. food plots and other wildlife enhancement;
5. swim areas when permitted by the Department of Environmental Protection;
6. floating recreational platforms within authorized swim areas; and
7. sheds, patios, and gazebos and other similar structures.

**Action Plan:**

1. *Register Pre-existing Structures* – For the purpose of this SMP, pre-existing structures are defined as: (1) structures owned by abutting property owners or community associations that were constructed within the Project boundary prior to December 31, 2005; (2) structures owned by individuals that possess an easement or other legal right of access to the Project that were constructed within the Project boundary prior to December 31, 2000.

All pre-existing structures must be registered with the Project Owner unless

there is a current license or lease for the structure under the Project Owner's existing program.

Procedures for registering pre-existing structures are outlined in Section 8 of this SMP.

A License Review Subcommittee of the Lake Advisory Committee shall be formed to advise the Project Owner regarding the registration of pre-existing structures as described in Section 5.2.9.

All unencapsulated flotation must be removed: within ten (10) years of registration; within five (5) years of a license transfer; if the size, location, configuration of the dock is changed; or if the dock is replaced.

2. *License New Structures* – Prior to any ground disturbing activity, or the installation or construction of any new structure on or affecting Project lands, a license application must be submitted and approved and issued by the Project Owner. Application reviews will be coordinated with local jurisdictions such that no licenses will be issued until all applicable local permits and/or approvals have been obtained. Procedures for licensing new uses and occupancies are outlined in Section 8.5. Planting plans must be submitted and approved by the Project Owner prior to planting within the project boundary. Planting plans may be incorporated into the application for new or replacement structures. The license shall be revoked if erosion controls and Best Management Practices (BMP) are not followed throughout the construction phase of an authorized structure.
3. *Remove Unauthorized Moorings* – In accordance with SMP Policy 3.2.9, except as previously licensed, moorings

shall be prohibited. All existing, unlicensed moorings shall be removed. New moorings may be permitted on a case-by-case basis for situations where site conditions are not conducive to installation of docks in order to accommodate individuals and communities with deeded rights. All new moorings must be approved by the DEP in accordance with applicable State regulations.

- 5.2.6 ***Derelict Dock Program*** All licensees shall be responsible for maintaining their docks in safe working condition. If a dock is to be removed or replaced, the old dock must be disposed of properly. The Project Owner or its agents shall remove and dispose of docks that break loose during the year. If the owner of the dock can be identified, they will be charged an enforcement fee (see Section 8.6) plus the cost of recovering and disposing of the dock. The owner of the dock may be subject to loss of their license if there is evidence that the dock was purposefully released into the Lake.

- 5.2.7 ***GIS System and Data Sharing*** The Project Owner, in coordination with the CLA and local municipalities, shall develop an informational database and Geographic Information System (GIS) for tracking shoreline activities and licenses. The Project Owner shall seek to dovetail the system with existing town systems to the extent possible, to facilitate data sharing, coordination, and consistency. Information contained in the GIS will be made available to local Inland Wetlands and Watercourse Commissions and Planning and Zoning Commissions to aid in their review of proposed shoreline projects and enforcement of applicable town regulations. The Candlewood Lake Authority (CLA) has initiated an effort to construct a comprehensive watershed-wide information management and GIS system that would serve both the public and resource managers/regulatory

agencies. Recognizing that Candlewood Lake is a part of the larger watershed, the Project Owner shall coordinate with the CLA and to the extent practicable shall design the database and GIS System to interface with the larger Candlewood Lake Watershed Management and GIS System. This will aid in shoreline management, including monitoring and enforcing licensing of shoreline structures. Information obtained through licensing will be used to construct a central database for long-term management and compliance. The database shall include information regarding the number, size, and location of all existing structures and/or enhancements, as well as the date such structures were constructed, and a photograph of the Project property. The database will also contain parcel number information that can be used to link the shoreline database to other sources of land use regulatory information, including Town records.

5.2.8 **Lake Advisory Committee** The Project Owner shall establish and convene a Lake Advisory Committee (LAC) for Candlewood Lake as part of the implementation of the SMP. The LAC shall be formed within six months of FERC approval of the SMP. The LAC shall serve as a forum for coordination of ongoing activities associated with implementation of the SMP and other related plans, including the Recreation Management Plan. Details of the LAC, including membership and functions, are outlined below.

The LAC shall include representatives from the following groups:

- U.S. Fish and Wildlife Service;
- National Park Service;
- Connecticut Department of Environmental Protection;
- Candlewood Lake Authority;
- Town representatives;

- Lakefront property owner representatives; and
- Project Owner.

The purpose of the LAC meetings is to assist the Project Owner with ongoing review of recreational and shoreline needs within the Project and to discuss topics of mutual benefit and concern to those involved. Because of simultaneous enhancement activities occurring throughout the Project area at Project Owner-managed sites, as well as at the numerous private and public sites, the meetings will create a forum to achieve a balanced integration of resource goals for Project lands and waters, including:

1. Conducting ongoing and regular with input from interested parties;
2. Coordinating implementation of the SMP with the Recreation Management Plan and Critical Habitats Management Plan;
3. Sharing of information and criteria that is used to make resource decisions;
4. Clarifying resource priorities, as necessary;
5. Coordinating or conducting an assessment that will help solve a particular problem or resolve key issues;
6. Coordinating implementation of the recreational enhancements;
7. Helping to prepare and review recreational use monitoring studies associated with FERC requests; and
8. Assisting with updates to the SMP.

The LAC will meet annually for the first three (3) years following FERC approval of the SMP. The Project Owner will work with LAC members to determine a future meeting schedule as needed to address important shoreline management issues. The Project Owner will host the LAC meetings. The Project Owner will prepare a brief report of

work completed between meetings, any study results found during the past year, and work anticipated over the coming year. LAC members may provide comments to the Project Owner concerning implementation of the SMP; however, the LAC shall not have the authority to alter implementation plans or the SMP without the written agreement of the Project Owner. The Project Owner will, in its sole discretion, make any final decision regarding SMP implementation and revisions, subject to any necessary FERC approvals.

5.2.9 **License Review Subcommittee** The LAC shall establish a subcommittee to advise the Project Owner on the registration of pre-existing non-conforming structures requested by the Project Owner. The subcommittee shall consist of the following:

1. One representative from each of the four towns and the City of Danbury
2. A Project Owner representative
3. One representative of the Candlewood Lake Authority
4. Two representatives of private waterfront property owners

Town representatives shall be appointed by the town selectman (or the mayor in the case of the City of Danbury) and the Town of New Milford. The subcommittee shall nominate a chair who shall run all meetings of the subcommittee. All meetings and deliberations of the subcommittee shall be open to the public and all determinations shall be recorded in meeting minutes.

