FEDERAL ENVIRONMENTAL ASSESSMENT

AND

CONNECTICUT ENVIRONMENTAL IMPACT EVALUATION

Prepared and Submitted Pursuant to the Code of Federal Regulations Title 23, Part771,
Sections 119 and 135 (23 CFR 771.119 and CFR 771.135) and
Sections 22a-1a-1-12, inclusive, of the Regulations of Connecticut State Agencies

PUBLIC WATER SUPPLY SYSTEM EXPANSION AND REGIONAL INTERCONNECTION

Middlebury, Connecticut

Federal Environmental Protection Agency

State of Connecticut Department of Environmental Protection

June 2007
Revised December 2007

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List of Abbreviations

ADD	Average Day Demand
AWC	Aquarion Water Company
BMP	Best Management Practices
C&D	State Conservation and Development Policies Plan for Connecticut
CCCT	Connecticut Commission on Culture and Tourism
CEPA	Connecticut Environmental Policy Act
CGS	Connecticut General Statutes
CNVR	Central Naugatuck Valley Region
CO	Carbon monoxide
COGCNV	Council of Governments of Central Naugatuck Valley
CWC	Connecticut Water Company
DEP	Connecticut Department of Environmental Protection
DOT	Connecticut Department of Transportation
DPH	Connecticut Department of Public Health
DPUC	Connecticut Department of Public Utility Control
EIE	Environmental Impact Evaluation
EMT	Emergency Medical Technician
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
GPM	Gallons per Minute
HVWC	Heritage Village Water Company
IWC	Intermittent Water Course
MRT	Medical Response Technician
MCH	Middlebury Convalescent Home
MCHD	Middlebury Center Historic District
MMADD	Maximum Month Average Day Demand
MDD	Maximum Day Demand
MGD	Million Gallons per Day
MG/M^3	Milligrams per Cubic Meter
MOS	Margin of Safety
NAAQS	National Ambient Air Quality Standards
NDDB	Natural Diversity Data Base
NGVD	National Geodetic Vertical Datum
NO	Nitrogen Oxide
NO_2	Nitrogen Dioxide
O_3	Ozone
OPM	Office of Policy and Management
PEW	Palustrine Emergent Wetland
PFW	Palustrine Forested Wetland
Pb	Lead
PM_{10}	Particulate matter smaller than 10 micrometers in diameter

List of Abbreviations (Cont.)

POWW	Palustrine Open Water Wetland
PPM	Parts per Million
PRRD	Planned Residential Recreational Overlay District
PSSW	Palustrine Scrub-Schrub Wetland
RUP RB/UB	Riverine Upper Perennial Rock Bottom/ Unconsolidated Bottom
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
STEAP	Small Town Economic Assistance Program
UG/M^3	Micrograms per Cubic Meter
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
VOCs	Volatile Organic Compounds
WSP	Water Supply Plan

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EXECUTIVE SUMMARY

Introduction and Background

The Town of Middlebury, the Connecticut Water Company (CWC) and the Heritage Village Water Company (HVWC) are working collaboratively to plan, design, and construct a public water supply system expansion and regional interconnection in central Middlebury, Connecticut. Funding for the project is being provided through the Connecticut Department of Environmental Protection (DEP) and the Federal Environmental Protection Agency (EPA), triggering the need for environmental assessment under the National Environmental Policy Act (NEPA) and an Environmental Impact Evaluation under the Connecticut Environmental Policy Act (CEPA).

The proposed water supply interconnection will include (1) installation of an interconnection line along Tucker Hill Road and CT Route 188, and (2) the construction of a booster pump station. Additional project elements include (1) the extension of a water main along Chase Road and the Northern portion of Tucker Hill Road; (2) a service line to the Middlebury Convalescent Home; (3) a service line to the Town Library; and (4) an emergency interconnection to the Westover School water system.

A water supply expansion and regional interconnection has long been a goal of the Town of Middlebury. Water quality and quantity issues in the Town center have historically been difficult to address without the comprehensive solution an extension of water main affords. Further, the need for an interconnection has been underscored by the recent increase in regional development. The demand on the existing public water systems, particularly the HVWC system, is substantial and only expected to increase in the future. This is particularly true if regional development keeps up at its current pace.

The total funding for this project is $2,265,000. The following positive benefits are expected to occur as a result of the construction and operation of the regional water interconnection project:

- Supply HVWC with an adequate margin of safety for peak demand purposes and emergency supply.
- Provide an overall high level of redundancy to all water customers in the Town of Middlebury, with availability of one additional source of supply if the Waterbury or Naugatuck supply were compromised.
- Supply the Town of Middlebury Convalescent Home with public water and fire protection, bringing the facility into compliance with State fire suppression codes.
- Supply the existing town library with public water and fire protection, replacing the well that has suffered from bacteria contamination.

- Provide an emergency backup supply for Westover School's existing community water system.
- Provide a new public water supply for off-campus customers of the Westover School community water system, including municipal buildings.
- Provide improved water pressure to the Heritage-Middlebury system in the Bronson Drive area.

The multiple benefits far outweigh the costs of the project.

Alternatives Analysis

In accordance with CEPA and NEPA requirements, numerous alternatives have been analyzed for the regional water interconnection, including the "no action" alternative. A macro-scale alternative analysis considered an interconnection line between the CWC system in Middlebury with the HVWC system through the CWC Heritage-Middlebury system; expanding the capacity of the Pomperaug River wellfield; interconnecting with neighboring water com0pany supply systems; developing a stratified drift wellfield at the Housatonic River; develop new bedrock wells in the HVWC system; and modifying the Westover school water system. The micro-scale analysis considered two different interconnection routes between the CWC and HVWC systems. The proposed interconnection route (i.e. proposed action) is referenced as Alternative 2.

Evaluation of Existing Environment and Potential Impacts

The southwestern portion of the Town of Middlebury is serviced by the Heritage Village Water Company. The Central System of the Naugatuck Region of The Connecticut Water Company serves portions of the Towns of Beacon Falls, Bethany, Prospect, Naugatuck, Middlebury, and Waterbury. Two CWC systems currently operate in Middlebury. These are the main system, supplied by interconnections with Waterbury and the Naugatuck system; and the Heritage-Middlebury system in the Bronson Drive area, supplied by a single interconnection with HVWC.

The proposed interconnection will have a positive impact on the public water systems serving within the Town of Middlebury. The interconnection will provide HVWC with an adequate margin of safety and emergency supply, the Westover School system with an emergency water source, and provide improved water pressure for fire suppression purposes to several areas of the Town. However, an additional overall benefit of the interconnection is that the Town will increase its overall water supply redundancy, with the ability to draw water from the HVWC system in the west and the two existing CWC interconnections in the east.

The western section of the proposed interconnection route runs directly through the center of the Town of Middlebury. This area contains the central Town Green, several

municipal buildings, a private girl's school, and several churches. The eastern section of the proposed interconnection traverses a rural residential area which is predominately wooded open space with residences sparsely scattered throughout.

The interconnection route travels through several land use categorizations per the *State of Connecticut Conservation and Development Policies Plan.* The categorizations include Neighborhood Conservation Area, Conservation Area, Preservation Area, Existing Open Space and Rural Lands.

The proposed project is consistent with the policies of Neighborhood Conservation Areas. However, because all construction activities will be within the roads or their previously disturbed shoulders, the project will not result in any additional direct disturbance in the other land use designations. The project is inconsistent with the remaining designation in that running a water main through these areas supports growth of that area.

The major concern associated with the interconnection is that induced growth could be promoted and supported as a result of its construction and use. This can be a particularly adverse impact if this growth occurs in areas meant for preservation and conservation, such as those areas where such growth is unsupported by the *State Conservation and Development Plan.*

Mitigation Opportunities

Although induced growth should be prevented, it is important that mitigation allow for existing developed properties to connect to the water system, and that individual homes that are developed on lots with interconnection frontage be allowed to connect as well. In other words, a moratorium on connections is not workable because it will not provide for improved water service to existing and some future potential homes. For example, it is desired that subdivisions allowed through a simple division that yield lots with interconnection frontage should be permitted to connect to the water main. One way to control this process would be to exclude any development project that needs a special permit from the Middlebury Zoning Commission.

In summary, the following objectives must be considered in the development of mitigation in the form of land use controls:

- Allow existing transient non-community and non-transient non-community public water systems such as the library to connect to the water main along Whittemore Road and Tucker Hill Road.
- Allow existing homes on Whittemore Road and Tucker Hill Road to connect to the water main.

- Allow individual new homes on existing lots or first-cut lots with frontage on Whittemore Road and Tucker Hill Road to connect to the water main.
- Do not allow homes on new public or private streets to connect.
- Do not allow homes to connect if they are part of subdivisions or planned developments that require local special permits.

The Town of Middlebury has agreed to amend both its zoning regulations and its local Conservation and Development plan to restrict induced growth along the proposed interconnection route. The following represents the proposed language to be added to the local Conservation and Development plan:

- *In land use designations where the extension of public water or sewer service is not compatible with the policies of said designations, as determined by the State of Connecticut Conservation and Development Policies Plan (Conservation areas, Preservation areas, Existing preserved open space, and Rural Lands), only previously-developed parcels and those allowed to develop in accordance with the R-40 or R-80 zoning through a simple division will be eligible to receive water service.*

The following language is proposed to amend the town's R-40 and R-80 zoning regulations:

- *In land use designations where the extension of public water or sewer service is not compatible with the policies of said designations, as determined by the State of Connecticut Conservation and Development Policies Plan (Conservation areas, Preservation areas, Existing preserved open space, and Rural Lands), and that are located along Route 188(Whittemore Road) and Tucker Hill Road between their respective intersections with Bronson Drive and Chase Road; only previously-developed parcels and those allowed to develop in accordance with the R-40 or R-80 zoning through a simple division will be eligible to receive water service.*

1.0 PURPOSE AND NEED

1.1 Introduction

1.1.1 Project Background

The Town of Middlebury, the Connecticut Water Company (CWC) and the Heritage Village Water Company (HVWC) are working collaboratively to plan, design, and construct a public water supply system expansion and regional interconnection in central Middlebury, Connecticut. Figure 1-1 is a location of the Town of Middlebury and the State of Connecticut. Figure 1-2 shows the proposed interconnection route and surrounding area.

Specifically, the regional interconnection will include (1) installation of an interconnection line along Tucker Hill Road and CT Route 188; and (2) the construction of a booster pump station. Additional project elements include (1) the extension of a water main along Chase Road and the northern portion of Tucker Hill Road; (2) a service line to the Middlebury Convalescent Home;[1] (3) a service line to the Town Library; and (4) an emergency interconnection to the Westover School water system.

This project is being implemented by the Town of Middlebury. Table 1-1 summarizes the available funding for this project as of the writing of this document. A significant portion of the funding is being provided by HVWC. HVWC funding is being supplemented by grant funds from the Environmental Protection Agency (EPA), a Small Town Economic Assistance Program (STEAP) grant, as well as monies from CWC, the Town of Middlebury, and the Middlebury Convalescent Home.

As the interconnection project is funded in part with state money totaling over $100,000, it is subject to the Connecticut Environmental Policy Act (CEPA). The purpose of CEPA is to ensure that a proposed project is evaluated to determine if it will have significant impacts on the physical, biological, social, or economic environments. This evaluation is documented in the subject Environmental Impact Evaluation (EIE).

[1] Additional project elements 1 -3 were privately funded or funded in part with state monies totaling less than $100,000. Although these elements have been completed and are in service, they are essential components of the Town's master water supply plan, and as such, discussed herein.

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Study Location Plan

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\1-1-SLP.mxd
Source: DEP Bulletin No.40

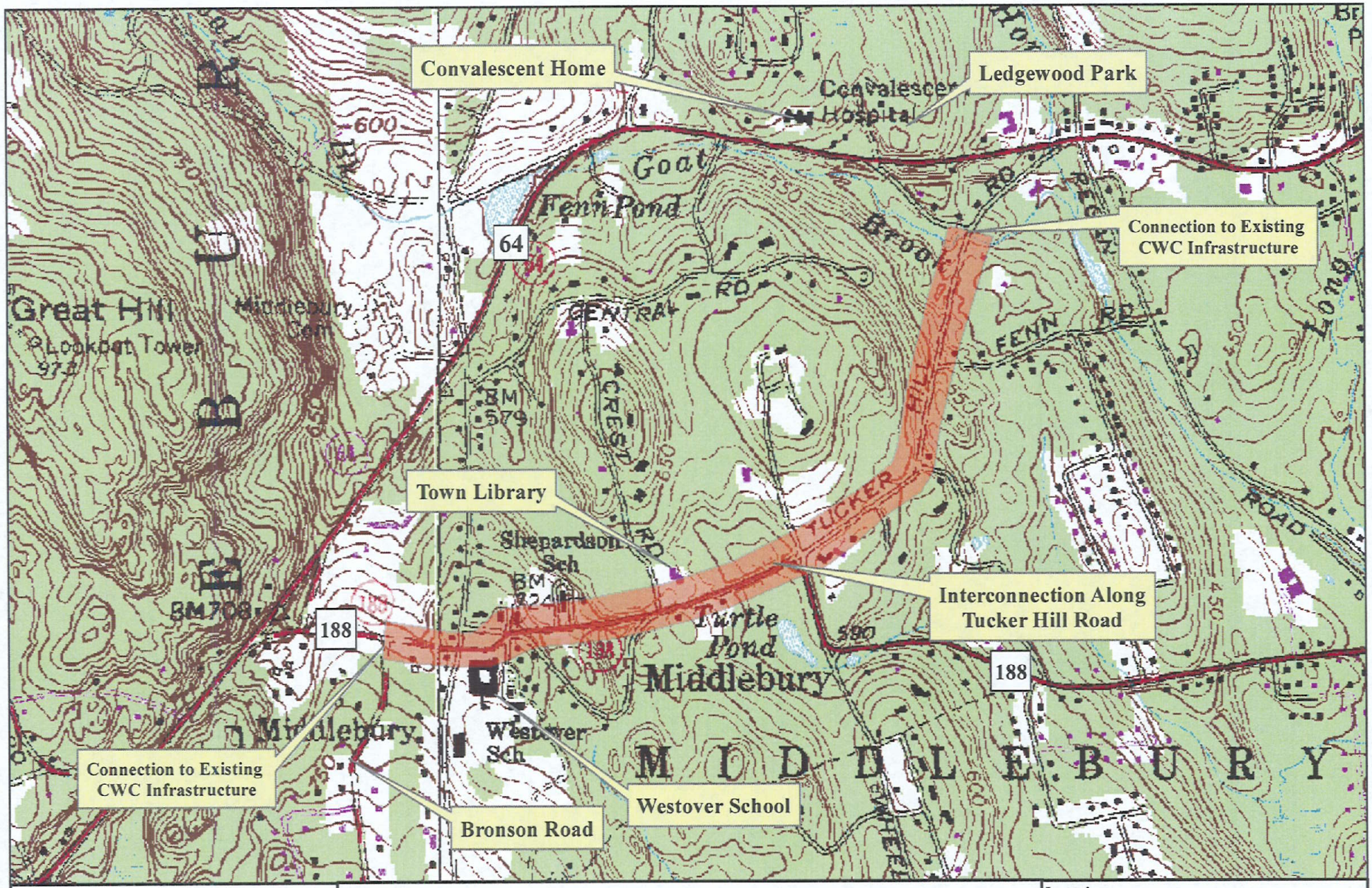
N

Environmental Impact Evaluation
Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 12 miles

Sheet: **Figure 1-1**



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Location Plan - Project Site

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\1-2-Project.mxd
Source: DEP Bulletin No.40

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Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: Figure 1-2

TABLE 1-1
Summary of Project Funding – Regional Water Supply Interconnection.

Funding Source	*General Purpose*	*Total Amount Allocated*	*Approximate Amount Available*
STEAP	Water to Ledgewood Park Water to Library Generator for Library	$300,000	$195,000
EPA via COGCNV	Emergency Interconnection to Westover School	$97,000	$97,000
P.A. 99-242	Water Distribution System Bona, Atwood Road area Pump Station	$1,250,000	$328,000
S.A.97-1 P.A.99-242	Water Distribution System Phases 1A and 1B	$2,250,000	$200,000
HVWC	Installation of approximately 6,300 feet of water main along Route 188 and Tucker Hill Road	NA	$1,000,000
CWC	Installation of approximately 1,500 feet of water main along Tucker Hill and Chase Roads.	NA	$260,000
Middlebury Convalescent Home	Installation of 670 feet of water main from road to facility	NA	$170,000
Totals			$2,250,000

1.1.2 Project Location

The Town of Middlebury is located in the Central Naugatuck Valley Region of west-central Connecticut, approximately 35 miles southwest of Hartford and 24 miles Northeast of Danbury. According to the U.S. Census Bureau, the Town of Middlebury had a year 2000 population of 6,451, and an estimated year 2005 population of 6,974. According to the town's Plan of Conservation and Development (March 2001), the employment base of Middlebury has long rested on manufacturing, although with the recent opening of a regional shopping mall, the service sector is now the area's biggest employer.

The proposed water supply interconnection route along Tucker Hill Road and a portion of CT Route 188 is located in central Middlebury. The route is adjacent to the town's central green where the Town Hall, Westover School, the Shepardson Community Center, and the Town Library are located. Single family residences lie along most of the remainder of the proposed route. This area can be characterized as mostly rural in nature.

The proposed interconnection (i.e. the proposed action) will occur entirely within right-of-way easements held by either the State of Connecticut or the Town of Middlebury. The infrastructure associated with the project will be located within the roads themselves or in the shoulders of the subject roadways.

1.2 Proposed Action and Justification

1.2.1 Proposed Action

The proposed action is the planning, design, and construction of a regional water supply interconnection in the Town of Middlebury, consisting of the following elements depicted on Figure 1-3:

1. CWC will fund and install approximately 1,500 feet of 12-inch water main along Chase Road and the northern portion of Tucker Hill Road.*

2. The Town of Middlebury will install the remaining service line necessary to provide water to Ledgewood Park.*

3. The Middlebury Convalescent Home will fund the installation of 670 feet of 12-inch water main from its terminus on Chase Road to the facility's property located on Route 64. This will enable compliance with requirements for fire suppression systems.*

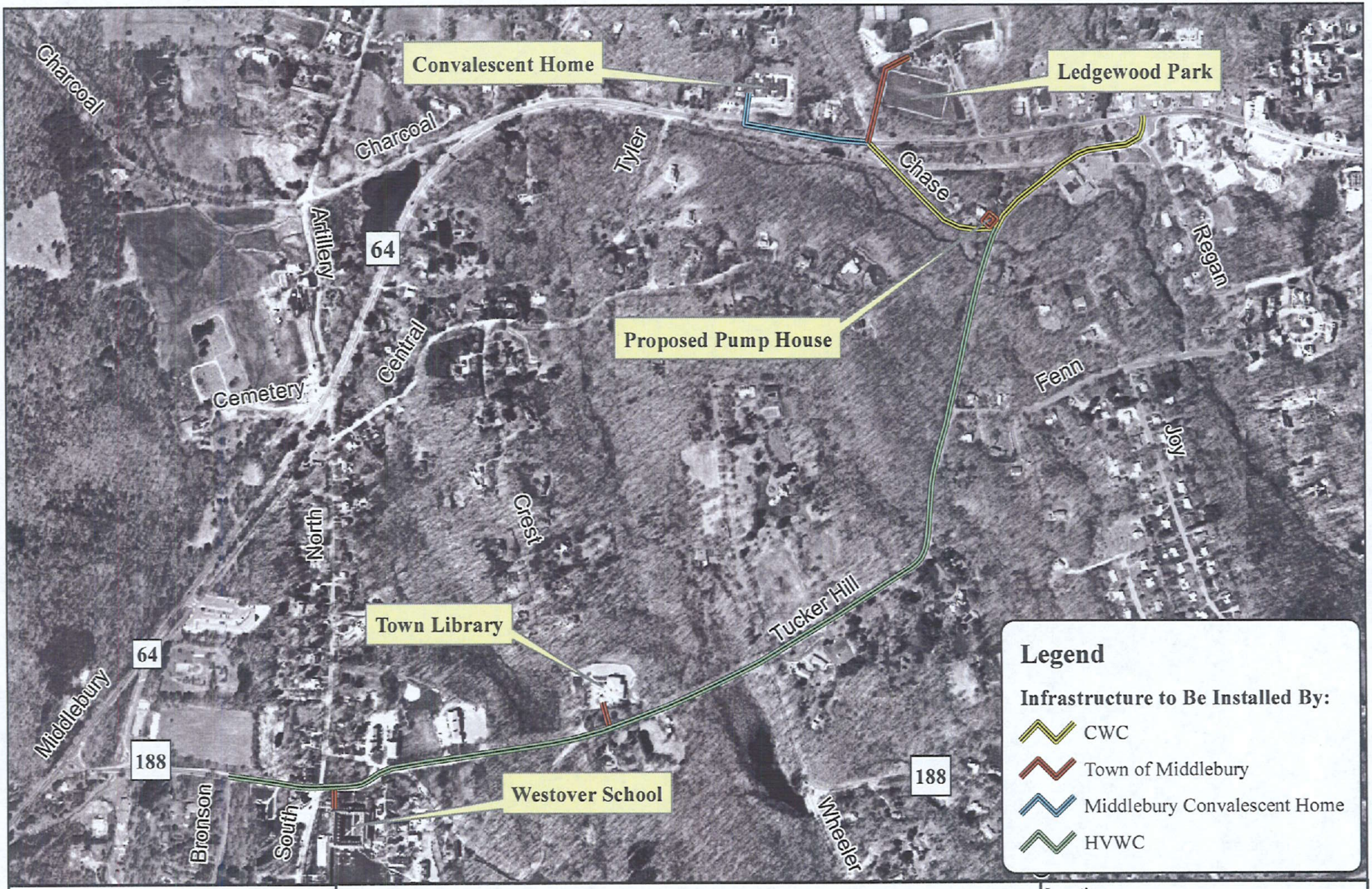
4. HVWC will fund the installation of approximately 6,300 feet of 12-inch water main along Tucker Hill Road and CT Route 188 from Chase Road to the existing 12-inch water main terminus at Bronson Drive in the CWC Heritage-Middlebury consecutive water system. At this point, the CWC Heritage-Middlebury consecutive water system will be considered combined with the main CWC system that currently serves eastern Middlebury, and water delivered to the Bronson Drive area will come from CWC rather than HVWC.

5. The Town of Middlebury will fund construction of a pump station on Town-owned property fronting Tucker Hill Road. The pump station will be sized as necessary to deliver fire flows to the Middlebury Town center and the former CWC Heritage-Middlebury consecutive water system, provide emergency supply to the Westover School, and provide peaking supply to the HVWC system.

6. Water service will be provided to the Town Library via the Route 188 extension

7. An emergency interconnection will be made between the existing distribution system and the Westover School.

* As noted previously, these peripheral elements are completed and in service.



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Location of Proposed Actions

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\1-3-PropAct.mxd
Source: CT DEP; Aerials 2004 CLEAR

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 750'

Sheet: Figure 1-3

1.2.2 Project Purpose

The overarching purpose of this project is to address existing water supply needs of the Town of Middlebury, as well as the current and future needs of the region, especially as they pertain to the planned growth of the HVWC service area. More specifically the project purpose includes the following elements:

1. Supply the existing town library with public water and fire protection.
2. Provide an emergency backup supply for Westover School's existing community water system.
3. Supply HVWC with an adequate margin of safety for peak demand purposes and emergency supply capability.
4. Provide an overall high level of redundancy to all water customers in the Town of Middlebury, with availability of one additional source of supply if the Waterbury or Naugatuck supply were compromised.

Ancillary benefits of the project are that it will provide a new public water supply for off-campus customers of the Westover School community water system, and will provide improved water pressure to the CWC Heritage-Middlebury system in the Bronson Drive area.

To meet the needs listed above, the objectives of the regional water supply interconnection include:

1. Maintain proximity to municipal buildings including the Town Hall, the Town library, and the Shepardson Community Building.
2. Maintain proximity to Westover School.
3. Maintain proximity to the Bronson Drive area.
4. Maintain proximity to Ledgewood Park and Middlebury Convalescent Home.
5. Utilize a route that provides for a cost effective water main installation.

1.2.3 Project Need

A water supply expansion and regional interconnection has long been a goal of the Town of Middlebury. Water quality and quantity issues in the Town center have historically been difficult to address without the comprehensive solution an extension of water main affords. Further, the need for an interconnection has been underscored by the recent increase in regional development. The demand on the existing public water systems, particularly the HVWC system, is substantial and only expected to increase in the future. This is particularly true if regional development keeps up at its current pace.

The proposed action is needed for the following reasons:

1. HVWC is currently breaching the Department of Public Health's (DPH) recommended margin of safety threshold for peak demand purposes. DPH requires that an adequate margin of safety be maintained at all times. Although DPH can approve different margins of safety on a case-by-case basis, a 15% margin of safety is typically used for most planning purposes. Under peak demand conditions the HVWC margin of safety is currently reduced to 14%. The margin of safety is expected to decrease as more demand accumulates on the HVWC system.

2. The Town Library, located along Route 188, is currently served by a single water supply well. The water tested positive twice for coliform bacteria in the fall of 2005. After the system tested positive the first time, it was chlorinated and flushed. Further testing indicated that the problem of coliform contamination was not alleviated. The well sleeve was then inspected using a fiber optic camera and determined to be intact, but the ground water level was found to be relatively high. It is believed the bacteria contamination is coming from an outside source and seeping into the well system. Possible solutions to the problem were analyzed, including the installation of an ultraviolet sterilization system. An alternative solution endorsed by the Town of Middlebury's Health Department and Connecticut Department of Public Health was to simply connect the Library to a public water system.

3. Like the library, Ledgewood Park was initially supplied by a single on-site well. Approximately 2,000 feet of water main installed by CWC on Tucker Hill and Chase Roads provides the park with a reliable source of potable water.

4. The Middlebury Convalescent Home had also been supplied by a well-based system. That system was insufficient to provide fire protection and therefore resulted in the Middlebury Convalescent Home being in violation of state statutes concerning fire suppression systems. Bringing a public water supply to the facility by extending water main from Chase Road enabled compliance with these statutory requirements.

5. The CWC Heritage-Middlebury water distribution system in Bronson Drive area currently has marginal water pressure, resulting in a marginal degree of fire suppression capability. The interconnection and the associated pump station will increase the water pressure in this area from its current level of 35 p.s.i. to a more acceptable level of 40 p.s.i.

6. The Westover School currently owns and operates its own community water system. This system provides water to the School, several nearby municipal buildings such as the Town Hall, and several residential properties. The system's infrastructure is outdated and in need of upgrade. The interconnection will supply the municipal buildings and residential properties with a public water supply, allowing Westover School to shed its off-campus customers, and will provide the School with a valved emergency water connection.

1.2.4 Relationship to Other Projects and Planning Documents

Numerous planning documents have been evaluated in the context of this EIE, including (1) the Conservation and Development Policies Plan for Connecticut (2004-2009); (2) The Connecticut Water Company Individual Water Supply Plan for the Naugatuck Region (August 2005, modifications dated February 8, 2006); (3) the Heritage Village Water Company Individual Water Supply Plan (October 2003, modifications dated April 2004 & October 2003); (4) Department of Public Utilities Control (DPUC) Docket Number 05-11-06; (5) the Town of Middlebury Water Supply Master Plan (August 1999); (6) the Town of Middlebury Plan of Conservation and Development (March 2001) and (7) the Central Naugatuck Valley Region Plan of Conservation & Development. Each is described more fully below.

Conservation and Development Policies Plan for Connecticut

The *Conservation and Development Policies Plan for Connecticut (2004–2009)* provides the policy and planning framework for administrative and programmatic actions and capital and operational investment decisions of state government. The objective of the Plan is to guide a balanced response to the current and future human, economic, and environmental needs of the state. The Plan has been consulted extensively to evaluate the consistency of the proposed regional water supply interconnection with the goals and policies relative to land use, growth management, sensitive environmental resources, resource management, public investment, the economy, integrated planning, and so on. The pertinent guidelines and policies set forth in the Plan are presented throughout this document.

The Connecticut Water Company Water Supply Plan

For certain regulated water utilities in Connecticut, water supply plans must be completed in accordance with Section 25-32d of the Connecticut General Statutes and Section 25-32d of the Regulations of Connecticut State Agencies, as may be updated from time to time. These regulations and the supporting statutes recognize that planning is a critical management activity of all water utilities. The principle goals of water system planning as defined by the DPH are to: (1) ensure an adequate quantity of pure drinking water, now and in the future; (2) ensure orderly growth of the system; and (3) make efficient use of available resources.

In 2005, CWC completed its most recent Naugatuck Region Water Supply Plan (WSP) update and submitted it to DPH for approval. The plan was approved in May 2006. This document has been reviewed in light of the proposed regional water supply interconnection relative to its consistency with policies, programs, and planned projects of CWC.

In Sections 2.3 (Interconnections), 4.3 (Future Sources) and 5.2 (Central System Needs), the WSP notes the need for an interconnection between its central Middlebury system and the Heritage-Middlebury system sometime "within the next five years." The WSP states that future development resulting in greater demand on the systems will require the interconnection. In Sections 3.4 (Land/Source Acquisition) and 4.3 (Future Sources) the WSP mentions the need for a pump station in central Middlebury if an interconnection was to be constructed.

Heritage Village Water Company Water Supply Plan

In 2003, HVWC completed its water supply plan update and submitted it to DPH for approval. Approval was received in March of 2005. The document was reviewed to ensure the proposed regional water supply interconnection is in accordance with the policies, programs, and planned projects of HVWC.

In Section 3.4 (Margin of Safety), the WSP states the 5, 20, and 50-year peak-day demands result in margins of safety of 1.08, 0.92, and 0.82 respectively, or a deficit of 0.181 mgd for the 20-year planning period and 0.42 mgd for the 50-year planning period. In section 9.1 (Analysis of Future Need and Assessment of Options), the plan addresses these deficits. The option the plan identifies as the most likely way to increase margin of safety as the systems grows is establishing an interconnection with another utility.

Department of Public Utilities Docket Number 05-11-06

On July 5, 2006, the DPUC reached a decision that approved the use of a Refundable Advance Payment Agreement between HVWC and Glendale at Oxford, LLC, in order to supply water to a new housing development in Oxford, Connecticut. DPUC approved HVWC's Agreement for estimated charges of $451,000 for costs of the main extension, to be paid by Glendale in five phases over the time necessary to construct and market the development. DPUC also approved a $75,200 special assessment for an equitable contribution to a portion of HVWC's cost to respond to significant increased water demand due to substantial new housing developments.

Within this document, HVWC provided the DPUC with revised supply and demand figures. When using these revised numbers to calculate the HVWC margin of safety, it is apparent that the system has already surpassed the recommended 15% threshold for peak day demand (1.14). If the system's supply remains constant, the peak day margin of safety in 2008, 2020, and 2050 will decline to 1.07, 0.98, and 0.87, respectively. This Docket further demonstrates HVWC's immediate need for additional water supply.

Town of Middlebury Water Commission Water Supply Master Plan

In August of 1999, the Water Commission of the Town of Middlebury completed a Water Supply Master Plan. The plans, policies, and programs were reviewed to ensure the interconnection was in accordance with the Master Plan.

The Water Supply Master Plan divided the Town into the "Western Service Area," "Westover School Service Area," and "Eastern Service Area." These were served (in part) by HVWC, Westover School, and the Town of Middlebury Water Commission, respectively. Although the Plan evaluated a main extension similar to the proposed project such that HVWC could serve the Eastern Service Area, the plan ultimately recommended that HVWC continue to serve portions of the Western Service Area and that Waterbury should continue to serve the Eastern Service Area.

In 2003, the Middlebury Water System in the Eastern Service Area was acquired by CWC and connected to the Naugatuck Region's Central System. This change does not preclude Middlebury or CWC from purchasing supplies from Waterbury. In fact, CWC intends to continue utilizing the interconnections with Waterbury.

The 1999 plan is still relevant because within the plan summary it states that groundwater contamination and inadequate yields have created a need to provide public water service to several areas of Middlebury. Although the plan did not specifically address portions of central Middlebury in the "Westover School Service Area," this is the area of the proposed interconnection and system expansion.

Town of Middlebury Plan of Conservation and Development

In March of 2001, the Town of Middlebury completed a Conservation and Development plan. The policies and programs were reviewed to ensure the interconnection was in accordance with the Conservation and Development plan. In Section 2.0, the plan states the Town's goal to "Continue toward the implementation of the municipal water system."

Central Naugatuck Valley Regional Plan of Conservation & Development

The *Regional Plan of Conservation and Development* provides the policy and planning framework for the region. The objective of the Plan is to guide a balanced response to the current and future human, economic, and environmental needs of the region. The Plan has been consulted to evaluate the consistency of the proposed regional water supply interconnection with the goals and policies relative to land use, growth management, sensitive environmental resources, resource management, public investment, the economy, integrated planning, and so on. In Section 11 "Water Supply and Sewer Service" one of the stated goals of the plan is to "Ensure an adequate supply of water for the Region."

The Future Land Use Plan Map (Figure 1-4) in the plan shows the area from the intersection of Chase Road and Tucker Hill Toad/ Crest Road to Crest Road and Bronson Road to be predominately in a Rural and Community Center districts with several areas of sever environmental constraints (predominately wetlands). Unlike the State Conservation and Development Policies Plan 2005-2010, the regional plan extends the Community Center from the intersection of Crest and Bronson Road along Crest/ Tucker Hill Road to a point east of Goss Road. A community center category has the potential for utility services. The rural and environmentally constrained areas do not. Most of the area north, east and south of the Community Center and this project is classified as Rural or as having sewer environmental constraints. It is these areas for which there is concern of pressure for "induced" development at greater densities than recommended in the regional plan.

1.3 The NEPA Process

The National Environmental Policy Act is the basic charter for protection of the environment and sets forth a policy and procedures to ensure that the decisions of federal agencies are made based upon a sound understanding of the environmental consequences, and that actions taken by such agencies, including funding of projects that are undertaken by others, protect, restore, and enhance the environment. The federal regulations relating to NEPA are codified in 40 CFR Parts 1500 through 1508. In summary, the policy requires that federal agencies, to the fullest extent possible:

1. Interpret and administer the policies, regulations, and public laws of the United States.

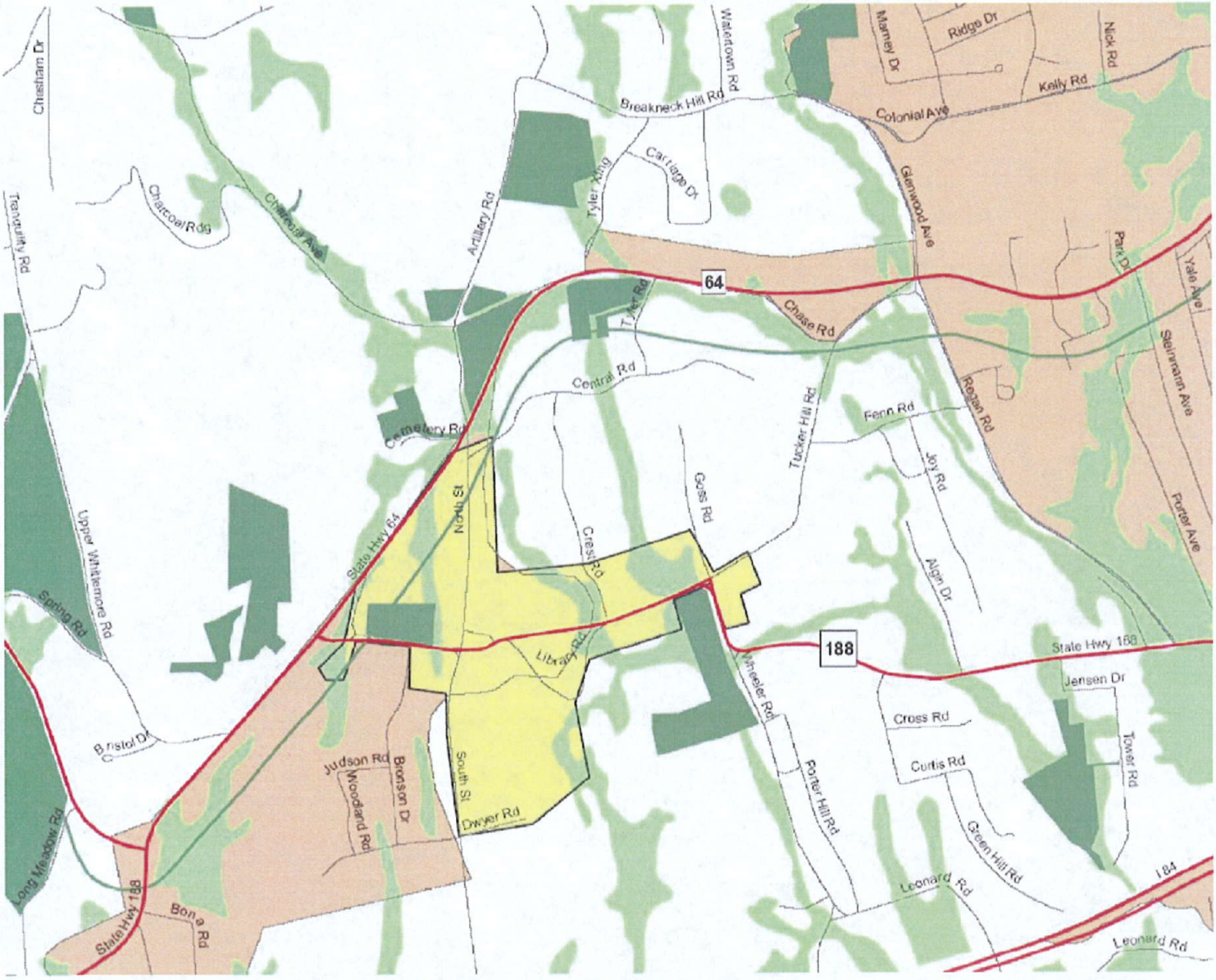
2. Implement procedures to make the NEPA process more useful to decision makers and the public; to reduce paperwork and the accumulation of extraneous background data; and to emphasize real environmental issues and alternatives.

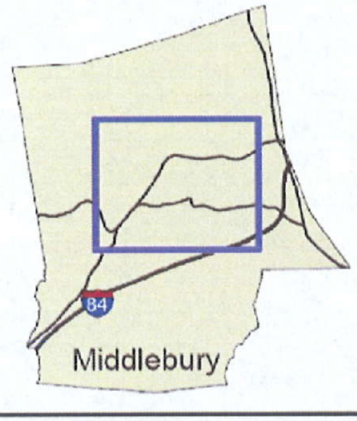
3. Integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.

4. Encourage and facilitate public involvement in decisions that affect the quality of the human environment.

5. Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.

6. Use all practicable means and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions.





Development Areas

- Growth Areas
- Major Economic Areas
- Community Centers
- Regional Core

Conservation Areas

- Rural Areas
- Severe Environmental Constraints
- Committed Open Space
- Proposed Open Space

N

Transportation and Other

- Regional Arterial
- Local Road
- Municipal Boundary

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Regional Plan Future Land Use

LOCATION: Middlebury,CT

MMI#: 1573-22
MXD: H:\1-4-RegLU.mxd
SOURCE: DEP Bulletin No.40

N

Environmental Impact Evaluation for Middlebury Interconnection

DATE: June 2007
SCALE: N\A

SHEET: Figure 1-4

The NEPA process is intended to be part of an early planning process to identify issues and make decisions that reflect sound environmental values. The NEPA Environmental Assessment is intended to be a concise public document that serves to:

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

2. Aid an agency's compliance with the Act when no environmental impact statement is necessary.

3. Facilitate preparation of a statement when one is necessary.

A Finding of No Significant Impact is a document that briefly presents the reasons why an action will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared.

Based on scoping meetings and discussions with the Connecticut Department of Transportation and the Federal Transit Administration, NCDC was directed to proceed with the preparation of a NEPA Environmental Assessment.

1.4 The CEPA Process

1.4.1 Overview of Regulation

The Connecticut Environmental Policy Act, established in Sections 22a-1 through 22a-1h of the Connecticut General Statutes, recognizes the complex relationship between the natural environment and human actions, including population growth, high-density urbanization, industrial expansion, natural and cultural resources, and technological advances. The Regulations of Connecticut State Agencies (Sections 22a-1 through 22a-1a-12) outline a process whereby, through coordination with other state, local, regional and federal governments, as well as public and private entities, a sponsoring state agency can evaluate and minimize the projected impacts of a project to the resources of the state.

State funds will be utilized for the Regional Water Supply Interconnection, thus triggering the CEPA process. The sponsoring state agency is the Connecticut Department of Environmental Protection (DEP). The Town of Middlebury will act as the implementing agency.

1.4.2 Determination of Environmental Significance

A major function of the CEPA process is the determination of whether a project will have a significant effect, defined as substantial adverse impact on the environment. Agencies

preparing such CEPA documents must consider the following two factors: (1) direct and indirect effects; and (2) cumulative impacts.

The subject EIE is intended to be an early planning process during which options are discussed and the impact of each alternative action is compared. Significant issues are identified and analyzed in detail, allowing participation of interested and/or affected agencies and persons.

Public input and participation is a significant component of the CEPA process. Early scoping and information exchange is essential. Section 6.0 of this document contains a detailed accounting of the scoping, consultation, and coordination process that has taken place to date. The overall process for public participation is summarized as follows:

- A period of no less than forty-five (45) days must be provided for notice, distribution, and review of the Draft Environmental Impact Evaluation by any interested parties.

- Upon receiving comment, the sponsoring agency must review comments, perform any additional environmental study and analysis, or amend the evaluation as appropriate. It is the sponsoring agency's responsibility to respond to all substantive comments received.

- A public hearing may be held, if requested in accordance with state statutes, regulations, and Section 22a-1a-11 of the regulations. A period of no less than thirty (30) days following the date of availability of the EIE must be provided before such public hearings.

- The sponsoring agency (in this case, the DEP) must forward the following information to the Office of Policy and Management (OPM), for determination of the adequacy of the evaluation: (1) all public notice documentation; (2) a brief summary of the public hearing, if one is held, (3) comments received from all interested parties; (4) the agency decision relative to proceeding with the proposed action; and (5) a discussion of the intentions for initiation of actions for minimizing impacts. This constitutes the Record of Decision (final EIE document and the measures for mitigation identified therein).

- The CEPA process concludes with the review of the EIE and Record of Decision by OPM and its determination of whether or not regulatory requirements have been satisfied. The final EIE is the basis for the implementation of the project.

1.5 Joint Document

Consistent with the NEPA and CEPA goal of paperwork reduction, the subject document has been prepared as a joint document to meet the requirements of the CEPA Environmental Impact Evaluation and the NEPA Environmental Assessment.

2.0 ALTERNATIVES CONSIDERED

2.1 Overview

In accordance with CEPA requirements, numerous alternatives have been analyzed for the regional water supply interconnection including the "no action" alternative. The micro-scale analysis considers an alternate route for the interconnection between CWC and HVWC. The macro-scale alternatives analysis considers options other than an interconnection between CWC and HVWC that would satisfy the numerous objectives of the proposed project.