During the registration process (see Section 5.2.5), the Project Owner may request a review and recommendation from the License Review Subcommittee regarding approval of pre-existing structures. The Project Owner or the applicant may request a review if an initial registration request is

denied by the Project Owner (see Section 8.5 for grounds for denial of a registration). Actions by the subcommittee shall be advisory in nature. Final decisions regarding issuance of a license shall be made by the Project Owner. Appeals of the Project Owner's determination may be taken to the FERC. Once all pre-existing structures have been registered, the subcommittee shall sunset.

5.2.10 **Education Program** Article 407 of the new FERC license for the Housatonic River Project requires that the SMP incorporate a public education component. Article 407 also requires the identification of land that could be used as staging areas by local lake associations or authorities for patrol and water quality monitoring activities.

The City of Danbury recently passed a bond measure to fund the construction of a new Candlewood Lake Education and Research Center, to be located at the Danbury Town Park at the southern end of the Lake. The Project Owner applauds the efforts of the City to create a centrally located facility that will also serve as the operational headquarters for the CLA. The Project Owner, in coordination with the City and the CLA, shall seek to utilize the new center as a portal for disseminating educational materials, including print materials as described below. The Town Park has also been identified as a potential targeted re-vegetation area that could serve as an educational demonstration project.

The Project Owner shall publish materials regarding the SMP and associated regulations on a project website. The Project Owner will also work with CLA, the Towns, and the State, to develop appropriate educational materials for dissemination at boat ramps and other public access points, and/or the internet "including information on the

location of available pump-out/dump station facilities and land and toilets.”

The Project Owner will periodically sponsor seminars for the public and contractors who may be interested in doing work on project land. These seminars will educate participants regarding SMP policies regarding construction and vegetated buffers. The Project Owner will also periodically sponsor seminars for real estate brokers to ensure requirements of the SMP are communicated to new property owners adjacent to the project. The Project Owner shall utilize existing education

programs, such as those provided by the Northwest Conservation District and other organizations to the extent possible.

The Project Owner shall also encourage private entities with qualified buffers to designate their buffers as “Demonstration Buffers” and allow for occasional scheduled viewing by the public for educational purposes. Licensing fees shall be reduced for entities that agree to participate in the Demonstration Buffer Program.

## 6.0 Shepaug Development (Lake Lillinonah)

The following presents information specific to the Shepaug Development and Lake Lillinonah. A brief description of the Project is presented first, followed by a summary of SMP policies, programs, and actions for Lake Lillinonah. All references to the 210 foot contour line herein are in reference to 208.3 feet above sea level NGVD.

### 6.1 Description of the Project

The Shepaug Development and its impoundment, Lake Lillinonah, are located on the main stem of the Housatonic River, downstream from the Rocky River Development in the towns of Southbury, Newtown, Brookfield, Bridgewater, Roxbury, and New Milford. The Lake is approximately thirteen (13) miles long and ¼ mile wide at its widest point, has a surface area of approximately 1,870 acres, a depth of approximately 100 ft.; and it follows the natural course of the Housatonic River. With the exception of a small triangle of land in Bridgewater, all land associated with the Shepaug Development consists of a variable band between the water's edge and the 210' contour. The Project is operated in accordance with the new FERC license at water levels ranging from 193.8 NGVD to 198.3 NGVD.

The vast majority (approximately 70 percent) of the shoreline of Lake Lillinonah is undeveloped, wooded land with much of the land adjacent to the project protected by existing State Park lands and other open space. Some residential development exists around the Lake, but is generally confined to a few small cove areas.

Approximately 95% of the land within the Project boundary is owned by the Project Owner. At the upstream end of the reservoir, above the Still River, the Project is generally bounded by a roadway on one side and a railroad on the other. In this area, the Project Owner holds only flowage rights over the low-lying lands between these two features.

Additional information regarding the Project setting,

existing land use, and ownership; natural, cultural, and aesthetic resources; existing shoreline management programs; and zoning, is provided in Appendix E (Existing Conditions).

### 6.2 SMP Policies, Programs and Actions

The following sections outline specific policies, programs, and actions for managing shoreline lands within the Project boundary for Lake Lillinonah. There are also a number of existing State and local regulations that apply to Lake Lillinonah, as well as several other FERC license compliance plans as listed in Section 2.5 and summarized in Appendix C. Relevant existing planning documents, regulations and other resource materials include:

- Debris Management Plan;
- Recreation Management Plan;
- Littoral Zone Monitoring Plan;
- Nuisance Plant Monitoring Plan;
- State Boating Laws and Regulations;
- State Health Code;
- Inland Wetlands and Watercourses regulations;
- Local Zoning;
- Local Planning and Subdivision Regulations; and
- Landscapers Resource Guide to Lake Lillinonah Shoreline.

The SMP programs and actions outlined in the subsections below are intended to complement the above plans and regulations, and where possible, improve consistency with these existing documents and regulations.

- 6.2.1 **Purpose and Intent** Lake Lillinonah supports a mix of existing shoreline development and natural, undeveloped lands. The purpose and intent of the policies and programs outlined herein for Lake Lillinonah is to maintain the existing balance, allowing for continued shoreline use in a manner that does not

adversely affect the environmental or aesthetic values of the Lake and its shoreline.

To achieve the above purpose, future management actions, as described in more detail in the subsections below, shall focus on the following:

- Conserving open space and protecting the scenic and environmental quality of the Lake by designating much of the project shoreline as Conservation Lands under the SMP.
- Reducing floating woody debris originating from the shoreline through implementation of, and coordination with, the Debris Management Plan.
- Monitoring shoreline conditions and correcting Project-induced erosion identified through the Littoral Zone Monitoring Plan.
- Managing the use and occupancy of Project lands through a comprehensive licensing program with allowances for certain pre-existing structures.
- Enhancing coordination and consistency, including creation of a standard set of Shoreline Development Guidelines.
- Protecting and establishing vegetated buffers, including incentives to encourage voluntary establishment of vegetated buffers on previously cleared shoreline lands, and establishing a targeted re-vegetation program focused on specific disturbed lands.
- Creating and partnering on education and training opportunities for the public, contractors, and real estate agents, regarding shoreline management, licensing requirements, and SMP Development Guidelines.

6.2.2 **Development Specific Policies** In addition to the policies established in Section 3.0 of this SMP, the following development specific policy shall be enforced at Lake Lillinonah:

- *Shoreline Designations* – Shoreline lands within the Project boundary shall be managed in accordance with the shoreline designations shown in Figure 6.1 and defined in Section 3.3 of this SMP. These designations will guide future management decisions regarding shoreline lands.

6.2.3 **Land Conservation Program** The new license for the Housatonic River Project requires that the SMP identify conservation restrictions, or other similar protective measures, on those lands owned by the Project Owner within the Project Boundary that are not already dedicated to open space and provisions for identifying opportunities to provide conservation easements for greenway and trail development and improved public access within the Project Boundary.