Alternatives were measured against the identified project purposes and objectives. These have been carried through the development and evaluation of alternatives. The overarching purpose of this project is to address existing water supply needs of the Town of Middlebury, as well as the current and future needs of the region, especially as they pertain to the planned growth of the HVWC service area. More specifically the project purpose includes the following elements:

1. Supply the existing town library with public water and fire protection.
2. Provide an emergency backup supply for Westover School's existing community water system.
3. Supply HVWC with an adequate margin of safety for peak demand purposes and emergency supply capability.
4. Provide an overall high level of redundancy to all water customers in the Town of Middlebury, with availability of one additional source of supply if the Waterbury or Naugatuck supply were compromised.

Ancillary benefits of the project are that it will provide a new public water supply for off-campus customers of the Westover School community water system, and will provide improved water pressure to the CWC Heritage-Middlebury system in the Bronson Drive area.

To meet the needs listed above, the objectives of the regional water supply interconnection include:

1. Maintain proximity to municipal buildings including the Town Hall, the Town library, and the Shepardson Community Building.
2. Maintain proximity to Westover School.
3. Maintain proximity to the CWC Heritage-Middlebury system in the Bronson Drive area.
4. Maintain proximity to Ledgewood Park and Middlebury Convalescent Home.
5. Utilize a route that provides for a cost effective water main installation.

The following alternatives were considered in combinations that would meet the above objectives.

1. No action;
2. Interconnection route along Route 64 and North Street;
3. Interconnection route along Tucker Hill Road and Route 188;
4. Expand capacity of existing Pomperaug River Wellfield;
5. Interconnect with United Water Company's Newtown System;
6. Interconnect with United Water Company's Woodbury System;
7. Interconnect with Aquarion Water Company's Valley Division System;
8. Interconnect with Birmingham Utilities' Ansonia-Derby System;
9. Develop a stratified drift wellfield at Housatonic River;
10. Develop new bedrock wells in the HVWC system;
11. Construct a pumping station at Camp Road;
12. Develop a fully redundant well system and increased storage at Westover School; and
13. Consolidate Westover School's off campus users with the CWC Heritage-Middlebury System.

Alternative 1 is the no-action alternative. Alternatives 2 and 3 explore two different routes for the interconnection. Alternatives 4 through 10 explore different options for increasing the HVWC available supply, and are consistent with the alternatives evaluated in the approved Individual Water Supply Plan (revised through 2004) and subsequent correspondence such as DPUC docket 05-11-06. Alternatives 11 through 13 address other components of the proposed project.

2.2 No Action

The consideration of a "no action" alternative is necessary to establish a basis for comparison, as it provides a baseline that can be used to assess the level of impact associated with the implementation of the action alternatives. The no action alternative concedes that no action be taken to construct a regional water supply interconnection.

The "no action" alternative contradicts the purpose, need, and goals and is therefore not believed to be a viable option. Under this alternative:

1. The town library would continue to utilize an individual well and be regulated as a transient non-community system, while grappling with poor water quality;
2. Westover School would continue to operate a community water system without an emergency backup supply; and
3. HVWC would have an inadequate margin of safety during peak demands.

Furthermore, on a more global scale, the existing public water supply systems in the Town of Middlebury could benefit from additional redundancy in the event of a loss of supply from Waterbury or Naugatuck, or another emergency condition.

Analysis of alternative options is presented in Sections 2.3.1 through 2.4.2.

2.3 Interconnection Route Analysis

Two alternate route concepts have been evaluated for an interconnection line that would connect the main Connecticut Water Company system in Middlebury with the HVWC system through the CWC Heritage-Middlebury system. Each of the alternative routes is evaluated relative to environmental sensitivities and its ability to meet the stated project goals and objectives.

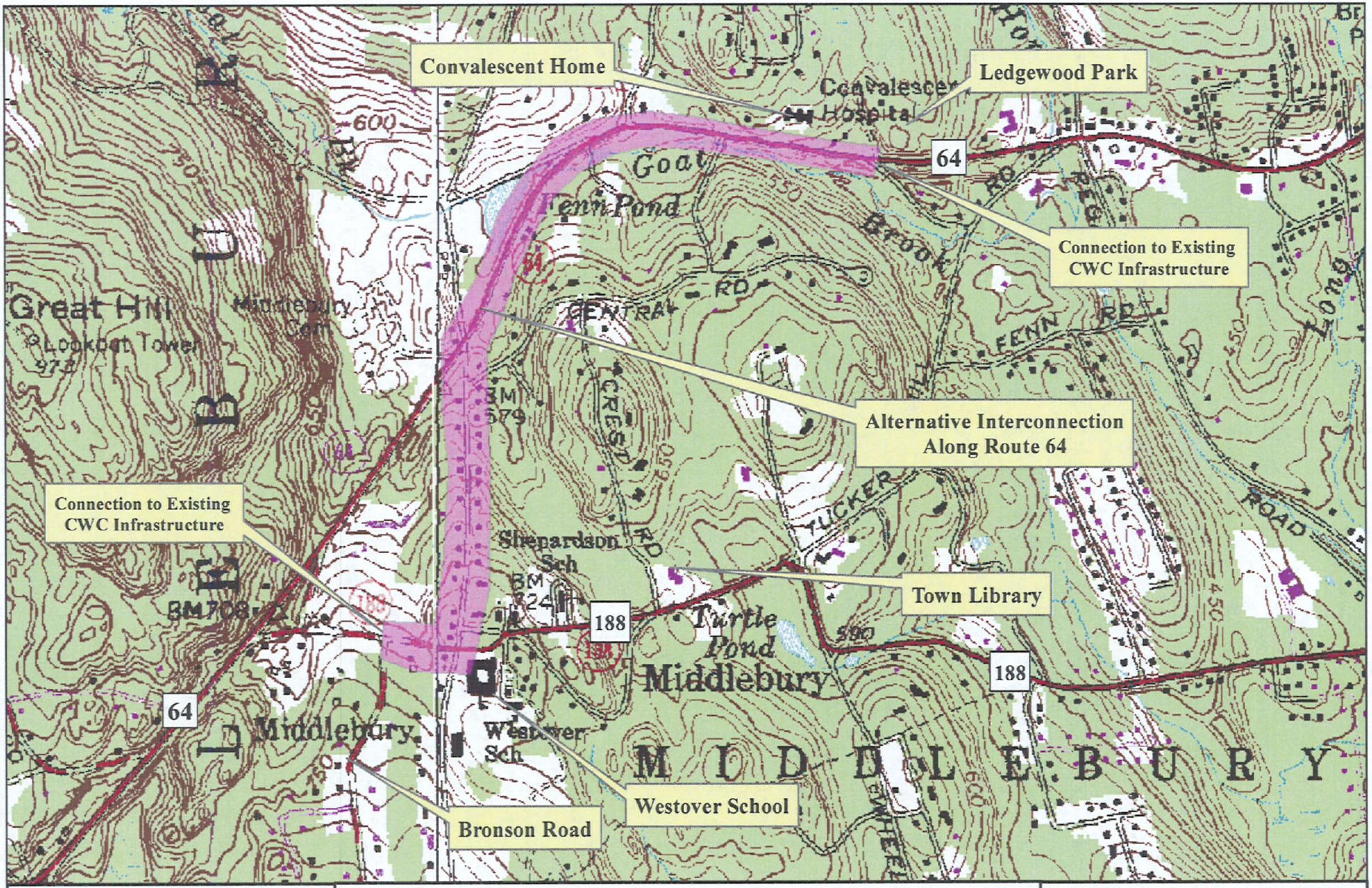
2.3.1 Route 64

Route Location – The Route 64 alternative (Figure 2-1) consists of approximately 7000 feet of water main and a pumping station on Bronson Drive. The route begins at the intersection of Route 188 and Bronson Drive and then travels 601 feet east until it intersects with North Street. The route then travels 2,326 feet north to its intersection with Route 64. It then travels 4,090 feet until it connects with existing 12-inch water main in Route 64.

Provides HVWC with an adequate margin of safety for peak demand purposes - The route 64 alternative connects the same two existing CWC water mains as the preferred Route 188 Alternative. CWC has sufficient capacity to provide HVWC with water to maintain a 15% margin of safety under peak demand conditions. Capacity would also be available to supply HVWC under emergency conditions.

Provides service to Ledgewood Park and the Middlebury Convalescent Home - Ledgewood Park and Middlebury Convalescent Home are located on Route 64. A 12 inch water main has been installed to these facilities. This alternative extends water main westerly from the convalescent home.

Provides emergency service to Westover School – The Route 64 alternative extends along North Street.. Westover School is located at North Streets Intersection with Route 188 and the schools private system extends along North Street. An emergency interconnection can be made between the two systems.



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Location Plan - Route 64 Alternative

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\2-1-Rt64Alt.mxd
Source: DEP Bulletin No.40

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Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: Figure 2-1

Provides Public Water to Town Library – The Town Library is located approximately 1,755 feet from the intersection of North Street and Route 188. This alternative would require the installation of additional water main along Route 188 to satisfy the objective of supplying the library with a new public water supply.

Increase the water pressure to the CWC Heritage-Middlebury System in the Bronson Drive area – The Route 64 alternative terminates at the intersection of Route 188 and Bronson Drive. This alternative includes a pump station that would provide increased water pressure to the Bronson Drive area.

Flood Hazard Potential - FEMA mapping indicates that a small portion of the Route 64 alternative is located in the 100-year floodplain. The portion of the route within the flood plain is located near its intersection with Charcoal Avenue.

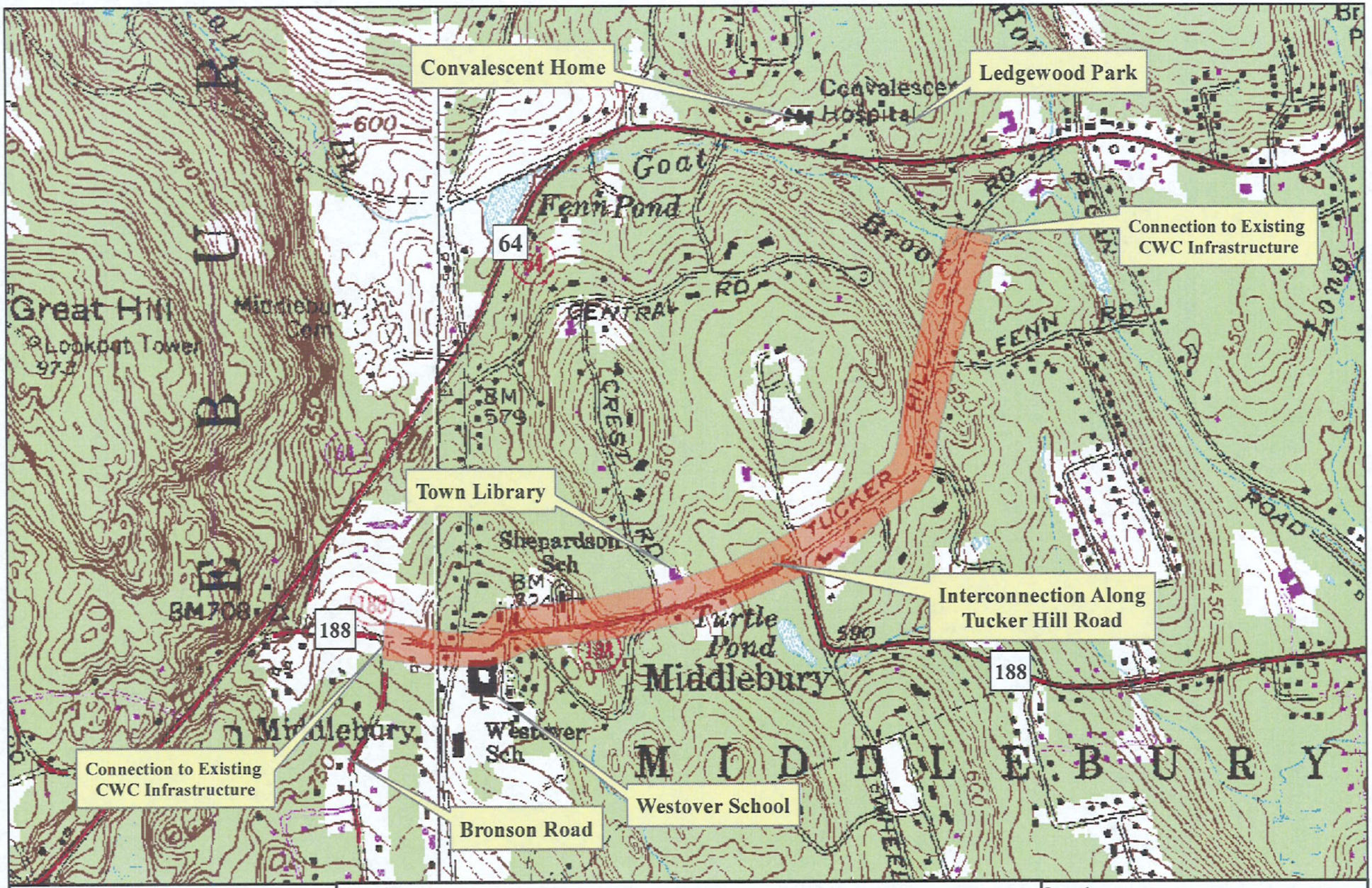
Potential to Impact Sensitive Environmental Resources – The parcels located along the Route 64 alternative include mostly commercial land uses, residential development, and municipal uses. The one environmentally sensitive area along the Route, owned by the Middlebury Land Trust, is Fenn's Pond. Although the route has substantial natural or wildlife habitat it is not expected to be adversely impacted by the proposed activity. The DEP Natural Diversity Data Base indicates that this route does not lie within an area of special concern for endangered or threatened species or significant natural communities. Accordingly, a water supply interconnection at this location would be expected to have minimal impact on the surrounding natural environmental resources.

Ability to Meet Project Needs, Goals, and Objectives – The Route 64 alternative is not as compatible with the goals of the proposed public water supply system expansion and regional interconnection, as it fails to accommodate the Town Library with public water service.

2.3.2 Route 188

Route Location – The Route 188 alternative (Figure 2-2) consists of approximately 6,400 linear feet of water main and a pumping station located along Tucker Hill Road. The route would begin at the intersection of Bronson Drive and Route 188 and travel east along Route 188 until it intersects with Tucker Hill Road. The water main would then travel northerly along Tucker Hill Road until it connects with an existing 12-inch water main located at the intersection with Chase Road.

Provides HVWC with an adequate margin of safety for peak demand purposes - The route 188 alternative connects the same two existing CWC water mains as the Route 64 Alternative. CWC has sufficient capacity to provide HVWC with water to maintain a 15% margin of safety under peak demand conditions. Capacity would also be available to supply HVWC under emergency conditions.



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Location Plan - Route 188 Alternative

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\2-2-Rt188Alt.mxd
Source: DEP Bulletin No.40

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007
Scale: 1" = 1,000'

Sheet: Figure 2-2

Provides service to Ledgewood Park and the Middlebury Convalescent Home - Ledgewood Park and the Middlebury Convalescent Home are located on Route 64. As noted previously, these peripheral elements have been accomplished and service provided.

Provides emergency service to Westover School – The Route 188 alternative begins at the intersection of Route 188 and Bronson Drive and then travels easterly along Route 188 passing directly adjacent to the Westover School. An emergency interconnection can be made between the two distribution systems.

Provides Public Water to Town Library – The Town Library is located along Route 188. Water service can be provided to the Town Library via the main to be installed in Route 188.

Increase the water pressure to the CWC Heritage-Middlebury System in the Bronson Drive area – The Route 188 alternative terminates at the intersection of Route 188 and Bronson Drive. This alternative includes a pump station along Tucker Hill Road which would provide the Bronson Drive area with increased water pressure.

Flood Hazard Potential - FEMA mapping indicates that a small portion of the Route 188 alternative, approximately 166 feet, is located in the floodplain associated with the 100-year frequency storm event. The route runs within the floodplain near the intersection of Tucker Hill Road and Chase Road where it crosses Goat Brook.

Potential to Impact Sensitive Environmental Resources – The parcels located along the Route 188 alternative house mostly residential and municipal uses. The route passes two environmentally sensitive areas that are owned by the Middlebury Land Trust, Goat Brook and Turtle Pond. Although the route, specifically these areas and three other wetland areas, has substantial natural or wildlife habitat, it is not expected to be adversely impacted by the proposed activity. The DEP Natural Diversity Data Base indicates that this route does not lie within an area of special concern for endangered or threatened species or significant natural communities. Accordingly, a water supply interconnection at this location would be expected to have minimal impact on the surrounding natural environmental resources.

Ability to Meet Project Needs, Goals, and Objectives – The Route 188 alternative is believed to be the most compatible with the goals of the proposed public water supply system expansion and regional interconnection. It satisfies the goals and secondary objectives of the project with no adverse impacts to the surrounding environment.

2.3.3 Other Routes

Based on a review of parcel mapping and road maps covering the area between the CWC Heritage-Middlebury system and the existing CWC Middlebury system on Route 64, alternative routes for an interconnection are not available.

2.4 Alternatives to Interconnection Between HVWC and The Connecticut Water Company

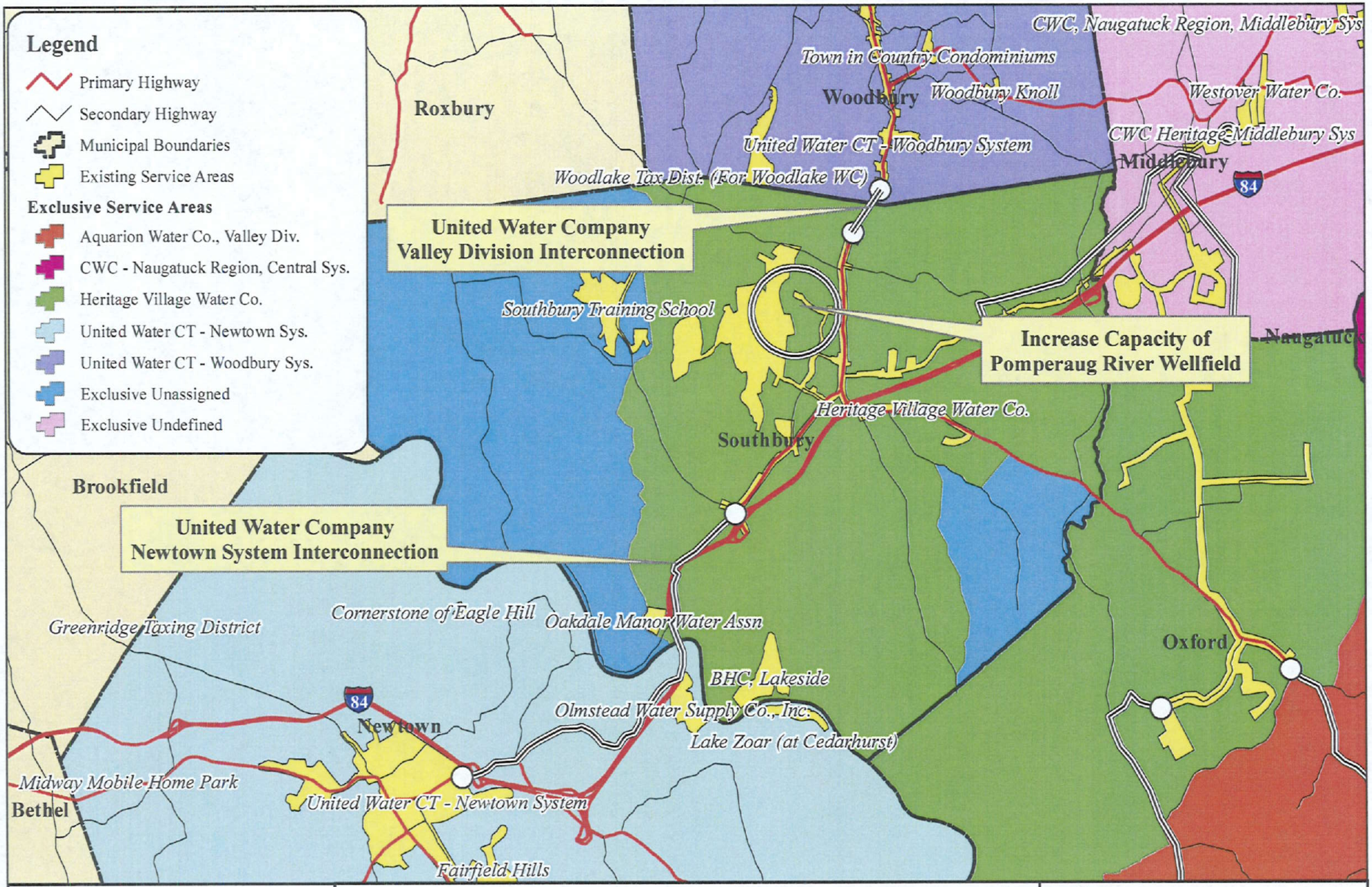
2.4.1 Expand Capacity of Existing Pomperaug River wellfield

Site Location – The existing Pomperaug River wellfield is located in Southbury, Connecticut along the Pomperaug River near the Dolce Heritage Inn and Golf Course in Heritage Village (see Figure 2-3). The aquifer is composed of stratified drift (a mix of sand, gravel, silt and clay) and covers an area of approximately 18 square miles, extending from the Housatonic River northward into central Woodbury. The wellfield consists of five wells (H-1A, H-2A, H-3, H-4, and H-5A) registered for a total withdrawal of 2.052 mgd.

Ability to provide HVWC with an adequate margin of safety for peak demand purposes – Two options exist for expanding capacity of the existing wellfield. The first is to increase pumping capabilities of individual wells by replacing pumps. The second is to pursue the use of Well H-6 (already drilled but not permitting for use by DEP). In either case, a diversion permit would be needed to exceed the current registration of 2.052 mgd. If a permit for Well H-6 to withdraw 225 gpm were again pursued, the resulting increase in capacity would enable the peak day demands to be met with 15% margin of safety immediately, and continuing nearly through 2020. Similarly, if pumping rates were increased in Wells H-1A, H-2A, H-3, H-4, and H-5A, as suggested in the water supply plan, the resulting increase in capacity would enable the peak day demands to be met with 15% margin of safety immediately, and continuing nearly through 2020. If a combination of pumping capacity increase plus Well H-6 were pursued and approved, the capacity to meet peak day demands would exceed the 50-year planning period.