**Action Plan:**

1. *Conserve Undeveloped Lands* – Figure 6.1 displays undeveloped shoreline lands owned by the Project Owner that will be managed for environmental protection and conservation (shown as Conservation Lands). Those lands within the Project that have existing conservation restrictions, including scenic easements, are also shown.
2. *Identify Opportunities for Conservation Easements* – In addition to Action 1 above, the Project Owner shall entertain discussions with appropriate State, Federal, and local entities regarding the purchase of conservation easements or other conservation restrictions for those Project lands designated as Conservation Lands that are not already protected.
3. *Encourage Conservation Restrictions by Others* – In addition to activities to conserve Project lands owned in fee, the Project Owner shall encourage conservation restrictions on undeveloped Project

lands owned by other private individuals, as well as large upland land holdings adjacent to the Project. The Project Owner shall review land ownership maps and identify specific undeveloped properties within the Project Boundary that it does not own, as well as identify large tracts of undeveloped land adjacent to the Project that represent key opportunities for greenspace or trail development. The Project Owner shall contact these property owners in writing and offer to arrange for a meeting with HVA and other appropriate local land trust groups to discuss the benefits of, and opportunities for placing conservation restrictions on their lands.

6.2.4 **Vegetated Buffers Program** Trees, shrubs and other vegetation growing below the 210 foot contour line play an important role in the overall environmental condition of the Lake, including helping to protect water quality, helping to maintain scenic beauty, and providing habitat for fish and wildlife.

The intent of the Vegetated Buffer Program is to achieve the benefits noted above through the protection of existing native vegetation and the re-vegetation of previously cleared shoreline lands with native plantings over time.

Consistent with SMP policy 3.2.3, Vegetated Buffer Zones shall be established along the shoreline of Lake Lillinonah as shown in Figure 6.2. The Project Owner shall implement the measures described herein designed to re-establish native vegetation within these zones.

Protection of existing vegetated shorelines will be accomplished through implementation and enforcement of new SMP policies and guidelines which restrict removal of existing vegetation (see Section 3.2.2 and Appendix D) and new licensing provisions

and procedures which require protection of existing vegetation when constructing new structures on Project lands (see Section 6.2.5).

Re-vegetation of the buffer zone will be accomplished through a combination of: (1) voluntary actions, promoted through, education and incentives; (2) mandatory actions, implemented through the licensing program; and (3) targeted re-vegetation conducted by the Project Owner.

The Vegetated Buffer Program shall be implemented based upon "case-by-case" analysis, rather than a one size fits all approach. Recognizing that each site may be different, the Program will allow for a mixing and matching of buffer plantings and mulching to accomplish program objectives.

The Vegetated Buffer Program shall promote re-vegetation of land above the mean high water mark as well as promote the establishment and maintenance of lakeshore littoral zone habitat consistent with lake morphology, substrate type, and the constraints imposed by fluctuating pool elevations.

**Action Plan:**

1. *Protect Existing Vegetation* – In accordance with SMP Policy 3.2.2, removal of native vegetation located below the 210 foot contour line shall not be allowed without prior approval from the Project Owner, and any applicable permits from local land use commissions. The Project Owner shall allow limited removal of vegetation for the construction and installation of docks and other approved structures in accordance with the Shoreline Development Guidelines and an approved landscape plan.

Individuals shall be required to plant or pay for the planting of vegetation in the event that native vegetation is removed

without a license from the Project Owner, unless the Project Owner in its sole discretion determines to waive the requirement. Planting plans must be submitted and approved by the Project Owner prior to planting within the Project boundary. This action is not intended to apply to diminimus pruning, mowing, weeding, or planting of small garden plants.

2. *Promote Re-vegetation of Disturbed Lands* – The Project Owner shall make progress toward revegetation of disturbed project lands within designated buffer zones through a combination of the following actions:

A. *Voluntary Actions* – Where project lands have been previously cleared and structures such as seawalls and patios have been constructed, the Project Owner shall recommend and encourage private property owners to voluntarily re-vegetate project lands around such structures. This action shall be supported by a buffer education program, incentives, and buffer guidelines as described below.

B. *Education* – The Project Owner shall establish a vegetated buffer education program, which will include development and dissemination of educational materials, workshops and seminars.

C. *Incentives* – The Project Owner shall develop an incentive program through the reduction of licensing fees for buffer planting, and will provide planting plan review services as a component of the Licensing Program. The Project Owner shall also provide fee reductions for licensees that agree to designate their buffers areas as “Demonstration Buffers” and allow for occasional scheduled viewing by the public for educational purposes.

D. *Buffer Guidelines* – The Project Owner shall establish guidelines for installation of vegetated buffers including provisions for three levels of buffer development (see Table 6.1 Appendix D and G).

E. *Mandatory Re-vegetation* – Re-vegetation of shoreline areas shall be required in connection with continued use of Project lands owned by the Project Owner by adjacent landowners:

1. within 5 years of a property transfer; and/or
2. if an applicant is proposing a new structure.

The Project Owner will maintain a list of certified Landscape Architects that can assist applicants in developing planting plans tailored to the site

<b>Buffer Level</b>	<b>Established trees and shrubs</b>	<b>Impervious Surface</b>	<b>Percent Native Vegetation</b>	<b>Aquatic Habitat</b>	<b>Littoral Zone Habitat</b>
1 minimum	No	less than 20%	5 – 50	No	No
2	Yes	less than 15%	50 – 75	Yes	No
3	Yes	less than 10%	75 – 100	Yes	Yes

**Table 6.1 – SMP Buffer Level Performance Criteria**

conditions and certify the applicant's planting for equivalency to a Level 2 or 3 buffer; or state that the planting plan is the best possible solution given the site specifics.

The Project Owner shall not require the removal of existing structures such as patios or beaches for the purpose of establishing such buffer plantings, but rather the plantings and mulching may be designed around the existing uses.

3. *Conduct Vegetation Mapping* – The Project Owner shall provide a detailed assessment and mapping of shoreline vegetation to establish baseline conditions. Methods may include analysis of aerial or satellite imagery, field reconnaissance, and electronic photo documentation. The assessment shall be completed within five (5) years of the SMP being approved by the FERC.
4. *Re-vegetate Targeted Areas* – The Project Owner shall target select shoreline areas for re-vegetation where there is a clear environmental benefit, such as in areas of active erosion and/or where a clear educational value exists, such as public access sites which are highly visible. Figure 6.3 displays areas of disturbed Project lands around Lake Lillinonah, known or suspected areas of accelerated shoreline erosion, and targeted re-vegetation sites that at this time the Project Owner believes represent particularly promising opportunities for re-vegetation for environmental reasons, educational reasons, or both. In concert with implementation of the Littoral Zone Monitoring Plan and shoreline vegetation mapping as described above, the Project Owner shall map and photo document those areas shown in Figure 6.3 in more

detail. Based on this information, the Project Owner shall refine the list of potential sites and select up to five targeted areas for re-vegetation. By the end of 2008, the Project Owner shall prepare planting plans and a schedule for re-vegetation of selected areas.