Given the availability of additional water supply capacity, a second component of this alternative is the addition of a pumping station on Camp Road to increase pressures in the CWC Heritage-Middlebury system in the Bronson Drive area.

Ability to provide emergency service to Westover School – HVWC currently supplies the CWC Heritage-Middlebury System through a metered interconnection located on Judd Hill Road in southwest Middlebury. This system is located in the western portion of Middlebury and serves portions of Route 188, Bona Road, Camp Road, Atwood Road, Bronson Drive, Judson Road, and Woodland Road. If a pumping station were constructed on Camp Road to increase the area's water pressure, an emergency interconnection could be made between the existing CWC and Westover distribution systems.



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Location Plan - Southbury Alternatives

Location: Litchfield & New Haven Counties, CT

MMI#: 1573-22-1
MXD: 2-3-SouthAlt.mxd
Source: CT DPH, DEP

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Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007
Scale: 1" = 7,500'

Sheet: Figure 2-3

Ability to provide public water to the Middlebury Town Library – Expanding the capacity of the Pomperaug River wellfield will not immediately provide the Town Library with public water. The closest existing water main to the Town Library is located approximately 1,100 feet away and is part of the Westover School system. Extending the Westover service area to accommodate the library would require an interconnection between the existing distribution systems of the CWC Heritage-Middlebury and Westover school systems. The wellfield expansion, the 1,100-foot interconnection, and the Camp Road pumping station would provide the Westover system with the necessary capacity to adequately serve the Library.

Ability to increases the water pressure to the Bronson Drive area – This alternative has the potential to increase water pressure in the CWC Heritage-Middlebury system. The wellfield expansion and the construction of a pump station along Camp Road would provide the Bronson Drive area with additional capacity and increased water pressure.

Flood Hazard Potential – The Pomperaug River wellfield falls within the 100-year floodplain as delineated by the FEMA Flood Insurance Maps. Bringing a sixth well online would not necessarily increase the flood hazard potential for the area. However, the well would need to be protected from the 100-year flood by filling the area around it, and this would in turn require mitigation elsewhere in the floodplain for maintaining flood storage capacity.

Potential to Impact Sensitive Environmental Resources – HVWC previously applied to the DEP for a diversion permit for Well H-6. DEP denied the diversion permit, citing potential adverse environmental impacts such as reduced instream flow and its interrelated impacts, including effects on aquatic habitats and water quality.

Ability to Meet Project Needs, Goals, and Objectives – The expansion of the Pomperaug River Wellfield is not believed to be compatible with the goals and objectives of the proposed project, in that without substantial modification and expansion, it fails to provide service to the Town Library, and most importantly may have an adverse impact to the Pomperaug River.

2.4.2 Interconnection with United Water Company's Newtown System through HVWC

Site Location – The Newtown system is located several miles to the southwest of the existing HVWC Southbury system (see Figure 2-3). A specific route has not been identified for the interconnection.

Ability to provide HVWC with an adequate margin of safety for peak demand purposes – United Water Company has indicated that its available water supply is limited and diverting any major amount of water to HVWC would compromise its margin of safety. Thus, United Water Company's Newtown system does not have excess capacity to supply

HVWC with an adequate margin of safety for peak demand purposes. As a result, construction of a pumping station at Camp Road is only a component of this alternative inasmuch as very low volumes of water could be transferred to parts of Middlebury.

Ability to provide emergency service to Westover School – This alternative could potentially provide emergency water service to Westover School, subject to the same conditions described on page 2-8. If a pumping station were constructed on Camp Road to increase the area's water pressure, an emergency interconnection could be made between the existing CWC and Westover distribution systems.

Ability to provide public water to the Town Library – This alternative could result in the Town Library being provided with public water, subject to the same conditions described on page 2-10, as the library water demands are minimal. The United Water interconnection, the 1,100-foot interconnection from the Westover School system to the library, and the Camp Road pumping station would together provide the Westover system with the necessary capacity to adequately serve the Library.

Ability to increase water pressure to the Bronson Drive area – This alternative has potential to increase the water pressure in the Bronson Drive area with construction of a booster pumping station. However, the volume of water available would be minimal.

Flood Hazard Potential – Depending on the selected route, this interconnection may or may not fall within an area delineated as a floodplain. In either instance, this alternative would not be expected to affect the flood hazard potential of the area, as the interconnection would be installed in established roadways.

Potential to Impact Sensitive Environmental Resources – Regardless of the specific route selected, this interconnection alternative will eventually have to cross the Housatonic River. The DEP Natural Diversity Data Base indicates that this area does not lie within an area of special concern for endangered or threatened species or significant natural communities.

Ability to Meet Project Needs, Goals, and Objectives – This alternative is not consistent with the goals of the project in that it fails to provide HVWC with an adequate margin of safety for peak demand purposes.

2.4.3 *Interconnection With United Water Company's Woodbury System*

Site Location – United Water Company's Woodbury system is located approximately one mile away from HVWC's Southbury system (see Figure 2-3). The interconnection would extend along Route 6 from Scuppo Road in Woodbury to a point approximately 1,500 feet into the Town of Southbury.

Ability to provide HVWC with an adequate margin of safety for peak demand purposes – United Water Company has indicated that its available water supply is limited and diverting any major amount of water to HVWC would compromise its margin of safety. Thus, United Water Company's Woodbury system does not have the capacity to supply HVWC with an adequate margin of safety for peak demand purposes. As a result, construction of a pumping station at Camp Road is only a component of this alternative inasmuch as very low volumes of water could be transferred to parts of Middlebury.

Ability to provide emergency service to Westover School – This alternative could potentially provide emergency water service to Westover School, subject to the same conditions described on page 2-8 and 2-11.

Ability to provide public water to the Town Library – This alternative could result in the Town Library being provided with public water, subject to the same conditions described on page 2-10 and 2-11, as the library water demands are minimal.

Ability to increase water pressure to the Bronson Drive area – This alternative has potential to increase the water pressure in the Bronson Drive area with construction of a booster pumping station, subject to the same conditions described on page 2-10 and 2-11.

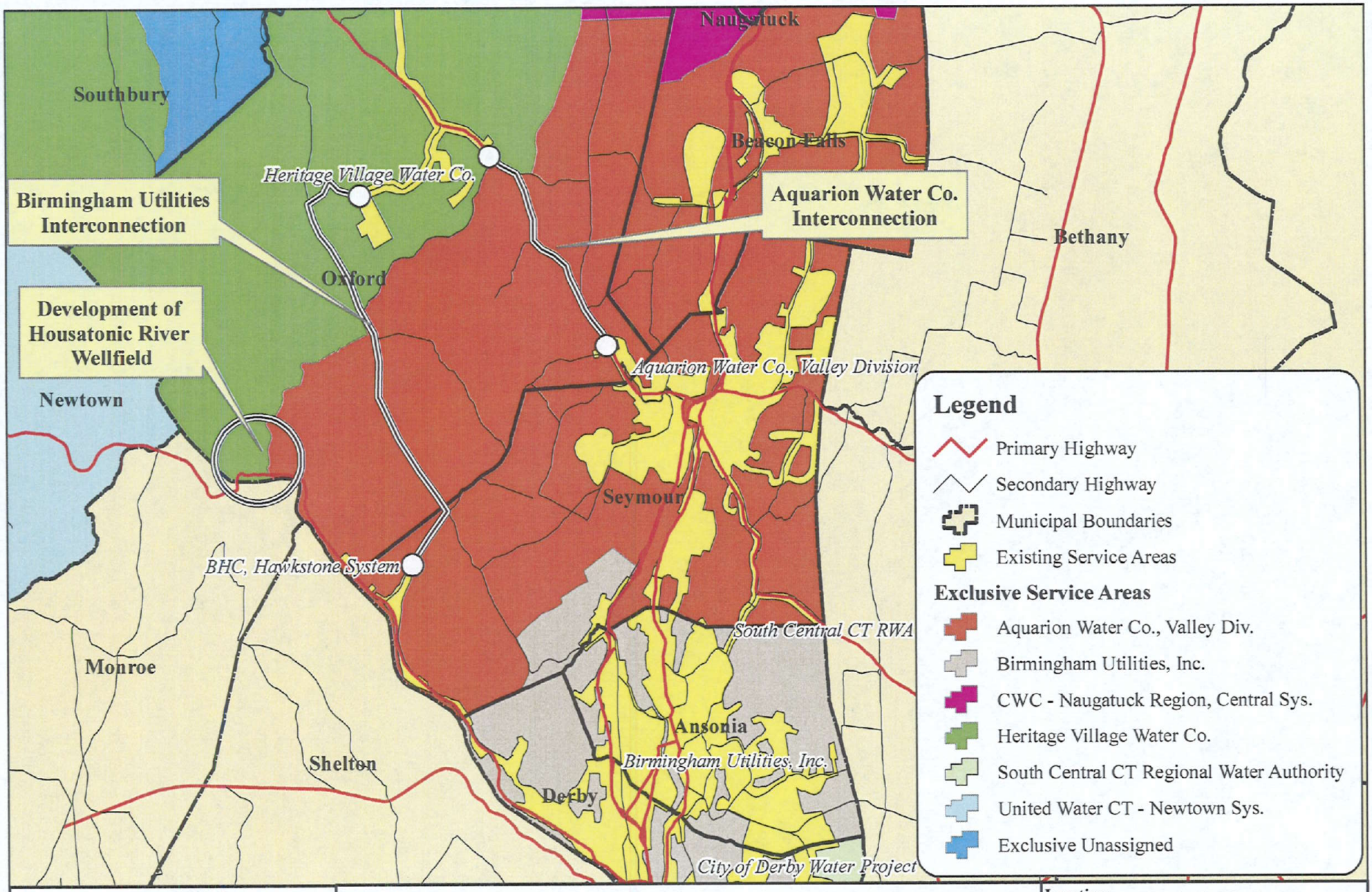
Flood Hazard Potential – The proposed route does not fall within a delineated floodplain area. An interconnection along this route is not expected to increase the flood hazard potential of the area.

Potential to Impact Sensitive Environmental Resources – The route does not come into contact with any areas designated as inland wetlands or watercourses. The DEP Natural Diversity Data Base indicates that this area does not lie within an area of special concern for endangered or threatened species or significant natural communities. The route location would have minimal impact on the surrounding natural environmental resources and is not expected to adversely impact wetland areas.

Ability to Meet Project Needs, Goals, and Objectives – This alternative is not consistent with the goals of the proposed project in that it fails to provide HVWC with an adequate margin of safety for peak demand purposes.

2.4.4 Interconnection with Aquarion Water Company's Valley Division System

Site Location – Aquarion Water Company's Valley Division System (Aquarion) comes closest to the Oxford portion of the HVWC system in the Town of Seymour (see Figure 2-4). The most likely interconnection route would be along Route 67 through the Town of Oxford. Two booster pumping stations and approximately 2.3 miles of water main would need to be extended to construct the interconnection between Aquarion and HVWC.



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Location Plan - Oxford Alternatives

Location: Fairfield & New Haven Counties, CT

MMI#: 1573-22-1
MXD: H:\2-4-OxAlt.mxd
Source: CT DPH, DEP

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Environmental Impact Evaluation Middlebury Interconnection

Date: Dec. 2007
Scale: 1" = 7,500'

Sheet: Figure 2-4

Ability to provide HVWC with an adequate margin of safety for peak demand purposes – This alternative would provide HVWC with additional water supply, which would satisfy this project goal.

Given the availability of additional water supply capacity, a second component of this alternative is the addition of a pumping station on Camp Road to increase pressures in the CWC Heritage-Middlebury system in the Bronson Drive area.

Ability to provide emergency service to Westover School – As explained in Section 2.3.1, an emergency interconnection could be made between the existing CWC and Westover distribution systems if a pumping station were constructed on Camp Road to increase the area's water pressure. But this solution would only be practical if an interconnection with Aquarion could provide HVWC with sufficient capacity that it could then transfer more water to CWC's Heritage-Middlebury system. This is believed to be possible.

Ability to provide public water to the Town Library – This alternative could result in the Town Library being provided with public water, subject to the same conditions described on page 2-10, as the library water demands are minimal.

Ability to increases the water pressure to the Bronson Drive area – This alternative has the potential to increase water pressure in the CWC Heritage-Middlebury system. The interconnection with Aquarion and the construction of a pump station along Camp Road would provide the Bronson Drive area with additional capacity and increased water pressure.

Flood Hazard Potential – FEMA mapping indicates that portions of the Route 67 interconnection are located in the floodplain. However, it is not expected that the interconnection will adversely affect the flood hazard potential of the area, as the interconnection would be installed in established roadways.

Potential to Impact Sensitive Environmental Resources – This alternative would cross several areas designated as wetlands or watercourses. This alternative would not be expected to have any long term adverse impacts to these areas. The DEP Natural Diversity Data Base indicates that this area does not lie within an area of special concern for endangered or threatened species or significant natural communities. The route location would have minimal impact on the surrounding natural environmental resources.

Ability to Meet Project Needs, Goals, and Objectives – This alternative is not fully consistent with the goals of the proposed project in that it requires a 1,100-foot water main extension to provide the library with public water.

2.4.5 *Interconnection with Birmingham Utilities' Ansonia-Derby System*

Site Location – Birmingham Utilities' system comes closest to the Oxford portion of the HVWC system in the Town of Seymour (see Figure 2-4). The most likely interconnection route would travel along Route 188 through the Town of Oxford. Two booster stations and approximately 4.9 miles of water main would need to be extended to construct the interconnection between Birmingham Utilities and HVWC.

Ability to provide HVWC with an adequate margin of safety for peak demand purposes – This alternative would provide HVWC with a water supply which would satisfy this project goal.

Given the availability of additional water supply capacity, a second component of this alternative is the addition of a pumping station on Camp Road to increase pressures in the CWC Heritage-Middlebury system in the Bronson Drive area.

Ability to provide emergency service to Westover School – As explained in Section 2.3.1, an emergency interconnection could be made between the existing CWC and Westover distribution systems if a pumping station were constructed on Camp Road to increase the area's water pressure. But this solution would only be practical if an interconnection with Birmingham Utilities could provide HVWC with sufficient capacity that it could then transfer more water to CWC's Heritage-Middlebury system. This is believed to be possible.

Ability to provide public water to the Town Library – This alternative could result in the Town Library being provided with public water, subject to the same conditions described on page 2-10, as the library water demands are minimal.

Ability to increases the water pressure to the Bronson Drive area – This alternative has the potential to increase water pressure in the CWC Heritage-Middlebury system. The interconnection with Birmingham Utilities and the construction of a pump station along Camp Road would provide the Bronson Drive area with additional capacity and increased water pressure.

Flood Hazard Potential – FEMA mapping indicates that the proposed route has portions located in the floodplain. Adverse impacts to the flood hazard potential of the area would not be expected, as the interconnection would be installed in established roadways.

Potential to Impact Sensitive Environmental Resources – The DEP Natural Diversity Data Base indicates that this area does not lie within an area of special concern for endangered or threatened species or significant natural communities. The route location is expected to have minimal impact on the surrounding natural environmental resources.

Ability to Meet Project Needs, Goals, and Objectives – This alternative is not fully consistent with the goals of the proposed project in that it requires a 1,100-foot water main extension to provide the library with public water.

2.4.6 *Development of Stratified Drift Wellfield at Housatonic River*

Site Location – According to the HVWC Water Supply Plan, the most promising location for obtaining high quantities of ground water is in the portion of the Housatonic River aquifer at the confluence of Eightmile River and the Housatonic River. This location is more than four miles from the HVWC service area in the Town of Oxford (see Figure 2-4).

Ability to provide HVWC with an adequate margin of safety for peak demand purposes – Although detailed hydrogeologic investigations have not been conducted, HVWC believes that an initial estimate of 100 gpm to 200 gpm is reasonable for a single well at this location. Assuming that several wells were developed, peak day margins of safety would exceed 15% throughout the planning periods cited in the Water Supply Plan.

Given an assumed availability of additional water supply capacity, a second component of this alternative is the addition of a pumping station on Camp Road to increase pressures in the CWC Heritage-Middlebury system in the Bronson Drive area.

Ability to provide emergency service to Westover School – As explained in Section 2.3.1, an emergency interconnection could be made between the existing CWC and Westover distribution systems if a pumping station were constructed on Camp Road to increase the area's water pressure. But this solution would only be practical if a new wellfield for HVWC would provide sufficient capacity that water could then be transferred to CWC's Heritage-Middlebury system. This is believed to be possible.

Ability to provide public water to the Town Library – This alternative could result in the Town Library being provided with public water, subject to the same conditions described on page 2-10, as the library water demands are minimal.

Ability to increases the water pressure to the Bronson Drive area – This alternative has the potential to increase water pressure in the CWC Heritage-Middlebury system. Operation of a new wellfield and the construction of a pump station along Camp Road would provide the Bronson Drive area with additional capacity and increased water pressure.

Flood Hazard Potential – The area in and around the confluence of Eightmile River and the Housatonic River falls within the 100-year floodplain as delineated on the FEMA Flood Insurance Maps. The wells would need to be protected from the 100-year flood by filling the area around it, and this would in turn require mitigation elsewhere in the floodplain for maintaining flood storage capacity.

Potential to Impact Sensitive Environmental Resources – Because of its large rate of flow as compared to any withdrawal that would be pursued at this location, operation of a Housatonic River wellfield would not have any correlated adverse impacts to instream flow, aquatic habitats, wetlands, and the like. Furthermore, the DEP Natural Diversity Data Base indicates that this area does not lie within an area of special concern for endangered or threatened species or significant natural communities.

Ability to Meet Project Needs, Goals, and Objectives – This alternative is not fully consistent with the goals of the proposed project in that it requires a 1,100-foot water main extension to provide the library with public water.

2.4.7 Development of New Bedrock Wells in the HVWC system

Site Location – Numerous locations for bedrock wells within the HVWC system are likely available, and an exhaustive review of potential locations is outside the scope of this EIE. In general, bedrock wells could be developed in the sedimentary rocks of central Southbury, or the metamorphic rocks of eastern Southbury, Oxford, or Middlebury (see Figure 2-5).

Provides HVWC with an adequate margin of safety for peak demand purposes – Temporarily removing the sedimentary rocks from the analysis (due to their proximity to the Pomperaug River), the metamorphic rocks in this part of Connecticut are known to have relatively low hydraulic conductivity due to poor fracturing and poor fracture interconnectivity. For example, test wells drilled for an unrelated golf course project within the CWC Heritage-Middlebury distribution system were found to have yields ranging from 15 to 20 gpm. With five wells test wells drilled, the total estimated yield was only on the order of 50,000 gpd.

Because of their low yields, the addition of new bedrock wells to the HVWC system is not expected to provide the necessary margin of safety to the system for meeting peak demands. The number of bedrock wells that would be required to provide HVWC with an adequate margin of safety is neither feasible in terms of having the necessary number of locations to place the wells, nor would it be cost effective. As a result, construction of a pumping station at Camp Road is only a component of this alternative inasmuch as very low volumes of water could be transferred to parts of Middlebury.

Ability to provide emergency service to Westover School – This alternative could potentially provide emergency water service to Westover School, subject to the same conditions described on page 2-8. If a pumping station were constructed on Camp Road to increase the area's water pressure, an emergency interconnection could be made between the existing CWC and Westover distribution systems.

Ability to provide public water to the Town Library – This alternative could result in the Town Library being provided with public water, subject to the same conditions described on page 2-10, as the library water demands are minimal. The United Water interconnection, the 1,100-foot interconnection from the Westover School system to the library, and the Camp Road pumping station would together provide the Westover system with the necessary capacity to adequately serve the Library.

Ability to increase water pressure to the Bronson Drive area – This alternative has potential to increase the water pressure in the Bronson Drive area with construction of a booster pumping station. However, the volume of water available would be minimal.

Flood Hazard Potential – Bedrock wells are typically developed outside of FEMA designated floodplains. The development of new bedrock wells would not be expected to impact the flood hazard potential of the area.

Potential to Impact Sensitive Environmental Resources – The impact of developing and operating numerous bedrock wells is relatively site-specific and therefore uncertain without the selection of a number of sites and comparing them to nearby streams, aquatic habitats, and wetlands. These impacts would be evaluated through the diversion permit process.

Ability to Meet Project Needs, Goals, and Objectives – This alternative is not consistent with the goals of the proposed project in that it fails to provide HVWC with an adequate margin of safety for peak demand purposes.