6.2.5 **Licensing Program** The purpose and intent of the licensing program is to provide provisions that allow for:

- reasonable use and occupancy of Project lands;
- existing structures to remain where viable; and
- new structures to be constructed as appropriate.

In accordance with its FERC license, the Project Owner may, among other things grant permission for certain types of use and occupancy of Project lands and waters, without prior FERC approval, if such use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the Project. The type of use and occupancy for which the Project Owner may grant permission without prior FERC approval under this SMP are:

1. landscape plantings;
2. non-commercial boat docks, or similar structures and facilities that can accommodate no more that adhere to Policy 3.2.10 and the Shoreline Development Guidelines (Appendix D);
3. embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline;
4. food plots and other wildlife enhancement;
5. swim areas when permitted by the Department of Environmental Protection;

6. floating recreational platforms within authorized swim areas; and
7. sheds, patios, and gazebos and other similar structures.

**Action Plan:**

1. *Register Pre-existing Structures* – For the purpose of this SMP, pre-existing structures are defined as structures owned by abutting property owners or community associations that were constructed within the Project boundary prior to December 31, 2005. All pre-existing structures must be registered with the Project Owner unless there is a current license or lease for the structure under the Project Owner’s existing program. Procedures for registering pre-existing structures are outlined in Section 8 of this SMP.

A License Review Subcommittee of the Lake Advisory Committee shall be formed to advise the Project Owner regarding the registration of pre-existing structures as described in Section 6.2.9.

All pre-existing docks must be brought into conformance with new SMP floatation requirements (see Appendix D) within ten (10) years of registration, or within five (5) years of a property sale, or if the dock is being replaced or undergoing a significant alteration (greater than 50%) requiring a new license, or if the dock is identified as a derelict dock (in danger of breaking loose).

2. *License New Structures* – Prior to any ground disturbing activity, or the installation or construction of any new structure on or affecting Project lands, a license application must be approved and issued by the Project Owner. Application reviews will be coordinated with local jurisdictions such that no licenses will be issued until all applicable local permits and/or approvals have been obtained. Procedures for licensing new

uses and occupancies are outlined in Section 8. Planting plans must be submitted and approved by the Project Owner prior to planting within the Project boundary. Planting plans may be incorporated into the application for new or replacement structures. The license shall be revoked if erosion controls and Best Management Practices (BMP) are not followed throughout the construction phase of an authorized structure.

3. *Remove Unauthorized Moorings* – In accordance with SMP Policy 3.2.9, except as previously licensed, moorings shall be prohibited. All existing, unlicensed moorings shall be removed. New moorings may be permitted on a case-by-case basis for situations where site conditions are not conducive to installation of docks in order to accommodate individuals and communities with deeded rights. All new moorings must be approved by the DEP in accordance with applicable State regulations.

6.2.6 ***Derelict Dock Program*** All licensees shall be responsible for maintaining their docks in safe working condition. If a dock is to be removed or replaced, the old dock must be disposed of properly. The Project Owner or its agents shall remove and dispose of docks that break loose during the year. If the owner of a dock can be identified, they will be charged an enforcement fee (see Section 8.6) plus the cost of recovering and disposing of the dock. The owner of the dock may be subject to loss of their license if there is evidence that the dock was purposefully released into the Lake.

6.2.7 ***GIS System and Data Sharing*** The Project Owner, with input from local municipalities, shall develop an informational database and Geographic Information System (GIS) for tracking shoreline activities and licenses. The Project Owner shall seek

to dovetail the system with existing town systems to the extent possible, to facilitate data sharing, coordination, and consistency. Information contained in the GIS will be made available to local Inland Wetlands and Watercourse Commissions and Planning and Zoning Commissions to aid in their review of proposed shoreline projects and enforcement of applicable town regulations. Information obtained through licensing will be used to construct a central database for long-term management and compliance. The database shall include information regarding the number, size, and location of all existing structures and/or enhancements, as well as the date such structures were constructed, and a photograph of the Project property. The database will also contain parcel number information that can be used to link the shoreline database to other sources of land use regulatory information, including Town records.

6.2.8 **Lake Advisory Committee** The Project Owner shall establish and convene a Lake Advisory Committee (LAC) for Lake Lillinonah and Lake Zoar as part of the implementation of the SMP. The LAC shall be formed within six (6) months of FERC approval of the SMP. The LAC shall serve as a forum for coordination of ongoing activities associated with implementation of the SMP and other related plans, including the Recreation Management Plan. Details of the LAC, including membership and functions, are outlined below.

The LAC shall include representatives from the following groups:

- U.S. Fish and Wildlife Service;
- National Park Service;
- Connecticut Department of Environmental Protection;
- Lake Lillinonah Authority;
- Lake Zoar Authority;

- Town representatives;
- Lakefront property owner representatives; and
- Project Owner.

The purpose of the LAC meetings is to assist the Project Owner with ongoing review of recreational and shoreline needs within the Project and to discuss topics of mutual benefit and concern to those involved. Because of simultaneous enhancement activities occurring throughout the Project area at Project Owner-managed sites, as well as at the numerous private and public sites, the meetings will create a forum to achieve a balanced integration of resource goals for Project lands and waters, including:

1. Conducting ongoing and regular coordination with interested parties;
2. Coordinating implementation of the SMP with the Recreation Management Plan and other license compliance plans;
3. Sharing of information and criteria that is used to make resource decisions;
4. Clarifying resource priorities, as necessary;
5. Coordinating or conducting an assessment that will help solve a particular problem or resolve key issues;
6. Coordinating implementation of the recreational enhancements;
7. Helping to prepare and review recreational use monitoring studies associated with FERC requirements; and
8. Assisting with updates to the SMP.

The LAC will meet annually for the first three (3) years following FERC approval of the SMP. The Project Owner will work with LAC members to determine a future meeting schedule as needed to address important shoreline management issues. The Project Owner will host the LAC meetings. The Project Owner will prepare a brief report of work completed between meetings, any

study results found during the past year, and work anticipated over the coming year. LAC members may provide comments to the Project Owner concerning implementation of the SMP; however, the LAC shall not have the authority to alter implementation plans or the SMP without the written agreement of the Project Owner. The Project Owner will, in its sole discretion, make any final decision regarding SMP implementation and revisions, subject to any necessary FERC approvals.

6.2.9 **License Review Subcommittee** The LAC shall establish a subcommittee to advise the Project Owner on the registration of pre-existing non-conforming structures as requested by the Project Owner. The subcommittee shall consist of the following:

1. One representative from each of the six towns
2. A Project Owner representative
3. One representative of the Lake Lillinonah Authority
4. Two representatives of private waterfront property owners

Town representatives shall be appointed by the town selectman. The subcommittee shall nominate a chair who shall run all meetings of the subcommittee. All meetings and deliberations of the subcommittee shall be open to the public and all determinations shall be recorded in meeting minutes.

During the registration process (see Section 6.2.5), the Project Owner may request a review and recommendation from the License Review Subcommittee regarding

approval of pre-existing structures. The Project Owner or the applicant may request a review if an initial registration request is denied by the Project Owner (see Section 8.5 for grounds for denial of a registration).

Actions by the subcommittee shall be advisory in nature. Final decisions regarding issuance of a license shall be made by the Project Owner. Appeals of the Project Owner's determination may be taken to the FERC. Once all pre-existing structures have been registered, the subcommittee shall sunset.

6.2.10 **Education Program** The Project Owner shall publish materials regarding the SMP and associated regulations on a project website. The Project Owner will also work with LLA, the towns, and the State to develop appropriate educational materials for dissemination at boat ramps, and other public access points, and/or the Internet.

The Project Owner will periodically sponsor seminars for the public and contractors who are interested in doing work on Project land. These seminars will educate participants regarding SMP policies, construction, and vegetated buffers. The Project Owner will also periodically sponsor seminars for real estate brokers to ensure requirements of the SMP are communicated to new property owners adjacent to the Project. The Project Owner shall utilize existing educational programs, such as those provided by the Northwest Conservation District and other organizations, to the extent possible.

## 7.0 Stevenson Development (Lake Zoar)

The following presents information specific to the Stevenson Development and Lake Zoar. A brief description of the Project is presented first, followed by a summary of SMP policies, programs, and actions for Lake Zoar. All references to the 110 foot contour line herein are in reference to 110 feet above sea level NGVD.

### 7.1 Description of the Project

The Stevenson Development and its impoundment, Lake Zoar, are located on the main stem of the Housatonic River, immediately downstream from Shepaug Dam in the towns of Monroe, Oxford, Newtown, and Southbury, Connecticut. The Lake is approximately eleven (11) miles long and  $\frac{1}{4}$  mile wide at its widest point. The Lake has a surface area of approximately 1,063 acres at the normal maximum operating elevation of 101.3 ft NGVD, and follows the natural course of the Housatonic River. There is approximately 25 miles of shoreline abutting the Lake.

A substantial portion of the shoreline around Lake Zoar (more than 40 percent) is comprised of residential development on small lots, with many of the houses located close to the waters edge. Much of this development reflects a pattern that was common in the nineteen twenties and thirties. There are two large State open space properties (Kettletown State Park in Oxford, and Paugussett State Forest in Newtown) that abut Lake Zoar, and form a green corridor along a significant portion of its shoreline. Together with Oxford Town Park and other conservation property, open space properties comprise approximately a quarter of the periphery of the Project.

Much of the Project land associated with the Stevenson Development is owned by private individuals. The Project Owner has flowage rights over those lands, necessary for operation of the Project.

Additional information regarding the project setting, existing land use and ownership; natural, cultural, and aesthetic resources; existing shoreline management

programs; and zoning, is provided in Appendix E (Existing Conditions).

### 7.2 SMP Policies, Programs and Actions

The following sections outline specific policies, programs, and actions for managing shoreline lands within the Project boundary for Lake Zoar. There are also a number of existing state and local regulations that apply to Lake Zoar as well as several other FERC compliance plans as listed in Section 2.5 and summarized in Appendix C. Relevant existing planning documents and regulations include:

- Debris Management Plan;
- Recreation Management Plan;
- Littoral Zone Monitoring Plan;
- Nuisance Plant Monitoring Plan;
- State Boating Laws and Regulations;
- State Health Code;
- Inland Wetlands and Watercourses Regulations;
- Local Zoning; and
- Local Planning and Subdivision Regulations.

The SMP programs and actions outlined in the subsections below are intended to complement the above plans and regulations, and where possible, improve consistency with these existing documents and regulations.

**7.2.1 Purpose and Intent** Lake Zoar supports a mix of existing shoreline development and natural, undeveloped lands. The purpose and intent of the policies and programs outlined herein for Lake Zoar are to maintain the existing balance, allowing for continued shoreline use in a manner that does not adversely affect the environmental or aesthetic values of the Lake and its shorelines. To achieve the above purpose, future management actions, as described in more detail in the subsections below, shall focus on the following:

- Reducing floating woody debris originating from the shoreline through implementation of, and coordination with, the Debris Management Plan.
- Monitoring shoreline conditions and correcting Project induced erosion in concert with the Littoral Zone Monitoring Plan.
- Managing the use and occupancy of Project lands through a comprehensive licensing program which allows for certain pre-existing structures.
- Enhancing coordination and consistency, including creation of a standard set of SMP Development Guidelines which can be adopted by local governments.
- Creating and partnering on education and training opportunities for the public, contractors, and real estate agents, regarding shoreline management, licensing requirements, and SMP Development Guidelines.

7.2.2 **Development Specific Policies** In addition to the policies established in Section 3.0 of this SMP, the following development specific policies shall be enforced at Lake Zoar:

- *Shoreline Designations* – Shoreline lands within the Project Boundary shall be managed in accordance with the shoreline designations shown in Figure 7.1, and defined in Section 3.3 of this SMP. These designations will guide future management decisions regarding shoreline lands.

7.2.3 **Land Conservation Program** The new license for the Housatonic River Project requires that the SMP identify conservation restrictions or other similar protective measures on those lands owned by the Project Owner within the Project Boundary that are not already dedicated to open space, and provisions for identifying opportunities to provide conser-

vation easements for greenway and trail development and improved public access within the Project Boundary.

**Action Plan:**

1. *Conserve Undeveloped Lands* – Figure 7.1 displays undeveloped shoreline lands owned by the Project Owner, State, or conservation organization that will be managed for environmental protection and conservation (shown as Conservation Lands).
2. *Identify Opportunities for Conservation Easements* – In addition to Action 1 above, the Project Owner shall entertain requests from appropriate State, Federal, and local entities regarding the purchase of conservation easements or other conservation restrictions for those Project lands designated as Conservation Lands that are not already protected.
3. *Encourage Conservation Restrictions by Others* – In addition to activities to conserve Project lands owned in fee, the Project Owner shall encourage conservation restrictions on undeveloped Project lands owned by other private individuals, as well as large upland land holdings adjacent to the Project. The Project Owner shall review land ownership maps and identify specific undeveloped properties within the Project Boundary that it does not own, as well as large tracts of undeveloped land adjacent to the Project that represent key opportunities for greenspace or trail development. The Project Owner shall contact these property owners in writing and offer to arrange for a meeting with the Housatonic Valley Association (HVA) and other appropriate local land trust groups to discuss the benefits of, and opportunities for placing conservation restrictions on their lands.