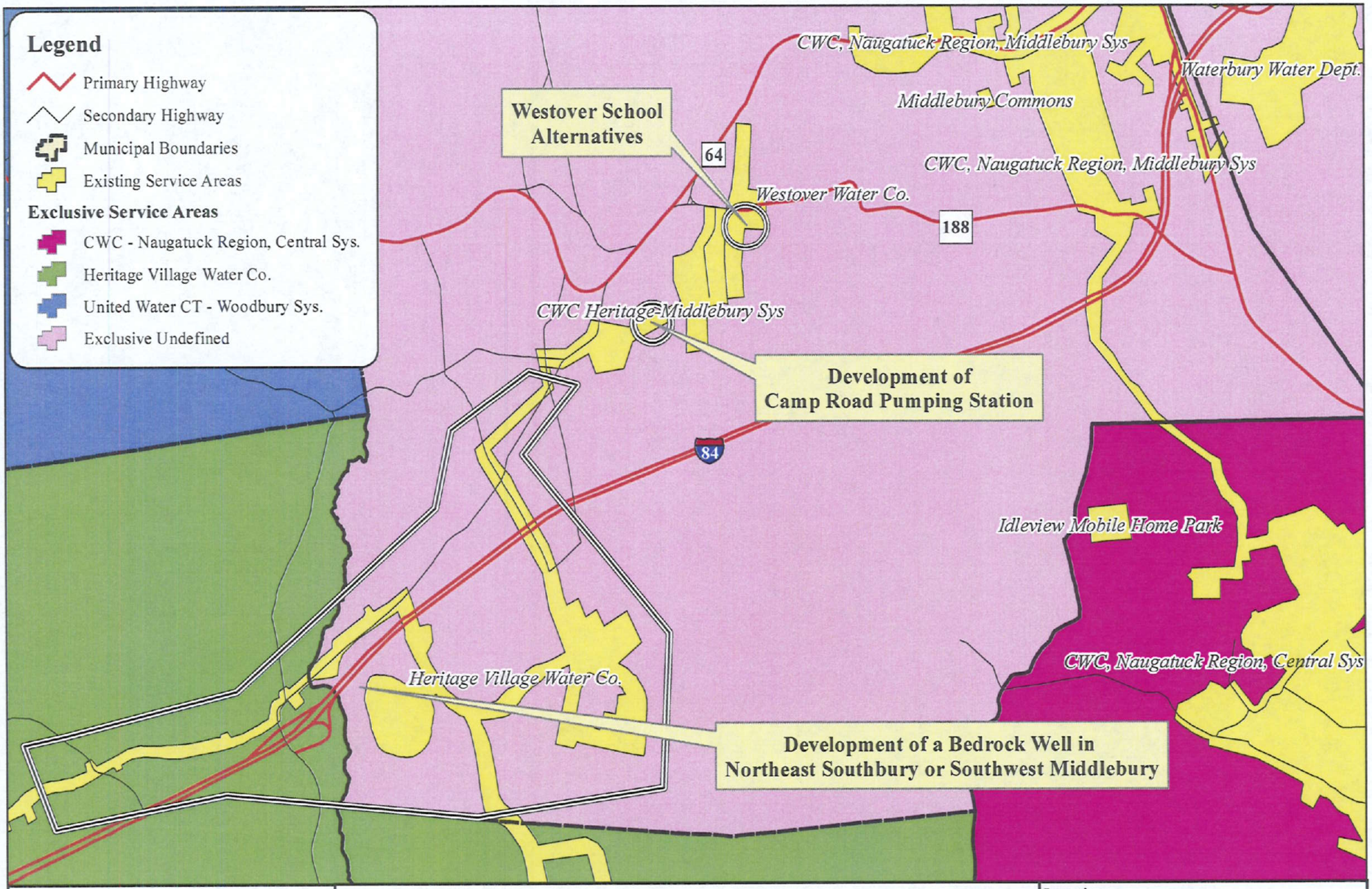
2.4.8 Construction of Camp Road Pumping Station

Site Location – Camp Road is served by the CWC Heritage-Middlebury system (see Figure 2-5). The pump station would be located at the southwestern end of the road.

Provides HVWC with an adequate margin of safety for peak demand purposes – A pumping station in this location would not satisfy HVWC's need for additional capacity, thereby ensuring an adequate margin of safety during peak day demands, because the station would direct flow away from HVWC.

Provides emergency service to Westover School – The Camp Road pump station is approximately 3,400 linear feet from the Westover School. The station would provide the water pressure necessary to supply the school with an emergency supply of water. However, the emergency supply would be limited by the available capacity in the CWC Heritage-Middlebury system, which in turn is restricted by the capacity available to HVWC.

Provides Public Water to Town Library – Although a Camp Road pump station would provide the water pressure necessary to supply the Town Library with a public water source, the closest existing line is 1,000 linear feet away. Since this line is part of the Westover School system, an interconnection between the school system and the CWC Heritage-Middlebury system would be required to satisfy this objective.



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Location Plan - Middlebury Alternatives

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\2-5-MidAlt.mxd
Source: CWC, CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 3,000'

Sheet: Figure 2-5

Increase the water pressure to the Bronson Drive area – Camp Road is considered part of the Bronson Drive area. The CWC Heritage-Middlebury owned water main, which serves Bronson Drive, is the same line which travels along Camp Road. A pump station located along Camp Road will provide the entirety of the Bronson Drive area with increased water pressure.

Flood Hazard Potential – The location of the Camp Road pump station is not within the 100-yr floodplain as delineated by FEMA Flood Insurance Maps.

Potential to Impact Sensitive Environmental Resources – This alternative is located in a Growth Area as designated by the States Conservation and Development Plan. The DEP Natural Diversity Data Base indicates that this area does not lie within an area of special concern for endangered or threatened species or significant natural communities. The location of a pump station at this site would be expected to have minimal impact on the surrounding natural environmental resources.

Ability to Meet Project Needs, Goals, and Objectives – This alternative alone is not fully consistent with the goals of the proposed public water supply system expansion and regional interconnection in that it fails to provide service to the Town Library and does not supply HVWC with an adequate margin of safety for peak day demand purposes.

2.4.9 Development of Fully Redundant Well System and Increase Storage at Westover School

Site Location – Westover School is located at the intersection of Route 188 and South Street (see Figure 2-5). The Westover School System extends north along North Street to its intersection with Central Street, south along South Street to its intersection with Dwyer Road, and east to the Shepardson Community building.

Provides emergency service to Westover School – This alternative is designed specifically to provide emergency service to the Westover School system. A redundant source of supply would include a well (or wells) with sufficient capacity to supply the system if the primary wells were out of service for any reason. Additionally, increased storage would provide additional means of supplying the system for a short time while compromised wells, well pumps, or other system components were being repaired or replaced.

Provides HVWC with an adequate margin of safety for peak demand purposes – Supplying the Westover School with a redundant well system does not address HVWC water supply and margin of safety issues.

Provides Public Water to Town Library – The town Library is approximately 1,000 linear feet from the termination of Westover's existing distribution system. Depending on how much capacity the additional wells could provide the Westover system, a water main could be extended from the existing system to the Town Library. This line would cost approximately $150,000 dollars. However, the addition of any customers to the Westover

School system could reduce the benefits provided by source of supply redundancy and storage unless new wells were developed with additional capacity.

Increase the water pressure to the Bronson Drive area – A fully redundant System at the Westover School would not be an effective alternative in providing the Bronson Drive area with increased water pressure, unless a new atmospheric tank were installed and made available to the Bronson Drive area.

Flood Hazard Potential – There are no FEMA flood zone designations in or around school owned property. Developing a fully redundant well system at the school is not expected to impact the flood hazard potential of the area.

Potential to Impact Sensitive Environmental Resources – The DEP Natural Diversity Data Base indicates that this area does not lie within an area of special concern for endangered or threatened species or significant natural communities. The location of the well system on this site would be expected to have minimal impact on the surrounding natural environmental resources.

Ability to Meet Project Needs, Goals, and Objectives – Providing the Westover School with a fully redundant well system and increased storage capacity does not address a sufficient number of the other goals and objectives of the proposed interconnection project because the redundant system of wells will likely have relatively low yields.

2.4.10 *Consolidate Westover School's off campus users with the CWC Heritage-Middlebury System*

Site Location – The CWC Heritage-Middlebury system and the Westover School system are adjacent to one another. The CWC Heritage-Middlebury system serves portions of Route 188 and Bronson Drive area (see Figure 2-5). Westover School is located at the corner of Route 188 and South Street. The Westover School water system extends north along North Street to its intersection with Central Street, south along South Street to its intersection with Dwyer Road, and east to the Shepardson Community Building.

Provides HVWC with an adequate margin of safety for peak demand purposes – This alternative would not provide HVWC with any additional water to satisfy its peak demand deficiencies.

Provides emergency service to Westover School – Removing the off-campus users will provide the school with greater capacity and means to operate during emergencies. However, the school is still required to have an independent emergency source of supply, and this alternative alone does not provide such emergency supply. A variation of this alternative could involve the school becoming a customer of the CWC Heritage-Middlebury in connection with the consolidation of its existing off-campus customers with

the CWC Heritage-Middlebury system. In this case, the school may not need to develop an independent emergency source of supply.

Provides Public Water to Town Library – Unless the Westover system was extended and the existing off-campus water usage was reallocated to the Library, simply consolidating the off-campus users with CWC will not satisfy this goal.

Increase the water pressure to the Bronson Drive area – Consolidating Westover School's off campus users with CWC would not have any positive effect on the water pressure in the Bronson Drive area, and in fact could further compromise pressures in the CWC Heritage-Middlebury system unless the booster pumping station were constructed on Camp Road.

Flood Hazard Potential – Westover School and its surrounding off campus users are not located within a FEMA designated floodplain area. Therefore, this alternative would not have an adverse impact on the flood hazard of the surrounding area.

Potential to Impact Sensitive Environmental Resources – The Westover School is comprised of multiple structures, athletic fields, and open space. There are no known environmentally sensitive areas in or immediately around Westover School. The DEP Natural Diversity Data Base indicates that the school and surrounding area does not lie within an area of special concern for endangered or threatened species or significant natural communities. Accordingly, this alternative would be expected to have minimal impact on the surrounding natural environmental resources.

Ability to Meet Project Needs, Goals, and Objectives – Consolidating the Westover School off-campus water users with the CWC Heritage-Middlebury system does not address many of the goals and objectives of the interconnection project and is therefore not designated as the preferred alternative.

2.5 Preferred Alternative

Interconnection of CWC with HVWC and extension of the CWC system in Middlebury is the only alternative that meets all of the project goals and objectives. Of the two alternative routes for the interconnection, the Route 188 alternative is the one that most efficiently meets all of the goals and objectives. Both alternatives provide HVWC with an adequate margin of safety and emergency supply, increase water pressure in the Bronson Drive area, but the Route 64 alternative fails to easily provide the Town library with public water.

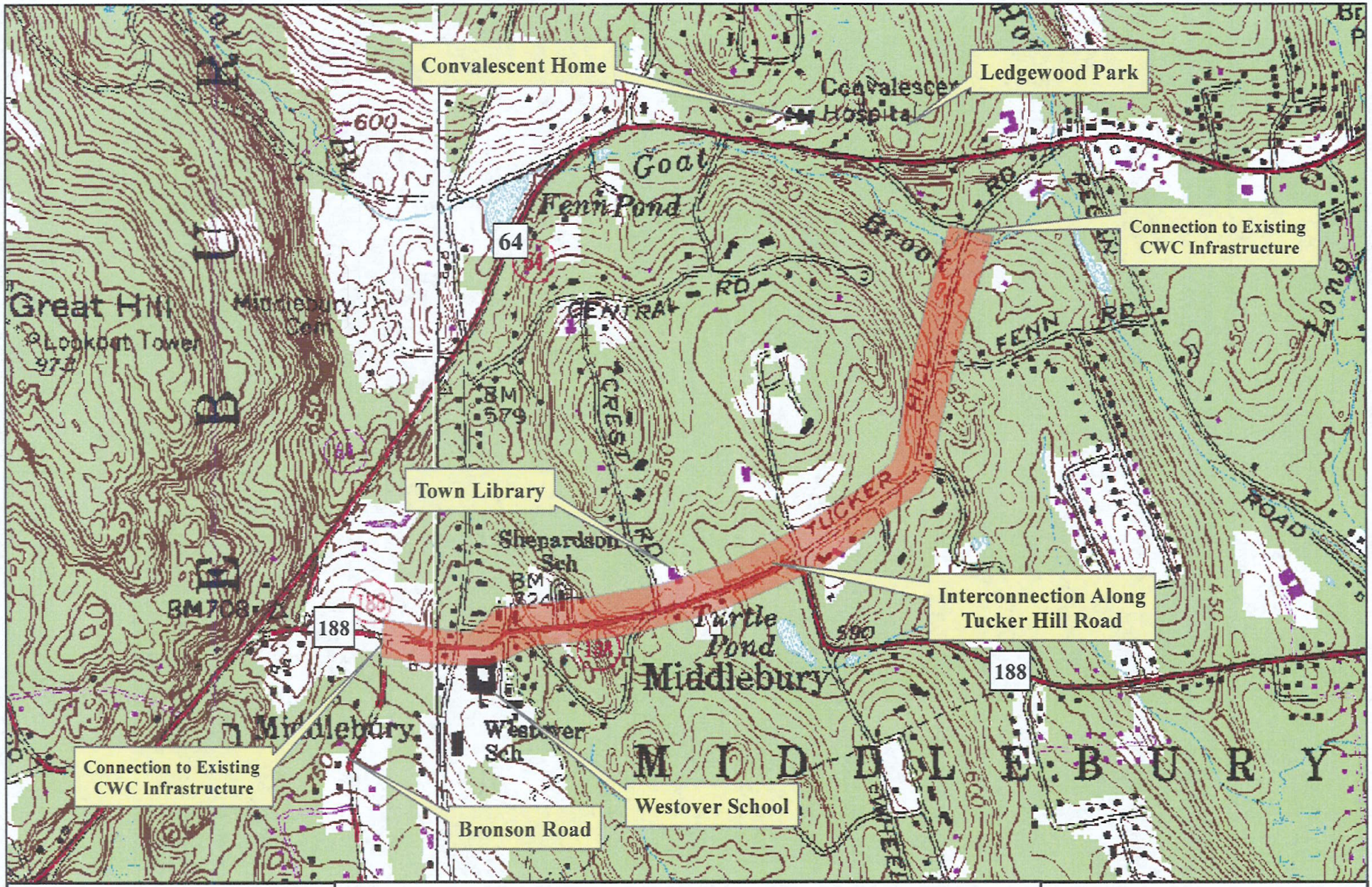
The Route 188 alternative is also much more cost effective that the Route 64 alternative. The Route 64 alternative is approximately 7,000 linear feet, or 600 linear feet longer than the Route 188 alternative. The Route 64 alternative is also less cost effective because it

travels a greater distance along state roads. State Roads are generally held to a higher standard of restoration specifications than town roads. Assuming a cost of $150/ foot, it would potentially cost $936,250 to extend the water main. The pump station associated with this alternative would cost approximately $600,000. The infrastructure cost related to this alternative is $1,536,250. This number does not include any of the required permitting costs.

The Route 188 alternative provides for the shortest water main interconnection being considered at approximately 6,400 linear feet. Of the 6,400 linear feet, approximately 3,200 linear feet or half the length of the interconnection, is located within the Town maintained Tucker Hill Road. Assuming a cost of $100/ foot for Town roads and $150/ foot for State roads, extending the water main would cost approximately $800,000. The pump station associated would cost approximately $600,000 bringing the total cost of the required infrastructure improvements of this alternative to $1,400,000 or $136,250 less than the Route 64 alternative.

Both routes are feasible and neither would have a substantial adverse impact to the flood hazard potential of the area or negatively impact any sensitive environmental resources. Likewise, neither alternative will have an impact on the surrounding aesthetic or physical environments. Air quality and noise impacts will be minimal and limited to the construction phase of the project. But because the Route 64 alternative is less cost effective and fails to easily provide the Library with water service, the Route 188 alternative is believed to be the superior option.

Therefore, the Tucker Hill Road / Route 188 interconnection is considered to be the preferred alternative since it will meet the purposes, need, and goals of the project while having minimal adverse impacts. Figure 2-6 depicts the proposed route of this alternative.



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Preferred Alternative

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\2-6-Preferred.mxd
Source: DEP Bulletin No.40

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: **Figure 2-6**

3.0 AFFECTED ENVIRONMENT

3.1 Land Use and Zoning

An understanding of land use plans and policies at the local, regional and state levels is essential to the analysis of potential alterations of land uses in the project area. The following discussion sets the framework of land use policies that apply to the project area. Consistency of the proposed action with these plans, policies, statutes, and regulations is evaluated in Section 4.0 of this document.

3.1.1 Statewide Land Use Conservation and Development

The following discussion presents portions of the *Conservation and Development Policies Plan for Connecticut (2004–2009)* as they relate to the proposed regional water supply interconnection. Italicized sections are direct excerpts from the Plan. Not all Plan policies are included in this discussion, as they may not directly apply. For an expanded review of the Plan, the reader is directed to the full document on file with the Connecticut Office of Policy and Management.

The *Conservation and Development Policies Plan for Connecticut (2004–2009)* is a statement of the state's growth, resource management, and public investment policies. The Plan provides a policy and planning framework for the administrative and programmatic actions and capital and operational investment decisions of state government, which influence the future growth and development of Connecticut.

The Connecticut General Assembly, in accordance with Sections 16a-24 through 16a-33 of the Connecticut General Statutes, establishes the Plan. The policies of the Plan are intended to guide the planning and decision-making process of state government relative to: (1) addressing human resource needs and development; (2) balancing economic growth with environmental protection and resource conservation concerns; and (3) coordinating the functional planning activities of state agencies so as to accomplish long-term effectiveness and economies in the expenditure of public funds.

The Plan embodies six statewide growth management principles as follows:

1. Redevelop and revitalize regional centers and areas with existing or currently planned physical infrastructure.

2. Expand housing opportunities and design choices to accommodate a variety of household types and needs.

3. Concentrate development around transportation nodes and along major transportation corridors to support the viability of transportation options.

4. Conserve and restore the natural environment, cultural and historical resources, and traditional rural lands.

5. Protect and ensure the integrity of environmental assets critical to the public health and safety.

6. Promote integrated planning across all levels of government to address issues on a statewide, regional, and local basis.

The accompanying *Conservation and Development Plan Locational Guide Map* apportions the state into land categories according to each area's characteristics and suitability for different forms of development or conservation activities. The categories of land use are designated on the *Locational Guide Map* as follows:

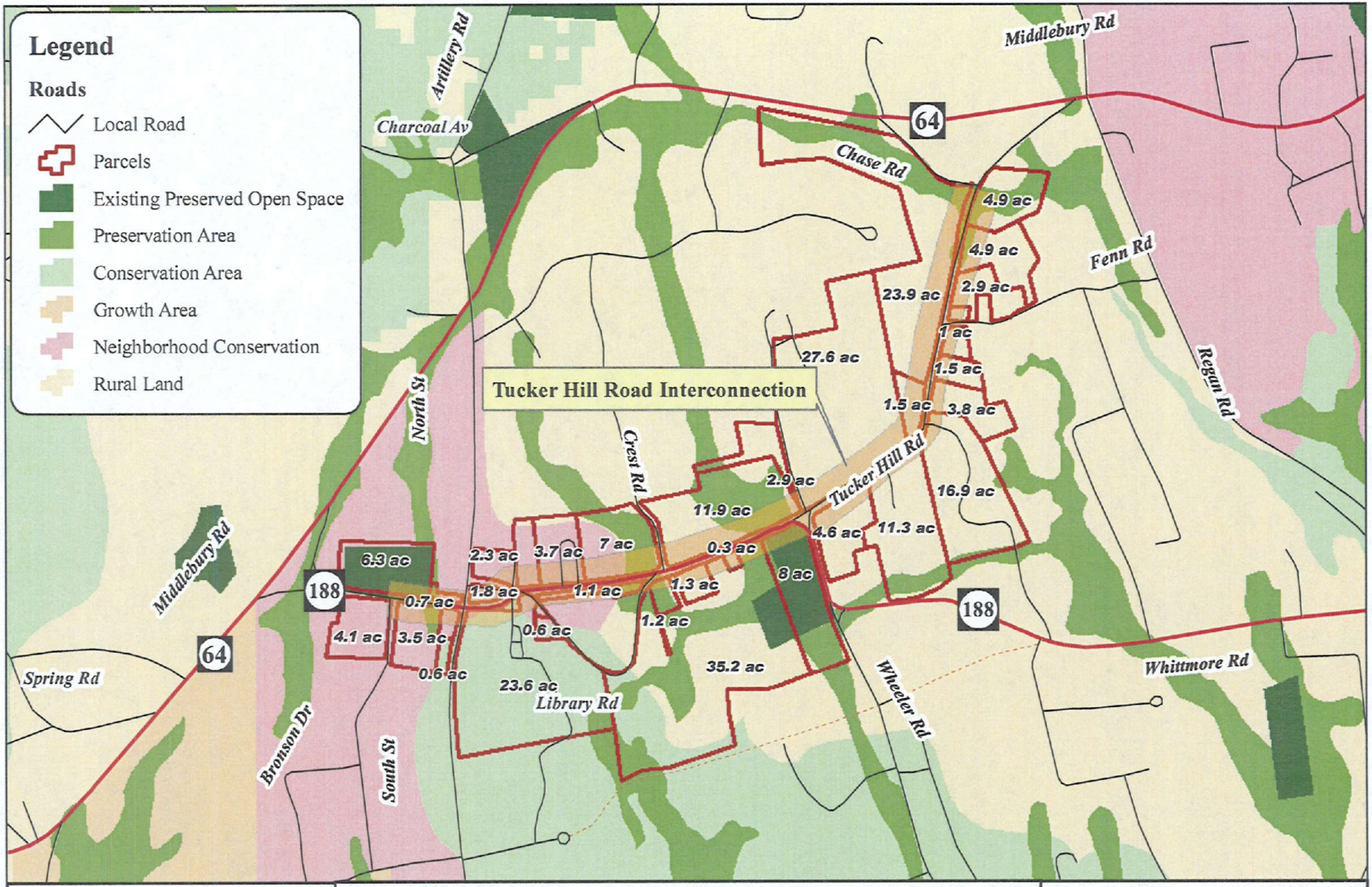
Development Areas

- Regional Centers
- Neighborhood Conservation Areas
- Growth Areas
- Rural Community Centers

Conservation Areas

- Existing Preserved Open Space
- Preservation Areas
- Conservation Areas
- Rural Lands
- Level A/B Aquifer Protection Areas
- Historic Areas

Figure 3-1 depicts the statewide conservation and development plan land designations for the project area. The Village Center in the project area is classified as *Neighborhood Conservation.* The wetland areas are classified as *Preservation Area.* A small stretch of the proposed interconnection route near the intersection of Route 188 and Library Road abuts land designated as *Conservation area.* Two areas along the route are classified as *Existing Preserved Open Space.* The first is located at the intersection of Bronson Drive and Route 188 and the second is located at the intersection of Route 188 and Wheeler Road. The majority of the land adjacent to the interconnection route is classified as *Rural Lands.* Descriptions of land use designations in the project area are presented below.