7.2.4 **Vegetated Buffer Program** Trees, shrubs and other vegetation growing along the shoreline play an important role in the overall environmental condition of the Lake, including helping to protect water quality, helping to maintain scenic beauty, and providing habitat for fish and wildlife. Consistent with SMP policy 3.2.3, Vegetated Buffer Zones shall be established as shown in Figure 7.2. The Project Owner shall implement measures designed to re-establish native vegetation within these zones as described herein. Because the Project Owner maintains only flowage easements around the vast majority of the Lake Zoar shoreline, measures to enhance native shoreline vegetation within the designated buffer zones will focus primarily on encouraging private land owners within the Project boundary to establish buffer plantings. This will be accomplished through education and outreach activities and promotion of the Shoreline Development Guidelines regarding buffer plantings.

For the relatively small percentage of lands owned by the Project Owner at Lake Zoar, the establishment of additional native vegetation along the shoreline will be accomplished through the actions and provisions developed for Candlewood Lake and Lake Lillinonah (see Section 5.2.4).

7.2.5 **Licensing Program** The purpose and intent of the licensing program for Lake Zoar is to provide provisions that allow for:

- reasonable use and occupancy of Project lands;
- existing docks to remain where viable; and
- new docks to be constructed as appropriate.

In accordance with its FERC license, the Project Owner may, among other things grant

permission for certain types of use and occupancy of Project lands and waters, without prior FERC approval, if such use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the Project. The type of use and occupancy for which the Project Owner may grant permission at Lake Zoar without prior FERC approval under this SMP are:

1. non-commercial boat docks, or similar structures and facilities that can accommodate no more that adhere to Policy 3.2.10 and the Shoreline Development Guidelines (Appendix D);
2. swim areas when permitted by the Department of Environmental Protection; and
3. floating recreational platforms within authorized swim areas.

The following sections outline provisions for licensing the use and occupancy of project lands and waters, at Lake Zoar including provisions for existing uses and potential future uses. The Project Owner shall register all existing and license all new uses and occupancies located on lands it owns within the Project Boundary to ensure that such uses and occupancies do not present hazards to navigation, or interfere with the safe and reliable operation of the Project. The Project Owner shall also register all existing docks that extend over Project waters, regardless of the underlying land ownership.

For new uses, the Project Owner shall license docks and other shoreline structures that extend over the water consistent with guidelines and procedures established by the U.S. Army Corps of Engineers and local regulatory agencies (see <http://www.usace.army.mil>). The Project Owner shall work with local Inland Wetland and Watercourses Commissions to

establish procedures for coordination and implementation of local permitting. Prior to any ground disturbing activity or the installation or construction of any new structure extending over project waters, a license application must be approved by, and a license issued from the Project Owner. Application reviews will be coordinated with local jurisdictions such that no licenses will be issued until all applicable local permits have been obtained. Procedures for licensing new uses and occupancies are outlined in Section 8.5.

**Action Plan:**

1. *Register Pre-existing Structures* – For the purpose of this SMP, pre-existing structures are defined as docks owned by abutting property owners or community associations that were constructed within the Project Boundary prior to December 31, 2005.

All pre-existing docks must be registered with the Project Owner unless there is a current license or lease for the structure under the Project Owner's existing program. Procedures for registering pre-existing structures are outlined in Section 8 of this SMP.

A License Review Subcommittee of the Lake Advisory Committee shall be formed to advise the Project Owner regarding the registration of pre-existing structures as described in Section 7.2.6.

Pre-existing docks must be brought into conformance with new SMP floatation requirements (see Appendix D) within ten (10) years of registration, or within five (5) years of a property sale unless the dock is being replaced or undergoing a significant alteration (greater than 50%) requiring a new license, or if the dock is identified as a derelict dock (in danger of breaking loose).

2. *License New Structures* – Prior to the construction of any new dock on Project

lands or waters, a license application must be submitted and approved by the Project Owner. Application reviews will be coordinated with other Federal and local jurisdictions such that no licenses will be issued until all applicable local permits and/or approvals have been obtained.

- 7.2.6 ***Lake Advisory Committee and License Review Subcommittee*** The Project Owner shall establish and convene a Lake Advisory Committee (LAC) for Lake Lillinonah and Lake Zoar as part of implementation of the SMP. The LAC shall be formed within six (6) months of FERC approval of the SMP. The LAC shall serve as a forum for coordination of ongoing activities associated with implementation of the SMP and other related plans. Details of the Lillinonah/Zoar LAC, are provided in Section 6.2.8 and 6.2.9.

- 7.2.7 ***Education Program*** The Project Owner shall publish materials regarding the SMP and associated regulations on a project website. The Project Owner will also work with LZA, the Towns, and the State, to develop appropriate educational materials for use at boat ramps and other public access points and/or the Internet.

The Project Owner will periodically sponsor seminars for the public and contractors who are interested in doing work on Project land. These seminars will educate participants regarding SMP policies, construction, and vegetated buffers. The Project Owner will also periodically sponsor seminars for real estate brokers to ensure requirements of the SMP are communicated to new property owners adjacent to the Project. The Project Owner shall utilize existing educational programs, such as those provided by the Northwest Conservation District and other organizations, to the extent possible.

- 7.2.8 ***GIS System and Data Sharing*** The Project Owner with input from the Towns of New-

town, Southbury, and Oxford, shall develop an informational database and Geographic Information System (GIS) for tracking shoreline activities and licenses. The Project Owner shall seek to dovetail the system with existing GIS systems developed by the towns of Newtown and Southbury to the extent possible to facilitate data sharing, coordination, and consistency. Information contained in the GIS will be made available to local Inland Wetlands and Watercourse Commissions and Planning and Zoning Commissions to aid in their review of proposed shoreline projects and enforcement of applicable town regulations.

Information obtained through licensing will be used to construct a central database for long-term management and compliance. The database shall include information regarding the number; size, and location of all existing structures and/or enhancements, as well as the date

such structures were constructed, and a photograph of the Project property. The database will also contain parcel number information that can be used to link the shoreline database to other sources of land use regulatory information, including Town records.

- 7.2.9 ***Derelict Docks Program*** All licensees shall be responsible for maintaining their docks in safe working condition. If a dock is to be removed or replaced, the old dock must be disposed of properly. The Project Owner or its agents shall remove and dispose of docks that break loose during the year. If the owner of a dock can be identified, they will be charged an enforcement fee (see Section 8.6) plus the cost of recovering and disposing of the dock. The owner of the dock may be subject to loss of their license if there is evidence that the dock was purposefully released into the Lake.