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Conservation & Development Plan Land Use Designations

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\3-1-C&D.mxd
Source: COGCNV, CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007
Scale: 1" = 1,000'

Sheet: Figure 3-1

Neighborhood Conservation Areas

Neighborhood Conservation Areas are typically characterized as lands without the high incidence of the structural, occupancy, and income characteristics of Regional Centers, yet are significantly built-up and well populated. These areas generally reflect stable, developed neighborhoods and communities. Neighborhood Conservation Areas have either census tracts with a population density greater than 1,000 per square mile, or census block groups that are greater than 80% built up as determined from the Land Use and Land Cover Inventory.

Middlebury's town square and Village Green are designated as Neighborhood Conservation Areas. This area contains among other things, the Town Hall, the Westover School, the Shepardson Community building, and several churches. State policy seeks to support the maintenance of these basically stable, developed neighborhoods and communities and also intensify development when it is supportive of community stability and consistent with the capacity of the existing urban services.

Conservation Areas

Conservation Areas represent a significant portion of the state and a myriad of land resources. Conservation areas include flood fringe areas that are, or may be, regulated in accordance with the National Flood Insurance Program, Connecticut's Channel Encroachment Line Program, or the Coastal Area Management Program, as areas subjected to the 100-year flood but not included in floodways. Historic preservation areas are also included in Conservation Areas, as are public water supply watersheds. The area along the route that is designated as Conservation Area is so designated because it lies within a public water supply watershed area of The Connecticut Water Company. However, the public water supply downstream of the watershed (the Meshaddock Brook diversion) does not meet SDWA criteria and is reserved only for emergencies.

State policy seeks to plan and manage, for the long-term public benefit, the lands contributing to the state's need for food, fiber, water and other resources; open space; recreation; and environmental quality; and ensure that changes in use are compatible with the identified conservation values.

Preservation Areas

Preservation areas are defined as existing rivers and water bodies, tidal and inland wetlands; Class I type aquifer and reservoir lands not in water utility ownership; habitats of state endangered, threatened and special concern species; natural and archeological areas of regional and statewide significance; agricultural land where development rights have been acquired; floodways within the 100 year flood zone; and open space areas designated in local plans and approved by local legislative bodies. The wetland corridors in the project area, including Goat Brook, have been classified as Preservation Areas.

State policies regarding preservation areas promote preservation and management of these areas as open space.

Existing Preserved Open Space

Existing Preserved Open Space represents areas in the state with the highest priority for conservation and permanent use as open space. The first area, near the Bronson Drive and Route 188 intersection, is an open hayfield that is owned by the Middlebury Land Trust. The Middlebury Land Trust also owns the area located at the Wheeler Road intersection. This area contains an existing water body named Turtle Pond. State policy supports the permanent continuation of these areas as public or quasi-public open space, while discouraging the sale and structural development of such areas unless they are consistent with the open space functions served.

Rural Lands

Rural Lands are those areas falling outside any other Guide Map category. Most of the interconnection route falls within this category. State policies regarding rural lands seek to discourage structural development forms and intensities that exceed carrying capacities for on-site water supply and sewage disposal. Rural Land uses must be consistent with their adjacent rural character or conservation areas. Uses that cannot provide this consistency are more appropriately located in Rural Community Centers.

3.1.2 Regional Land Use

The Central Naugatuck Valley Region encompasses 311 square miles in west-central Connecticut. The City of Waterbury is the economic and cultural center for the region. The twelve surrounding communities of the region include Cheshire, Prospect, Wolcott, Naugatuck, Beacon Falls, Oxford, Southbury, Middlebury, Woodbury, Middlebury, Watertown, Bethlehem, and Thomaston. The region is within the Boston-Washington corridor, one of the highest populated and developed corridors in the United States.

During the nineteenth century, major industrial enterprises developed in Waterbury, Naugatuck, and Thomaston, aided by the area's mechanical ingenuity and the waterpower provided by the Naugatuck River. The area became a national leader in the manufacturing of brass and brass related products such as clocks, buttons, munitions and machines by the time of the Civil War. The economic growth of the region's industrial centers, supported by the agricultural productivity of the surrounding towns, brought prosperity to the area.

Subsequent to World War II, the Region has become more economically diversified, aiding in the dispersal of population and employment. Although this dispersal continues today and will continue into the foreseeable future, Waterbury is still considered the social, cultural, economic, employment, retail, and institutional center of the region.

According to the Central Naugatuck Valley Conservation and Development Plan published in 1998, the region had 67,773 acres (33.8%) of developed or committed land. Agricultural and water resource lands made up approximately 11.5% of the total land area, leaving approximately 54% as vacant or remaining potential land.

Growth in the Central Naugatuck Valley Region was more than twice as fast in outlying communities (13%) as it was in Waterbury (6%) or in the state as a whole (6%) during the 1980s. While the outlying communities have been heralded for their rural character, the changing form of the region has reduced the amount of vacant land. As previously mentioned in chapter one of this document, The Regional Plan of Conservation and Development will help guide this growth.

3.1.3 Land Uses in the Project Vicinity

Figure 3-2 depicts land use in the vicinity of the interconnection. The western section of the proposed interconnection route runs directly through the center of the Town of Middlebury. This area contains the central Town Green, several municipal buildings, a private girl's school, and several churches. The eastern section of the proposed interconnection traverses a rural residential area which is predominately wooded open space with residences sparsely scattered throughout.

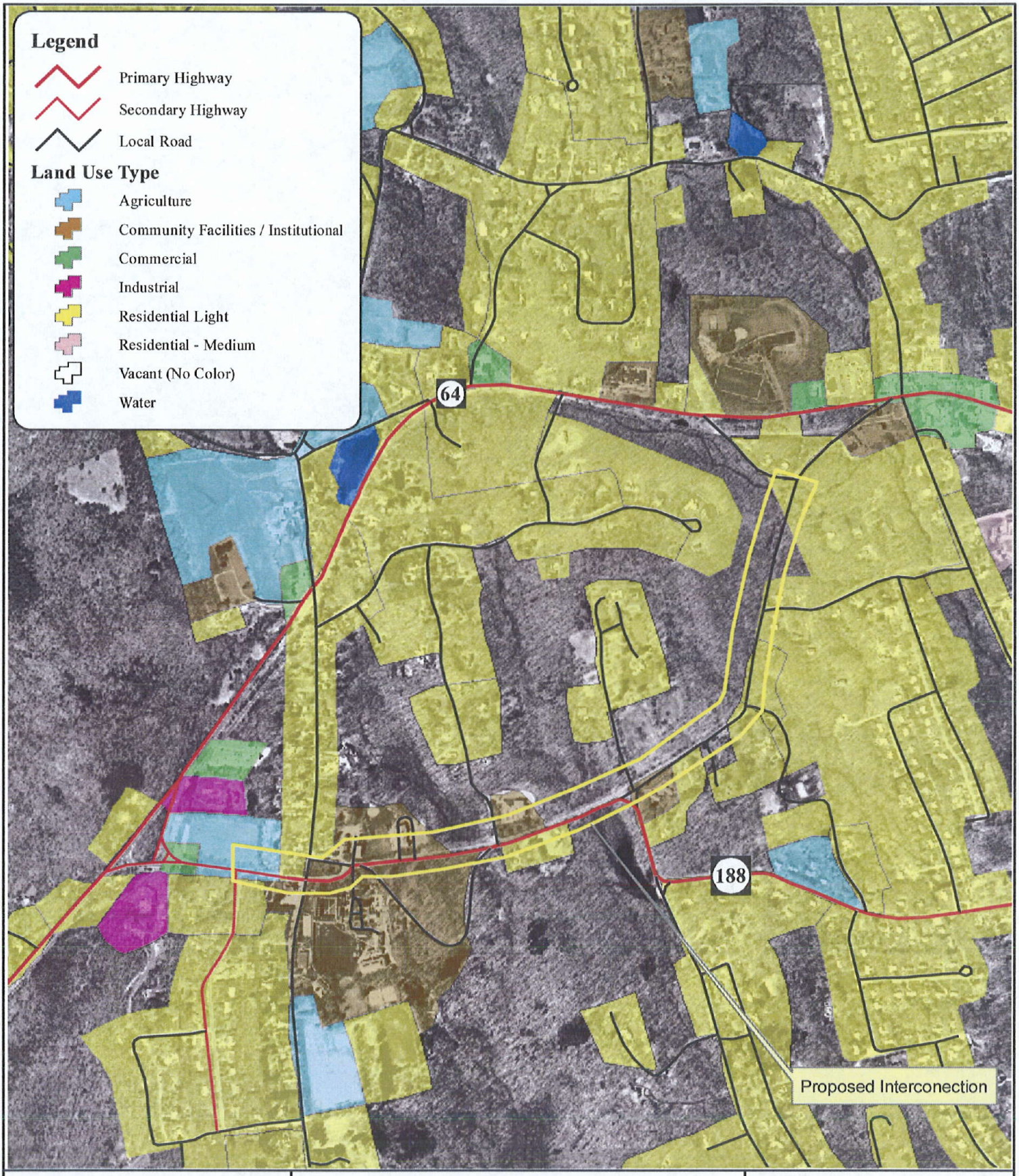
3.1.4 Zoning

The Town of Middlebury's local zoning regulations were reviewed to ensure the project is consistent with these regulations. Figure 3-3 is a graphical depiction of the zoning classifications abutting the project area. The interconnection is located in land areas designated as Residential Districts R40 and R80. According to Section 21 of the Town of Middlebury's Zoning Regulations, the following are considered to be permitted uses in residential zones: a single detached dwelling unit for one family; a professional office in a dwelling unit; home occupations in a dwelling unit; the renting of a dwelling unit, schools, parks, playgrounds, open space lands, farms, and to a more limited extent a garden center, greenhouse, nursery, or landscape service.

Table 3-1 outlines the acreages necessary for specific development within the Town of Middlebury as noted in the respective zoning regulations.

Table 3-1
Town of Middlebury Residential Districts Lot Area Standards

Zoning Designation	Minimum Lot Area
R40	40,000 sf (.92 ac)
R80	80,000 sf (1.84 ac)



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Land Uses in Project Vicinity

LOCATION: Middlebury, CT

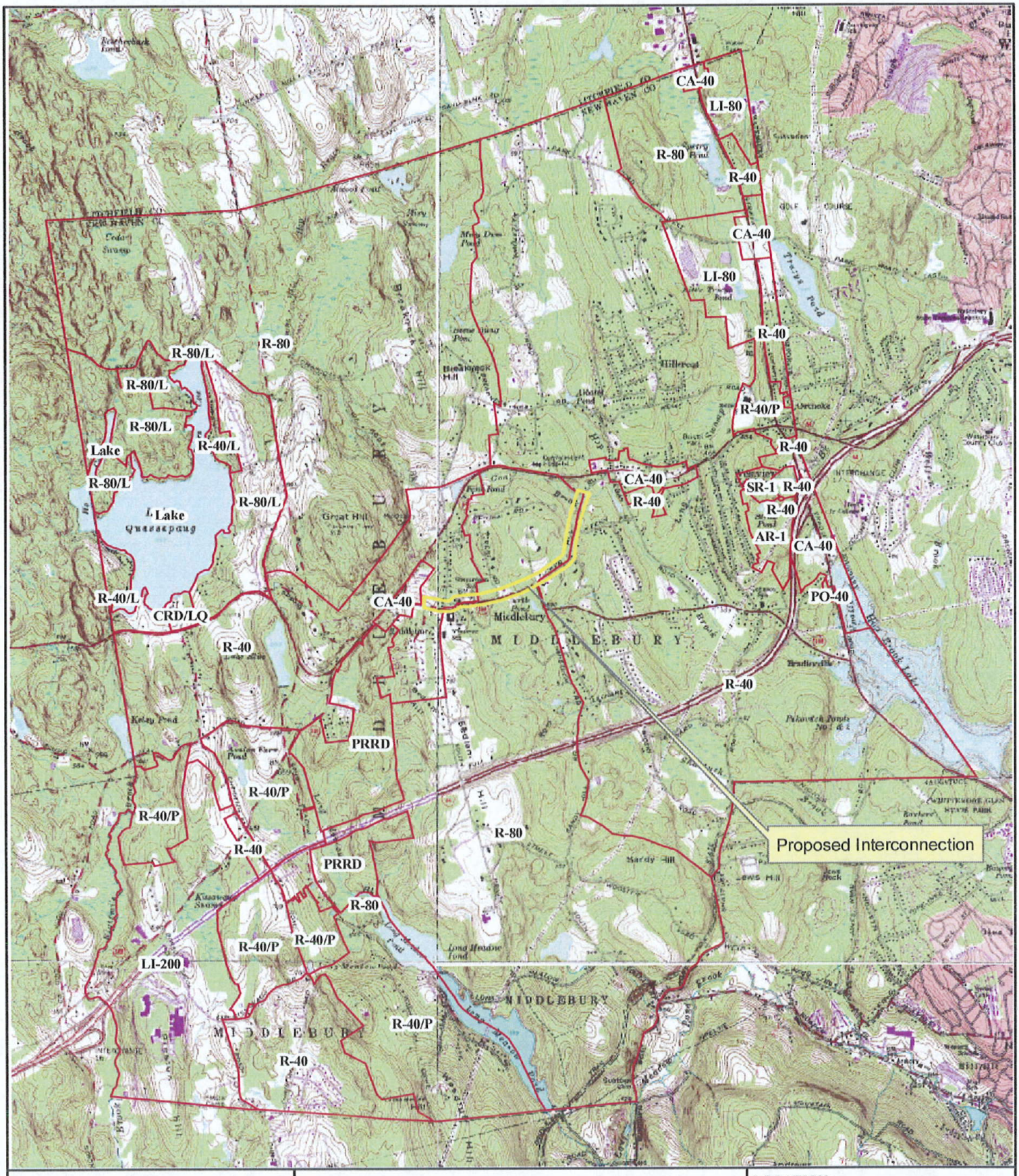
MMI#: 1573-22-1
MXD: H:\3-2-LU.mxd
SOURCE: COGCNV, DEP; Aerials 2004 CLEAR

N

Environmental Impact Evaluation: Middlebury Interconnection

DATE: Dec. 2007
SCALE: 1" = 1000'

SHEET: Figure 3-2



Engineering, Landscape Architecture and Environmental Science MILONE & MACBROOM® 99 Realty Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax: (203) 272-9733 www.miloneandmacbroom.com	**Zoning Designations**		LOCATION: **Middlebury, CT**	
	MMI#: 1573-22-1 MXD: H:\3-3-Zoning.mxd SOURCE: DEP Bulletin No.40	N **Environmental Impact Evaluation: Middlebury Interconnection**	DATE: Dec. 2006 SCALE: 1" = 3,500'	SHEET: **Figure 3-3**

3.2 Socioeconomics

The following information regarding demographics, employment, and tax base has been obtained from the Town of Middlebury Plan of Conservation and Development, regional documents, census information and statistics, Council of Governments of Central Naugatuck Valley (COGCNV) publications as well as data obtained from the Town of Middlebury Assessors Office and field investigations. This discussion is intended to provide an overall background of the demographic make-up of the Town of Middlebury and the project area.

3.2.1 Demographics

The Town of Middlebury was incorporated in October of 1807. Its name is derived from its location six miles from the centers of Southbury, Woodbury, and Waterbury. Middlebury's growth and development has been closely linked to that of Waterbury and the success of the local and regional industry. Middlebury, like the region in general, experienced a slower growth rate in the 1990s and 2000s than in the 1970s and 1980s. This trend is consistent with the State of Connecticut during the same period of time.

While the population increased by only 5% from 1990 to 2000, the housing stock rose by 7% over this same period of time. The household size decreased from 2.73 persons in 1990 to 2.66 in 2000, a common trend in Connecticut in recent years. Tables 3-2 and 3-3 present demographic data for the Town.

TABLE 3-2
Historic Population in Middlebury (1950 – 2005)

Year	Population	% Change
1950	3,318	
1960	4,785	44%
1970	5,542	16%
1980	5,995	8%
1990	6,145	3%
2000	6,451	5%
2005	6,974	7%

Source: U.S. Census, Town of Middlebury Plan of Conservation and Development

TABLE 3-3
Town of Middlebury Demographics

	1990 Census	2000 Census	%Change
Population	6,145	6,451	5%
Households	2,227	2,398	7%
Household Size	2.73	2.66	-3%

Source: U.S. Census, Town of Middlebury Plan of Conservation and Development, COGCNV 2005 Profile

3.2.2 Employment

The Town of Middlebury is located within the Central Naugatuck Valley labor market. The region's labor force in 2005 totaled 139,644 persons, with 6.8% of the labor force unemployed as summarized on Table 3-4. Unemployment was highest in Waterbury (9.2%), followed by Thomaston (5.5%) and Naugatuck (5.4%) Middlebury had a labor force of 3,561 persons with a 4.4% unemployment rate.

The development strengths of the region have been identified by the COGCNV as its prime location and transportation infrastructure, its core of skilled production workers and its reputation for manufacturing excellence. Other development strengths of the region include its availability of labor and employment support services, the competitive banking environment, an interest from state government, and the relatively low cost position in the real estate market compared to other locations in the northeast.

The COGCNV has noted in its development strategies the need to foster the ideal of the region as an international center of the technology-based precision manufacturing industry. The Town is influenced by the economic development occurring along the I-84 corridor, however its proximity to employment opportunities to the south (Bridgeport and New Haven areas), northeast (Hartford), and west (Danbury) make it a popular "commuting community" for residents who travel to work.

TABLE 3-4
Employment by Civilian Labor Force for the Central Naugatuck Valley Region (CNVR) Local Market Area - 2003 Annual Average

Town - Local Market Area	Labor Force	Employment	Percent of Labor Force
CNVR	139,644	130,120	
Beacon Falls	3,031	2,847	2.0%
Bethlehem	2,022	1,936	1.3%
Cheshire	14,769	14,272	10.2%
Middlebury	3,561	3,403	2.4%
Naugatuck	17,074	15,848	11.3%
Oxford	5,557	5,251	3.8%
Prospect	4,977	4,699	3.4%
Southbury	7,588	7,231	5.2%
Thomaston	4,283	3,986	2.9%
Waterbury	53,591	48,684	35%
Watertown	12,151	11,453	8.2%
Wolcott	8,721	8,222	5.9%
Woodbury	5,350	5,135	3.7%

Source: COGCNV Economic Profile, June 2005

3.3 Community Facilities and Services

The following information relative to education, health care, public safety, emergency services, and parks and recreation was taken in part from the Town of Middlebury Plan of Conservation and Development and the Middlebury Town Guide of March 2004. Personal telephone interviews and on-line research have been conducted to update and verify this information, which will serve (in part) as the basis for evaluation of potential impacts as presented in Section 4 of this document.

3.3.1 Education

The Town of Middlebury is part of the Region 15 Public School District that also includes the Town of Southbury. Middlebury houses two elementary schools, the Middlebury and Long Meadow Elementary Schools (grades K-5) and one middle school, the Memorial Middle School (grades 6-8). High School age students attend the Pomperaug High School located in Southbury, Connecticut. Pomperaug High School is approximately 3.5 miles from the project area.

The Westover School is also located in Middlebury. Westover is a girl's boarding and day school for grades 9 through 12. The school is located directly adjacent to the project area. Westover maintains its own community water system which provides water to the school and some nearby municipal buildings. The interconnection will provide the

Westover system with emergency backup water and allow the system to focus on serving on-campus customers.

3.3.2 Public Safety and Emergency Services

The Town of Middlebury provides a variety of police, fire and emergency services in an effort to reduce the loss of life and property and protect the public's safety. The Town of Middlebury Police Department headquarters is located on Southford Road. The Department consists of 10 full-time officers, one part-time officer, and one physician. The Town of Middlebury Fire Department, located on Tucker Hill Road, consists of 83 volunteer firefighters. EMT and ambulance services are also provided by the fire department. Nineteen volunteers have the required emergency medical technician certification and are supplemented by an auxiliary of 16 EMTs/MRT's responding only to ambulance calls.

3.3.3 Parks and Recreation

The town offers recreational programs for children and adults throughout the year. The town maintains three parks:

- Ledgewood Memorial Park is located on Route 64. The park features a playground, picnic area, soccer field, jogging track, tennis court, basketball court, street hockey court, softball field, pavilion with bathroom facilities, and the town's Veterans Memorial. Ledgewood Park will be serviced by the project.

- Meadowview Park is located on Route 188. The park offers horse-shoe pits, a softball field, a soccer field, bocce courts, a fishing pond, an area for inline skating, a large tot lot, and a pavilion with bathroom facilities.

- The final town maintained park is Bristol Park, located on Route 64. The park is an open area offering picnic tables, hiking, and a mapped trail guide.

From late spring through early fall, the town also offers the Middlebury Recreation Area, located on Lake Quassapaug. The area features a beach, tennis and basketball courts, a boat launch, a picnic area, horseshoe pits, and bocce courts.

The town also maintains an extensive trail system referred to as the Greenway. The trails may be used for walking, jogging or biking. Motorized vehicles are forbidden on the trail system.

The town owns two little league fields located opposite Lake Quassy Amusement Park, and a softball field on Route 188 located behind the Shepardson Community Building.

3.4 Aesthetic/Visual Resources

The proposed interconnection runs approximately 6,400 linear feet along Route 188 and Tucker Hill Road. The proposed route travels through Middlebury's Town Green and Village Center. The Village Center includes Town Hall, Westover School, several churches, the Town Library, and the Shepardson Community building. The route then extends into a rural residential neighborhood before finally ending at approximately its intersection with Goat Brook. The majority of the land that does not house a structure is comprised of wooded lots and open fields. The route comes into contact with five designated wetland areas. The two most defined areas are Goat Brook and Turtle Pond.

3.5 Public Utilities and Services

Existing utilities are described in the narrative below. This inventory provides a baseline against which to measure impacts of alternatives, as presented in Section 4.5 of this document.

3.5.1 Public Water Supply

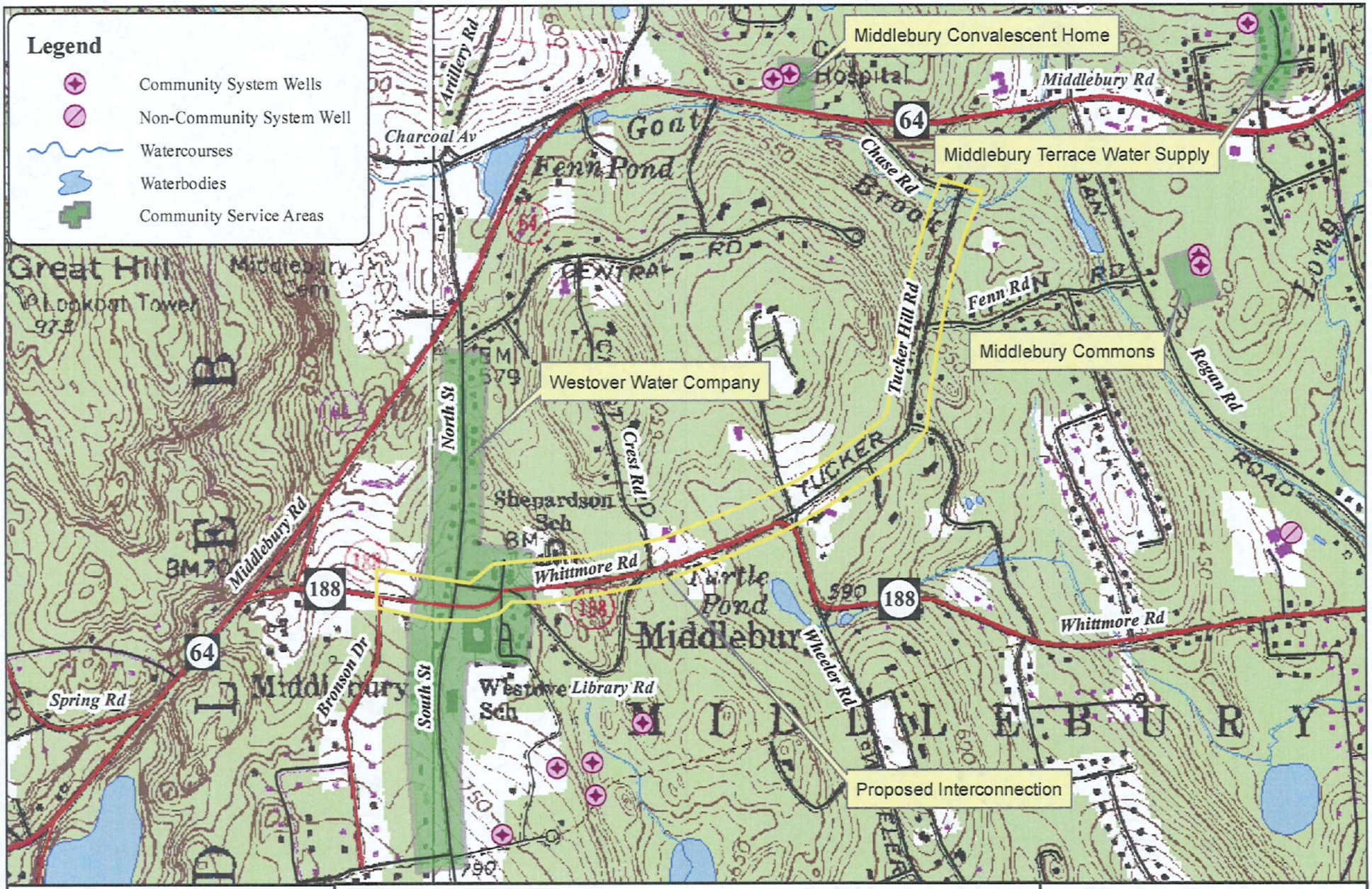
Heritage Village Water Company

The southwestern portion of the Town of Middlebury is serviced by the Heritage Village Water Company. HVWC is headquartered in Southbury, Connecticut and was originally chartered to serve an adult condominium community in Southbury (see figure 3-4). However, with requests for water service from industrial and commercial entities in Middlebury and Oxford, the company extended its service.

Source of Supply

The HVWC is supplied solely by five wells located along the Pomperaug River near the Dolce Heritage Inn and golf course in Heritage Village. The aquifer is composed of stratified drift (a mix of sand, gravel, silt and clay) and covers an area of approximately 18 square miles, extending from the Housatonic River northward into central Woodbury.

Wells H-1, H-2, and H-3 are located to the south and west of the river. Wells H-1 and H-2 were installed in 1966 to serve Heritage Village, with Well H-3 added in 1972 to accommodate additional demand. All three wells are 10-inch diameter wells ranging in depth from 63 to 69 feet. HVWC is authorized by the DEP via a diversion registration to withdraw up to 850 gpm (gallons per minute) or 1.224 mgd (million gallons per day) from the three wells combined.



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Community Water Systems

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\3-4-WaterSys.mxd
Source: CT DPH, CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Nov. 2006

Scale: 1" = 1,000'

Sheet: Figure 3-4

Wells H-4 and H-5 are 12 inches in diameter and range in depth from 61 to 68 feet. These wells were installed in 1970 and 1971 respectively and were intended to serve the Middlebury/Oxford system. The wells have a total diversion registration of 575 gpm or 0.828 mgd.

All five wells are connected to a common distribution system and are sequentially set to respond to system demand. The average combined production from the five wells from 1997 through 2002 was 0.926 mgd.

The system's unrestricted safe yield stands at 2.822 mgd, and the approved safe yield stands at 2.052 mgd, with the three replacement wells online.

Available Water Supply

Available water is defined as the maximum amount of water a company can dependably supply from its active, approved sources, taking into account hydraulic, treatment, permit, and/or other limitations. Quantities of available water are assessed based on 24-hour and 18-hour pumping days. For systems utilizing one or more ground water sources, available supply is also calculated with the largest yielding well source off-line. These supply quantities are compared to system demand in order to assess each system's ability to satisfy various demands over the 50 year planning horizon and plan for additional supply development needs.

From 1997 to 2002, HVWC replaced three wells and upgraded pumps. The estimated available water is 1,425 gpm (2.052 mgd), thereby matching the registered safe yield.

Water Storage Facilities

HVWC has two distribution storage tanks, one in Heritage Village and one in Middlebury. The Heritage Village tank stores one million gallons, of which 625,000 gallons are usable. The Middlebury tank stores 1.2 million gallons, entirely usable, at an overflow elevation of 867 feet.

Margin of Safety

Water demands are typically reported as Average Day Demand (ADD), Maximum Month Average Day Demand (MMADD), and Peak Day Demand (PDD). The margin of safety is defined as the dimensionless ratio of available supply over demand. The following calculations represent the existing margin of safety for the Heritage Water Company. According to DPUC docket 05-11-06, the demands reported in the year 2004 were 0.994 mgd (ADD) and 1.797 mgd (PDD).

1. Margin of Safety to meet Average Day Demand

$$M.O.S. = \frac{\text{Supply}}{\text{Demand}} = \frac{2.052 \text{ MGD}}{0.994 \text{ MGD}} = 2.06$$

2. Margin of Safety to meet Peak Day Demand

$$M.O.S. = \frac{\text{Supply}}{\text{Demand}} = \frac{2.052 \text{ MGD}}{1.797 \text{ MGD}} = 1.14$$

3. Margin of Safety to meet Maximum Month Demand

$$M.O.S. = \frac{\text{Supply}}{\text{Demand}} = \frac{2.052 \text{ MGD}}{1.306 \text{ MGD}} = 1.57$$

DPUC recommends a 15% margin of safety (i.e. ratio of 1.15). The HVWC system currently fails to meet that recommendation during peak day demands. The system has sufficient capacity to meet average day demand through the 50-year planning period but the 5, 20, and 50-year peak-day demands result in projected margins of safety of 1.07, 0.98, and 0.87 respectively indicating that peak day water demands are projected to exceed the capacity of current supplies as early as 2009. The system also fails to meet the recommended margin of safety for the maximum month demand during the 50-year planning period. The computed margin of safety for this period is 1.10.

The Connecticut Water Company

The Central System of the Naugatuck Region of The Connecticut Water Company serves portions of the Towns of Beacon Falls, Bethany, Prospect, Naugatuck, Middlebury, and Waterbury (see figure 3-4). Two CWC systems currently operate in Middlebury. These are the main system, supplied by interconnections with Waterbury and the Naugatuck system; and the Heritage-Middlebury system in the Bronson Drive area, supplied by a single interconnection with HVWC.

Sources of Supply

Supply for the Central System is provided by seven active surface water reservoirs, two active wellfields, two surface water diversions, and two interconnections. An additional surface water diversion and interconnection are available for emergency use only.

The supply sources consist of the Long Hill/Twitchell, Moody/Straitsville, Mulberry, and Candee Reservoir Systems. The Long Hill and Moody Reservoirs are the system's primary storage reservoirs, with supply distributed through the Twitchell and Straitsville Reservoirs, respectively. As necessary, Long Hill Reservoir supply is augmented by

water pumped from Beacon Valley Brook to the Twitchell distribution reservoir, while surface water collected from the Hopkins Pool watershed is diverted to the Mulberry Reservoir. Upper and Lower Candee Reservoir supply combine with Mulberry raw water for treatment at the Stewart treatment plant. During emergency conditions only, water is pumped from Meshaddock Brook to the Mulberry high service area.

The Indian Field Wells No. 1 and 2 and Marks Brook Wells No. 1 and 2 are active groundwater sources for the Central System.

Available Water Supply

Available water is defined as the maximum amount of water a company can dependably supply from its active, approved sources, taking into account hydraulic, treatment, permit and/or other limitations. Water obtained through interconnections is generally not included as available water, unless reliable delivery is assured by contract.

Historical and projected ADD, MMADD, and PDD for the Central System are listed in Table 3-5. Historic data are not available for the Waterbury-Middlebury or Heritage-Middlebury systems. Demands realized over the most recent five years are averaged and used as the basis for future projections, with the historical ratios of MMADD and PDD to ADD remaining constant for demand projection purposes. ADD growth is estimated based on historical growth, known projects in the service area having significant demand consequences, or other factors, and generally ranges from 0.25 percent for small satellite systems to 1.0 percent for large systems. System demand includes water consumption for residential, commercial, industrial and public use, and non-revenue water losses.

TABLE 3-5
CWC Available Water Supply (MGD)

Source	24 Hr Pumping Day	18 Hr Pumping Day	Largest Well Off-Line 24 Hr Pumping Day
Stewart WTP	6.00	3.60	3.60
Marks Brook Well Field			
Well 1	0.29	0.22	0.00
Well 2	0.20	0.15	0.20
Subtotal	0.49	0.37	0.20
Indian Field Well Field			
Well 1	0.21	0.16	0.21
Well 2	0.21	0.16	0.21
Subtotal	0.42	0.32	0.42
Interconnections	0.00	0.00	0.30 (1)
Total Available Supply	**6.91**	**4.29**	**4.52**
(1) Emergency Interconnection			

Margin of Safety

Margins of Safety were calculated for the Central System and summarized in Table 3-6. Values are obtained by dividing available water by demand and shown as decimal equivalents, whereby demands in excess of available water result in numbers less than 1.00 and demands less than available water generate numbers greater than 1.00.

A safe yield of 3.6 MGD was calculated for surface supplies. Because available supply exceeds system demand at this time, normal system operation does not maximize the diversion of water from Beacon Valley Brook. A second calculation excluding the Brook diversion was performed, resulting in a safe yield of 3.3 mgd. Should system demand approach available supply, the Beacon Valley Brook diversion would be operated in accordance with previously developed procedures (i.e. waters would be diverted whenever Long Hill Reservoir levels dropped one foot or greater below spillway elevation; pumping capacities would be adjusted based on stream flow; and a minimum flow of 0.25 MGD would be maintained downstream of the diversion). Such operational procedures would be implemented when a 15% margin of safety between demand and the available supply without the diversion was no longer realized.

In the Central System, supply is currently adequate for the 20 year planning period. Prior to 2050, however, additional supply will be needed to maintain an adequate margin of safety for average day and maximum month average day demands purposes. Absent additional supply, maximum month average day demand is projected to equal the system's 18 hour available supply sometime around the end of the fifty year planning period. Additional supply is not needed for peak day purposes.

In the Waterbury-Middlebury and Heritage-Middlebury systems, available supply is sufficient to meet all projected water demands throughout the entire 50 year planning period.

TABLE 3-6
CWC Demand/Margin of Safety

Historical Production (MGD)						Available Supply (MGD)		
						4.29	4.29	6.91
Year	ADD	MMADD	MDD	MMADD/ADD	MDD/ADD	MOS ADD, 18 hr	MOS MMADD, 18hr	MOS MDD, 24hr
2000	2.76	3.10	4.24	1.12	1.54	1.55	1.38	1.63
2001	2.70	3.08	4.07	1.14	1.51	1.59	1.39	1.70
2002	2.72	3.42	3.87	1.26	1.42	1.58	1.25	1.79
2003	2.80	3.05	3.54	1.09	1.26	1.53	1.41	1.95
2004	2.86	3.23	3.82	1.13	1.34	1.50	1.33	1.81
5 yr Mean	2.77	3.18	3.91	1.15	1.41	1.55	1.35	1.77
MAX.	2.86	3.42	4.24			1.50	1.25	1.63
Projected Demand (MGD)								
Year	ADD	MMADD	MDD	MMADD/ADD	MDD/ADD	MOS ADD, 18hr	MOS MMAD, 18hr	MOS MDD 24hr
2009	2.78	3.20	3.93	1.15	1.41	1.54	1.34	1.76
2020	2.99	3.44	4.23	1.15	1.41	1.43	1.25	1.63
2050	3.83	4.39	5.40	1.15	1.41	1.12	0.98	1.28

Westover School Water Company

The Westover School water company serves the school campus as well as some neighboring residences and municipal buildings located in the village center (see figure 3-4).

Sources of Supply

Supply is provided by five wells. The wells are located on easterly side of the campus, south of Route 188 and east of South Street.

Available Water Supply

Available water is defined as the maximum amount of water a company can dependably supply from its active, approved sources, taking into account hydraulic, treatment, permit and/or other limitations. Water obtained through interconnections is generally not included as available water, unless reliable delivery is assured by contract. In the case of the Westover School water system this amount is 49,900 gallons/day.

Water Storage Facilities

Westover School has a 300,000 gallon, gravity feed atmospheric storage system. The average system pressure is 70 psi.

Margin of Safety

Margin of safety is determined by dividing the available supply by the demand on the system. Table 3-7 summarizes the different scenarios and different margins of safety associated with each. When the school is in session the average daily demand on the system is 27,000 gallons per day. When school is out of session the demand is reduced to 12,000 gallons per day. The system provides water to 36 services not associated with the school. These services result in a demand of 8,000 gallons per day. The calculated safe yield for the system is 54.9 gpm.

Table 3-7
Westover School Demand/Margin of Safety

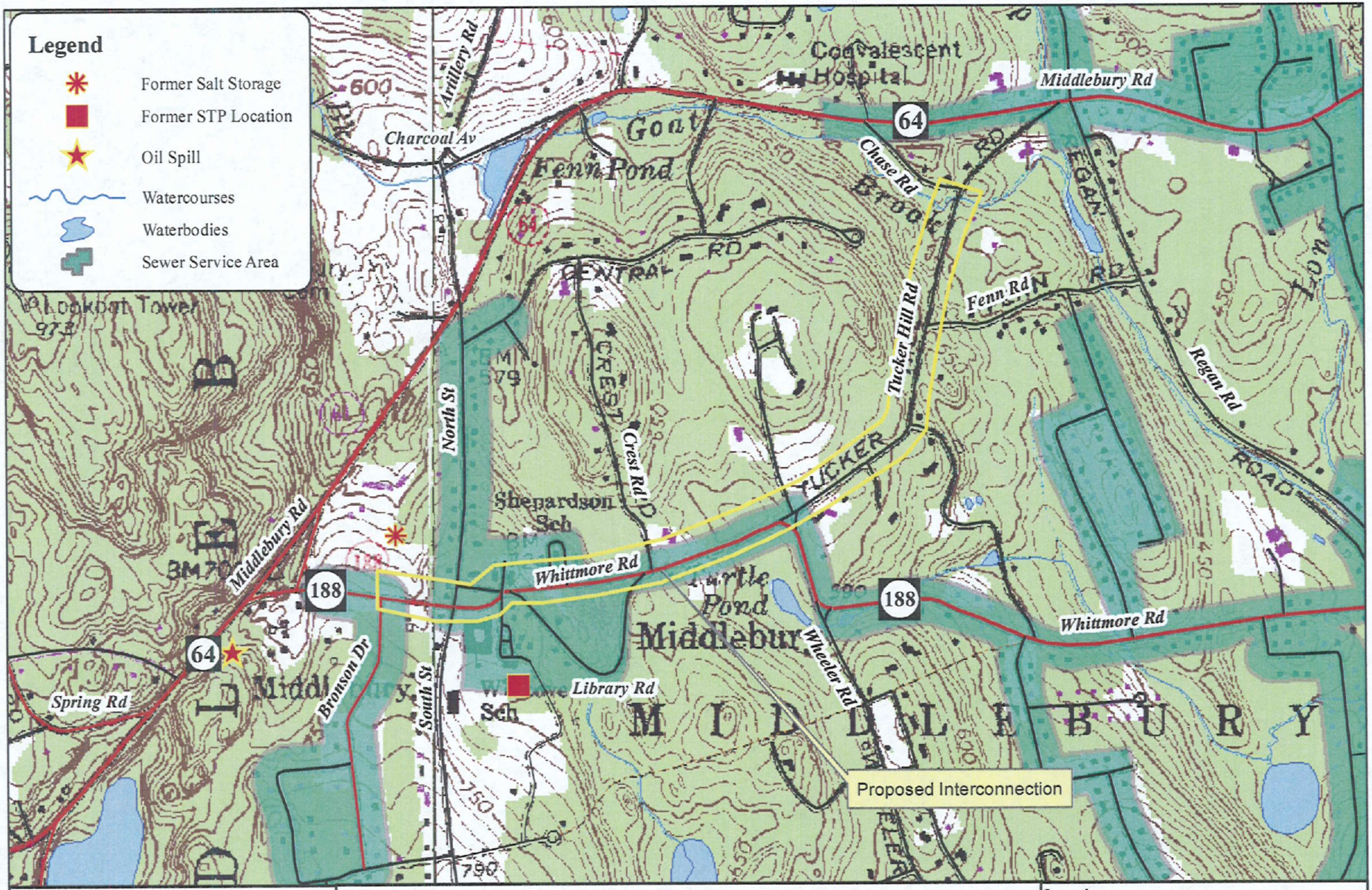
Scenario	Supply (gpd)	Demand (gpd)	Margin of Safety
School in session	49,900	27,000	1.85
School out of session	49,900	12,000	4.16
School in session (not including off-campus user	49,900	19,000	2.63
School out of session (not including off-campus user	49,900	4,000	12.48

Other Small Public Water Systems within the Project Area

The public water system associated with the Town library will be impacted by the project. The existing well will be formally abandoned once public water is made available. As noted earlier, public water is currently being provided to Ledgewood Park and the Middlebury Convalescent home, which previously maintained separate water systems.

3.5.2 Sanitary Sewer

Sanitary sewer service to the project area is provided by the Town of Middlebury Water Pollution Control Authority as depicted in Figure 3-5.



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Existing Sewer Service and Inactive Leachate Locations

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\3-5-Sewer.mxd
Source: CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: Figure 3-5

An 8-inch pipe runs in a westerly direction away from the project area, from the intersection of Bronson Drive and Route 188 toward Store Road. Another 8-inch pipe runs along Route 188 from the Shepardson Community building to the intersection of Route 188 and Tucker Hill Road and then continues along Route 188.

3.5.3 Stormwater System

Approximately 17 four-foot by three-foot catch basins are located along the interconnection route. A combined system is not used and all basins are directed to nearby outlets. Several outlet pipes can be also be seen along the route. One such outlet daylights into the open field owned by the Middlebury land trust near Benson Road; another daylights near the sharp corner of Tucker Hill Road.

3.5.4 Electric/Energy

Electric service is provided by Connecticut Light & Power via overhead lines. Electric service runs along Route 188 in a west-east orientation and along Tucker Hill Road in a south-north orientation.

3.5.5 Gas

Natural Gas is not available along Tucker Hill Road or this section of Route 188 (known as Whittemore Road). Yankee Gas provides service in other areas of the Town of Middlebury.