## 8.0 Implementation Plan

The following summarizes how various components of the SMP will be implemented, including general procedures and a schedule for conducting specific actions. Monitoring and enforcement of SMP provisions is also outlined along with a schedule for periodically updating the SMP.

Detailed implementation procedures, including specific implementation tools such as license application forms, GIS databases, and educational programs shall be developed with input from the Lake and River Advisory Committees after approval of the SMP. General methods for deriving fees are outlined herein, but specific fee schedules will depend on the final SMP that is approved by the FERC.

### 8.1 Implementation Schedule

Table 8.1 summarizes key actions identified in the SMP and presents a schedule for implementing these actions over the next three years, under the assumption that the SMP will be approved by the FERC no later than January 1, 2007. If approval of the SMP is delayed past January 1, 2007, then the implementation schedule will be adjusted accordingly.

### 8.2 Lake and River Advisory Committees

A key component to implementation of the SMP shall be the establishment of the River and Lake Advisory Committees described in Sections 4.2.6, 5.2.8, 6.2.8., and 7.2.6. These advisory committees will serve as a forum for coordination of ongoing management activities associated with implementation of the SMP and other related plans. The River and Lake Advisory Committees shall be established within six (6) months of FERC's approval of the SMP.

### 8.3 Program Cost and Accounting

The Project Owner shall pay for SMP programs such as targeted re-vegetation, and removal of unlicensed moorings. The administrative cost of licensing shoreline structures shall be recovered through fees charged to the parties that benefit from those structures. Fee schedules shall be set to recover the

administrative cost of the Licensing Program only, and will not result in any profits for the Project Owner or to fund other programs.

Costs will be reviewed by the Project Owner on an annual basis. The Project Owner will develop annual statements regarding costs and revenue associated with the Shoreline Management Plan which will be shared with the LAC. Fee schedules shall be established based on six (6) year projections and adjusted as needed every three (3) years to ensure that the revenues collected do not exceed the administrative costs of the program. If fees are to be adjusted, the results of the review, including supporting information shall be presented to the LAC and filed with the FERC.

### 8.4 Availability of Digital Data

The Project Owner shall maintain a list of digital mapping data in ArcView format and make such data available upon request. Available data layers shall include, but not be limited to:

- Hydrography and roads
- Project Boundary
- Open space
- Project Owner land within the Project
- Shoreline classification
- Parcels (where available)

Interested parties should contact the Project Owner's main office. Where possible, the Project Owner shall coordinate with other agencies such as Lake Authorities to enhance the sharing and utilization of digital mapping data.

### 8.5 Licensing Procedures

The following outlines procedures for licensing existing and new structures on Project lands. All existing structures on Project land must be licensed by June 2008. Where the Project Owner does not own Project lands in fee title, only those structures which extend over Project waters, such as docks, are required to be licensed.

Individuals who fail to obtain a license in accordance with the provisions of this SMP, shall be subject to enforcement fees as outlined in sections 8.6 and 8.9 of this Plan.

Property owners may request a pre-application meeting with a representative of the Project Owner to discuss licensing of existing structures in advance of completing an application form.

**Procedures for Registering Existing Structures and Facilities**

The SMP is designed to allow for the continuation of historic, existing shoreline uses. However, all existing uses must be registered and approved by the Project Owner, as outlined below. The Project Owner anticipates registering and issuing licenses to the vast majority of existing uses (see item 5

below for circumstances under which a license may be denied). The following outlines general procedures for registering existing shoreline structures and facilities.

1. Applicant completes and submits registration form to be developed by the Project Owner. Project Owner may consult with the LAC or other interested parties regarding development of the registration form.
2. Project Owner reviews the application for conformance with development guidelines, for any illegal uses, and for any safety or environmental issues.
3. Depending on the application review, a site visit may be scheduled by the Project Owner.

SMP	Actions	2006				2007				2008			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Conserve Undeveloped Lands												
2	Allow for Conservation Easements												
3	Encourage Conservation Restrictions by Others												
4	Re-vegetate Disturbed Lands												
5	Re-grade Upper and Lower Falls Village Recreation Areas												
6	Redesign Great Falls Overlook												
7	Redesign Bulls Bridge Scenic Area												
8	Provide Better Trail Definition												
9	Improve Bulls Bridge Appalachian Spur Trail												
10	Improve Signage at Bulls Bridge												
11	Protect Existing Vegetation												
12	Conduct Vegetation Mapping												
13	Re-vegetate Targeted Areas												
14	Register Pre-existing Structures												
15	License New Structures												
16	Remove Unauthorized Moorings												
17	Formation of LAC												
18	Formation of RAC												
19	GIS Database Development												
20	Education Program Development												

**Table 8.1 – Implementation Schedule**

4. The application will not be processed until it is complete and all required information is included.
5. Project Owner approves or denies the registration request. Requests may be denied if: (1) structures were constructed after December 31, 2005 or on easements after December 31, 2000; (2) there are illegal uses; (3) there are navigational safety or access issues; or (4) there are environmental concerns.
6. If the request is approved, a license will be issued by the Project Owner. The Project Owner will furnish a license tag and number to be placed on the licensed property. The tag shall be placed in a location easily visible from the lake.
7. Where Project lands have historically been cleared, the Project Owner will recommend and encourage voluntary establishment of native vegetative cover in the Buffer Zone.
8. If the request is denied, the applicant may request a review by the License Review Subcommittee and may appeal the Project Owner's final decision to the FERC.

***Procedures for Community Associations, Municipalities, and Commercial Entities***

Registration of community facilities shall be done at the same time as private residential uses. However, these uses shall be processed on a case-by-case basis reflective of the unique nature of these facilities. Existing leases will be renegotiated per the terms of the existing lease.

***Procedures for New Structures and Alterations to Existing Structures***

1. Individual completes and submits a license application form.
2. Project Owner reviews the application for conformance with development guidelines, provisions for establishment of a vegetated buffer plantings, and any potential safety or environmental issues.
3. Depending on the request, a site visit may be scheduled by the Project Owner.
4. The application will not be processed until it is

complete and all required information is included.

5. Once the application is processed, the Project Owner will issue a pre-approval letter and notify local jurisdictions of such action.
6. Applicant seeks and obtains all necessary Federal, State, and local permits for the proposed action.
7. Upon proof of having received all applicable federal, state and local permits and/or town or city department approvals, the Project Owner issues a license.
8. Applicant notifies Project Owner of commencement of construction and construction period.
9. Applicant notifies Project Owner of construction completion and the Project Owner furnishes a license tag to be placed on the site. The tag shall be affixed on the lake side of the structure in a location most visible from the channel or cove.
10. Construction of licensed structures must be completed within one year from the date the license is issued. If the work is not complete within one year, the licensee may apply for a one-year extension to complete the work. Additional extensions as necessary may be considered on a case-by-case basis. The extension will be granted provided there have not been any changes in the information that was submitted with the original application and the structure complies with current guidelines. If the license expires, the license is null and void.
11. Project Owner inspects property to ensure that all license conditions have been met, including establishment of required vegetated buffers.

***License Transfer***

If the ownership of the property to which the dock or other shoreline structures are licensed changes, the Project Owner must be notified and the license must be transferred to the new owner (using a license transfer application). The Project Owner shall review the site at the time a transfer request is submitted. If there are uses that have not been approved through a license agreement, the Project Owner shall require the new owner to obtain a new license for the property, which may require

the removal of unauthorized structures.

All license transfers shall include the following conditions:

- *Docks* – Pre-existing non-conforming docks must conform with SMP flotation requirements within ten (10) years of SMP approval, or within five (5) years of a license transfer, whichever is less.
- *Buffers* – The new licensee shall have five (5) years within which to establish at least minimum, Level 1 plantings.

Individuals who fail to submit a request for license transfer shall be notified by the Project Owner. If a transfer form is not received within thirty (30) days of notification, the Project Owner will send a second notification. If a transfer form is not received within 30 days of the second notification, the license will be canceled and the property owner will be required to remove all structures from Project lands.

## 8.6 Licensing Fees

The following sections outline a framework for assessing fees for residential, commercial, municipal, and community association uses. An initial schedule of fees has been included with the filing of this SMP (See Appendix I). The fee schedule may be modified based upon the final approved SMP, and will be reviewed and adjusted every three (3) years as outlined in Section 8.3.

### ***Registration Fee for Existing Structures - Residential***

When registering existing structures, applicants must pay a one-time registration fee unless the application is:

- received within six (6) months of SMP approval;
- for structures located on lands owned entirely by the applicant;
- for structures covered by a deeded right; or
- for structures covered by a current license.

Registration fees are to cover the costs of processing application forms, including necessary site inspections. The one-time registration fee will cover all existing structures associated with a given parcel.

Individuals or entities who do not submit applications to register existing structures by January 2008 shall be subject to an enforcement fee, and may be required to remove existing structures from Project lands.

### ***One-time Fee for New Structures, Repairs, or Replacements***

With the exception of applicants who either (1) own the property where the structure is or will be located; or (2) have a deeded right for the proposed structure, all applicants wishing to build a new structure, replace, or modify the size, location, and/or configuration of an existing structure on Project lands owned by the Project Owner must pay a one-time administrative licensing fee.

### ***Annual License Administration Fee***

All entities with structures located on Project lands shall pay an annual fee unless the shoreline structures are located on lands owned entirely by the applicant/license holder. Annual fees will be used to cover ongoing administrative costs such as monitoring license compliance and responding to license violations.

Annual fees shall be billed on a per-parcel basis to the holder of the license.

*Community Associations* – The annual fee for community association facilities will be scaled according to the number of boat slips maintained. The per-slip cost will be equivalent to the per-slip fees charge for residential docks.

*Municipal Facilities* – Annual fees for municipal facilities will be waived for years 2008, 2009, and 2010, and may be waived in subsequent years if the municipality agrees to assist with shoreline management initiatives.

*Buffer Incentives* – Shoreline licensees that install buffers, or have maintained an existing buffer shall be eligible for a reduced annual fee. Installed buffers shall be eligible once the buffer has been planted per an approved planting plan. The applicant must provide proof of the existing buffer and must maintain the buffer to maintain the credit

***Implementation of annual license administration fees will begin in 2008 (or one year from the date of final FERC approval).***

Annual fees shall be due on March 31st of each year following issuance of a new license (including licenses for pre-existing structures). If fees are not received on this date, the Project Owner will send a notification and request for fee payment. If fees are not received within thirty (30) days of the notification, the license will be canceled and the property owner will be required to remove said facilities from Project lands.

#### ***Enforcement Fee***

Enforcement fees shall be levied for the following:

- failure to register or license an existing use;
- failure to license a new use;
- major modification to existing structure without new license, or failure to conform to guidelines;
- commercial/rental use of a residential dock or ramp;
- failure to pay annual administrative fees;
- unauthorized removal of trees/vegetation on Project Owner property;
- illegal landscape planting;
- violation of license conditions;
- a derelict dock that is not improved as requested or is allowed to float into the lake;
- violation of any other SMP requirements.

Enforcement fees may be structured to include recovery of legal costs associated with pursuing a violation.

#### ***License Transfer Fee***

Applicants applying for a license transfer shall pay a one-time license transfer fee.

### **8.7 Mooring Removal**

Beginning in the summer of 2007, the Project Owner or its contractors shall identify, mark and physically impound and remove all illegal moorings. The illegal

moorings will be marked with fluorescent spray paint, then numbered and dated with indelible marker. Known owners will be notified in writing that they have three weeks to remove the mooring, or the mooring will be removed and impounded by the Project Owner at the mooring owner's expense.

### **8.8 Monitoring**

The Project Owner shall conduct periodic monitoring of the shoreline both from the water and from land. The Project Owner shall also conduct aerial flights every five years to record shoreline activity as well as recreation activity in accordance with the Recreation Management Plan. In conjunction with the licensing of shoreline activity, the Project Owner shall conduct site visits and inspections as deemed necessary to identify specific site issues and to check to ensure that license conditions have been adhered to.

### **8.9 Enforcement**

The Project Owner shall have a continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of Project lands. If a permitted use and occupancy violates any condition of this SMP, the Project Owner shall take any lawful action necessary to correct the violation. For a permitted use and occupancy, that action includes, if necessary, canceling the permission to use and occupy the Project lands and waters, requiring the removal of any non-complying structures and facilities by the user or by the Project Owner, or removing such structures and facilities. If the Project Owner removes the non-complying structure, the Project Owner shall seek recovery of all associated costs from the violating user and assess the enforcement fee.

As noted in Section 8.6 above, an enforcement fee shall be assessed to individuals or entities that fail to obtain prior approval before occupying Project lands, violate conditions of an approved license, or fail to register a pre-existing use within the specified time frame. In addition to enforcement fees, the Project Owner may pursue legal action against those that

violate their license conditions or fail to obtain prior approval for activities on Project lands.

The Project Owner shall coordinate all enforcement actions with local land use agencies.

The Project Owner encourages local municipalities to establish Shoreline Overlay Districts, similar to the overlays already established by the six towns along the upper Housatonic River, and the Town of Brookfield for Candlewood Lake. Shoreline overlay districts that specifically recognize and incorporate the SMP and its development guidelines will improve consistency of regulations and add to the overall enforcement of

measures designed to protect the shoreline. The Project Owner shall coordinate enforcement actions with local land use agencies and other entities as appropriate under the circumstances.

### **8.10 Plan Update**

The Project Owner shall review and as necessary update this SMP every six (6) years following FERC approval. All updates to the SMP will be submitted to the FERC for approval.