3.5.6 Telephone

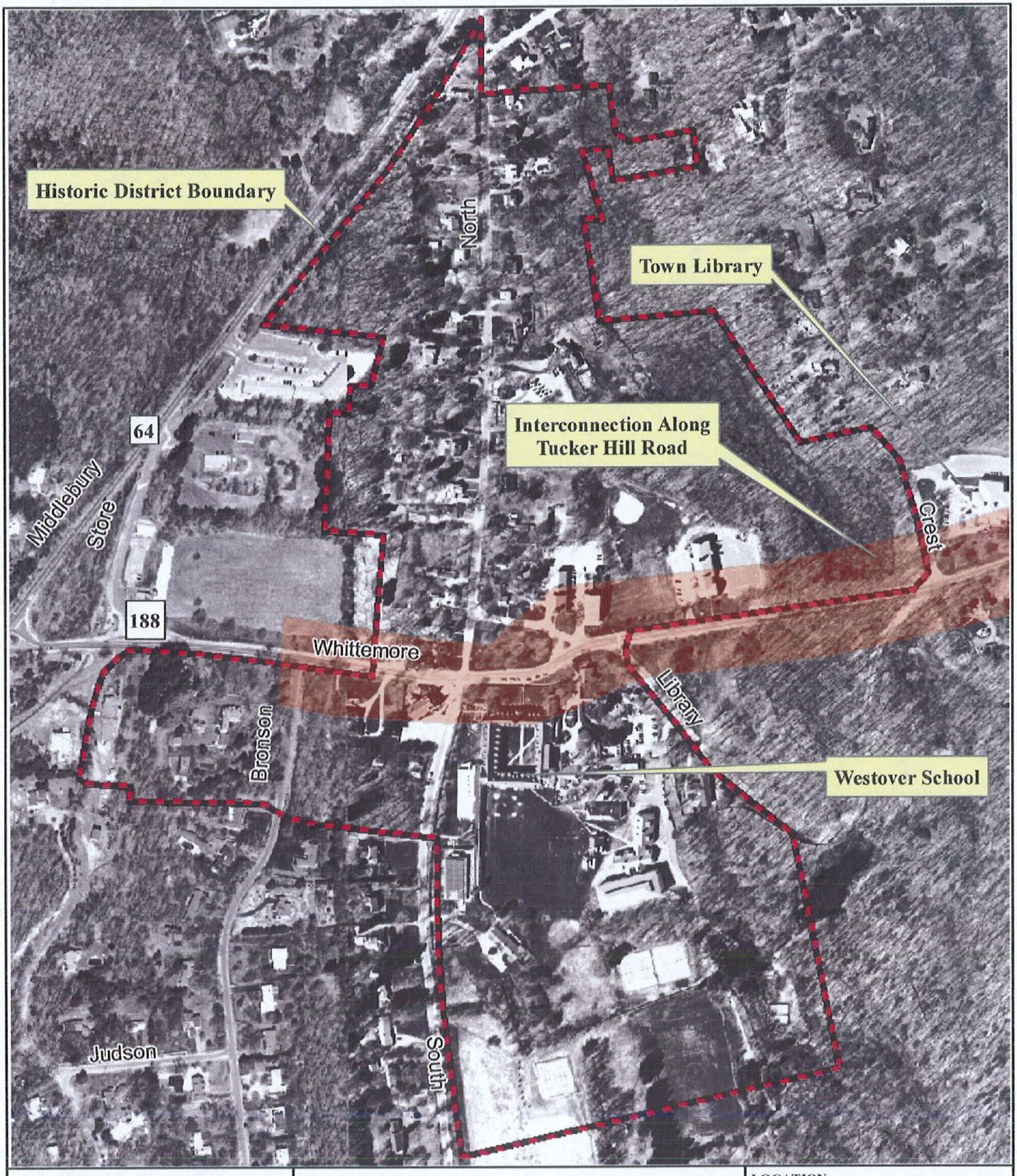
Telephone service to the project area is provided by AT&T/Southern New England Telephone Company (SNET) via overhead lines.

3.5.7 Cable

Cable television service to The Town of Middlebury is provided by Telemedia via overhead lines.

3.6 Cultural Resources

In May of 1986, the Town of Middlebury was awarded a National Register of Historic Places Certificate, thereby establishing the Middlebury Center Historic District (MCHD). The boundaries of this district are depicted on Figure 3-6. Route 188, the preferred route for the interconnection, travels directly through the Historic District.



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Middlebury Center Historic District

LOCATION: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\3-6-Historical.mxd
SOURCE: Town of Middlebury; Aerials: 2004 CLEAR

N

Environmental Impact Evaluation for Middlebury Interconnection

DATE: Dec. 2007
SCALE: 1" = 400'

SHEET: **Figure 3-6**

The MCHD comprises approximately 103 acres and contains 50 principal structures. Of these, three do not contribute to the district because they are less than fifty years old. The MCHD is located on a plateau 700 feet above sea level and is approximately 3.5 miles southwest of Waterbury.

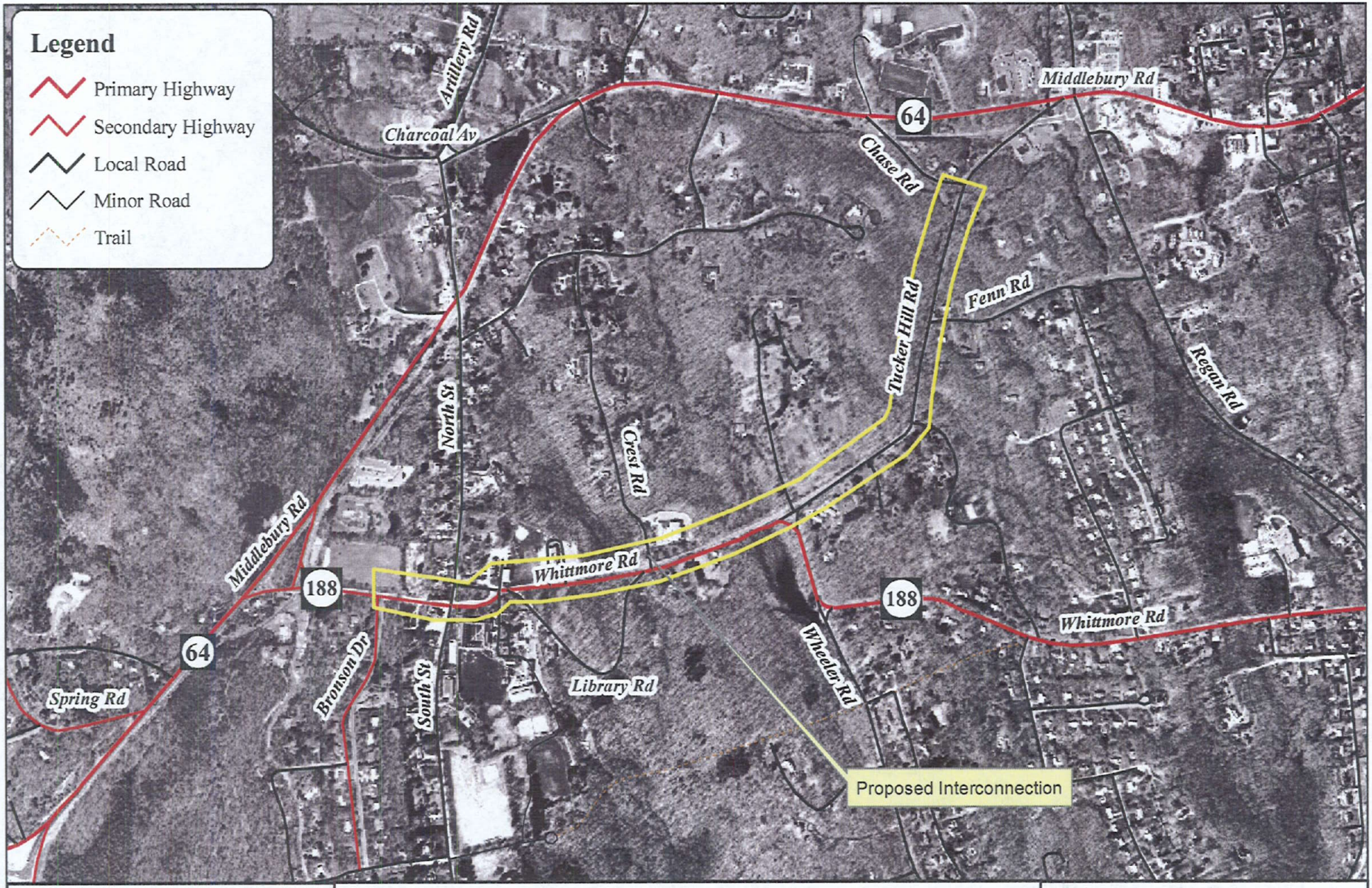
The Historic focus of the Town of Middlebury and hence the Historic District is the 2/3-acre Center Green. The community's churches, schools, public buildings and library were built around this green since the late 18th century. The most significant structures are the Methodist, Catholic, and Congregational churches, Town Hall, the old town library, Shepardson Community Building (originally a school), and Westover School, which alone contributes 20 structures to the district.

3.7 Traffic and Parking

The interconnection will be installed along the shoulders of Connecticut State Route 188, also known as Whittemore Road, and the Town-maintained Tucker Hill Road, both depicted on Figure 3-7. The project will extend from the intersection Chase Road and Tucker Hill Road and run in a southwesterly direction to the intersection of Route 188 and Bronson Drive. The following describes roadway and traffic characteristics for each of the above-mentioned roads:

- Route 188 (Whittemore Road) between Bronson Drive and Tucker Hill Road is a two-way State roadway with a posted speed limit of 30 miles per hour (mph). The roadway is classified as a collector street along this stretch the due to low traffic volumes and two severe turns. Collector streets "collect" traffic from neighborhoods and bring it to the arterial network. Solid yellow lines divide the two directions of travel.

- Tucker Hill Road between its intersection with Route 188 and Chase Road is a two-way Town roadway with a posted speed limit of 25 mph. The roadway is classified as a local residential street. Local residential streets serve only the small number of houses. They are not designed to carry through traffic. Solid yellow lines divide the two directions of travel.



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Roadway Network

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\3-7-Roads.mxd
Source: CT DEP; Aerials 2004 CLEAR

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: **Figure 3-7**

3.8 Water Resources

3.8.1 Surface Water Resources

Primarily two watercourses/water bodies are associated with the site, as depicted on Figure 3-8. Goat Brook is a perennial watercourse that flows easterly near the intersection of Tucker Hill Road and Chase Road. After intersecting the project route it continues traveling in an easterly direction before flowing into Hop Brook. Hop Brook flows into Hop Brook Lake and then continues until eventually emptying into the Naugatuck River approximately 1.5 miles from the project area.

Two unnamed wetland systems bisect the project route and eventually drain into Turtle Pond. The first is located at the easterly intersection of Route 188 and Library Road. The second stream bisects the project at approximately the intersection of Route 188 and Tucker Hill Road. Turtle Pond drains through an unnamed stream before finally emptying into the Naugatuck River.

An unnamed intermittent stream intersects the proposed route between Bronson Drive and South Street.

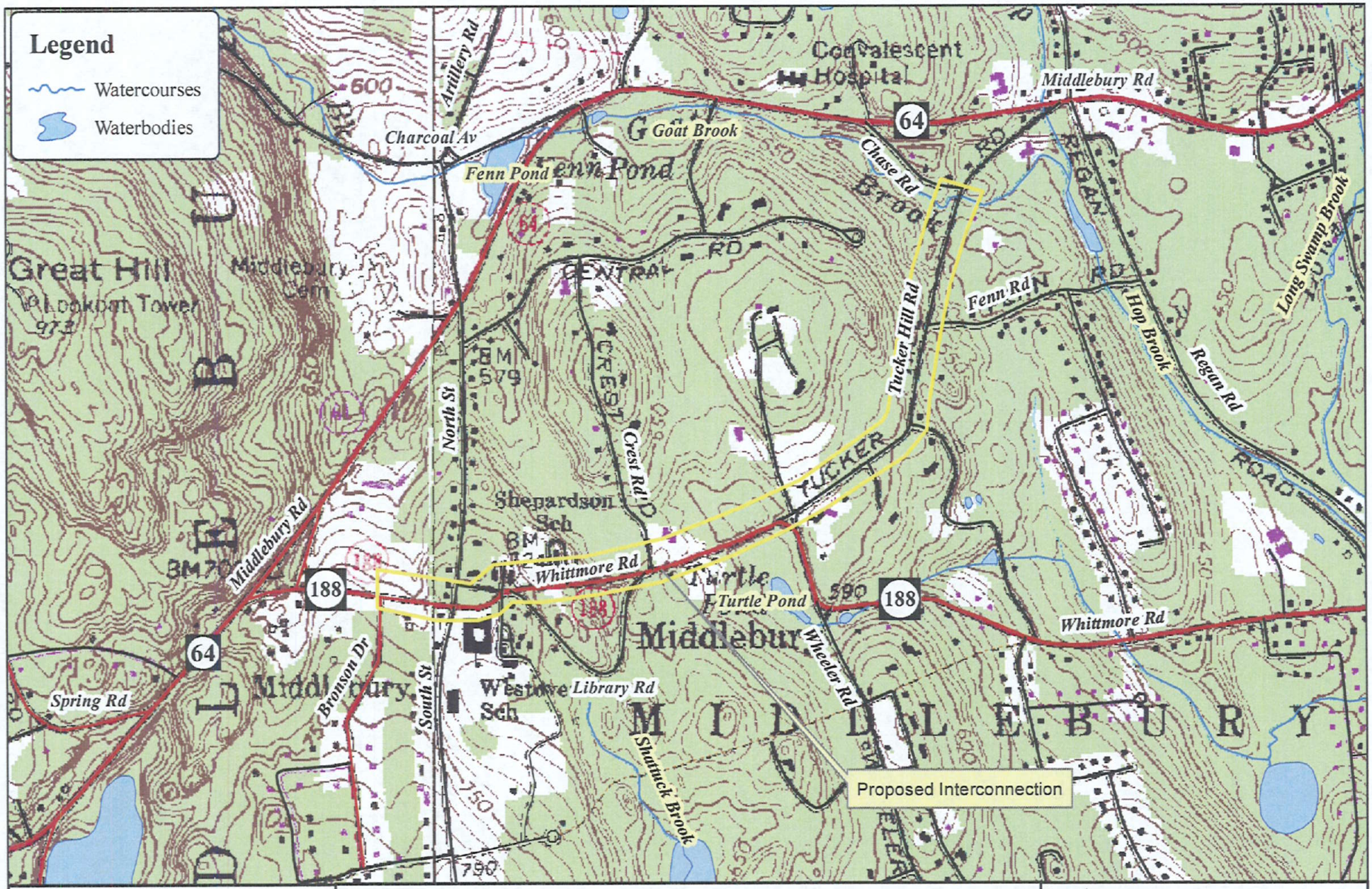
3.8.2 Water Quality

Surface Water

The State of Connecticut has set forth a policy for the management of water quality through the Water Quality Standards and Criteria, wherein criteria and a classification system are applied to all surface water and ground water resources in the state. These classifications establish designated uses for surface and ground water resources and identify the criteria necessary to support those uses. Criteria have been established with respect to desirable use, anti-degradation, allowable types of discharges, waste assimilation, and a variety of physical and chemical constituents.

According to Connecticut's Water Quality Standards, Goat Brook is a Class A surface water resource. Designated uses of Class A surface waters include potential drinking water supply, recreation, fish and wildlife habitat, agricultural and industrial water supply, and other legitimate uses, including navigation.

Federal law prohibits a state from diminishing surface water quality classifications or standards in order to accommodate new or increased wastewater discharges or land use practices which impact a particular watercourse. Therefore, the state must attain and maintain the most sensitive existing and potential use for a respective water body.



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Hydrology

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\3-8-Hydro.mxd
Source: CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: **Figure 3-8**

Ground Water

Ground water beneath the project area has been designated as Class GA. Class GA ground waters are classified as those within the area of influence of private and potential public water supply wells. They are presumed suitable for direct human consumption without need for treatment. The goal for Class GA groundwater is to maintain drinking water quality.

3.9 Flood Hazard Potential

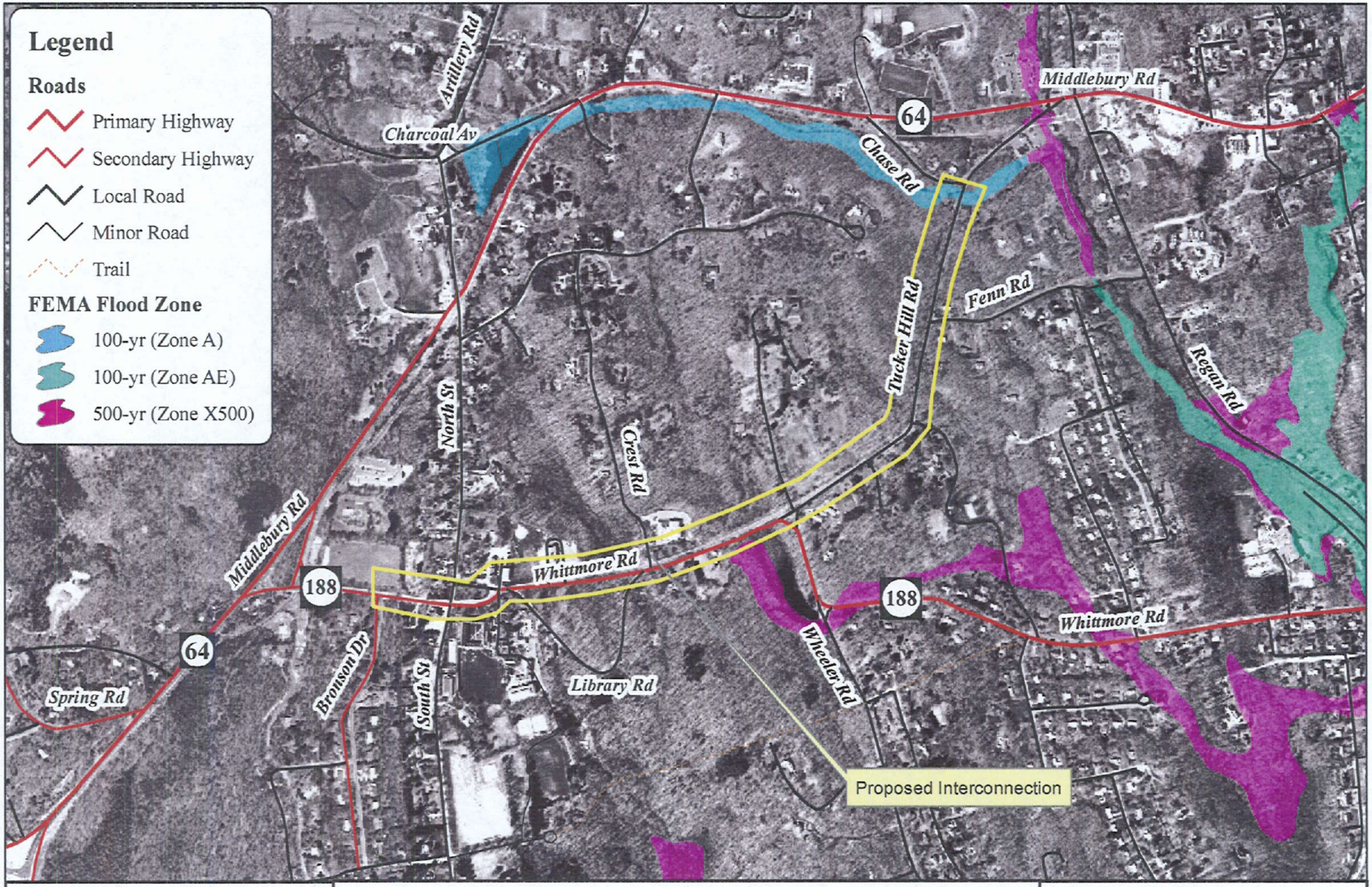
A small portion of Tucker Hill Road, approximately 166 linear feet, falls within the 100-year floodplain of Goat Brook as delineated by FEMA Flood Insurance Maps. This is shown graphically in Figure 3-9. A zone A designation indicates that the area is subject to a 100-year storm event. The base flood elevation and flood hazard factors have not been determined for this area. The remainder of the project area is not characterized by 100-year floodplains.

3.10 Biological Environment

3.10.1 Fisheries

In 1991 the Fisheries Division of the Connecticut DEP collected extensive fish population data on the Lower Housatonic River and Naugatuck River watersheds. This is documented in *A Survey of Connecticut Streams and Rivers- Lower Housatonic River and Naugatuck River Drainages* (Hagstrom, Humphreys, and Hyatt, Connecticut DEP, Fisheries Division, 1992). While DEP did not collect data directly from Goat Brook, DEP did collect data from Hop Brook, the watercourse that receives water from Goat Brook. Assuming there are no impairments, such as a dam or exposed culverts that would in some way restrict the travel of the fish population, one could assume the fish population identified within Hop Brook could also be found in Goat Brook. A visual inspection could not locate any such impairment.

DEP collected data in Hop Brook on July 9, 1991 at a site parallel to 284 Regan Road in Middlebury. Table 3-7 is a list of species sampled in the brook on that date.



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FEMA Flood Hazard Zones

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\3-9-FEMA.mxd
Source: CT DEP, Aerials 2004 CLEAR

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: Figure 3-9

Table 3-8
Sampled Fish Species

Common Name	Scientific Name	Population Size (Number/Hectare)
Brook trout	Salvelinus fontinalis	125
Blacknose dace	Rhinichthys atratulus	9,969
Brown trout	Salmo trutta	307
Creek chub	Semotilus atromaculatus	587
Common shiner	Luxilus cornutus	419
----	Unknown cyprinid	573
Longnose dace	Rhinichthys cataractae	8,165
Pumpkinseed sunfish	Lepomis gibbosus	13
Tessellated darter	Etheostoma olmstedi	335
White shiner	Catostomus commersoni	810

3.10.2 Vegetation

Because the regional water supply interconnection will run in the existing roads and their respective shoulders over its entire length, the project area can be characterized as developed or disturbed lands. The upland (non-wetland) areas adjacent to the project can be characterized predominately as deciduous forest. Deciduous forest includes typical Southern New England mixed hardwood forest and scrub areas with patches of dense woody vegetation and undifferentiated grasses. Upland Forests also include isolated low density residential areas. Table 3-9 lists information obtained from *New England Wildlife: Habitat, Natural History, and Distribution* published in 1995 detailing the dominant vegetation species generally found in upland forested areas.

Table 3-9
Dominant Plant Species List for Upland Forest

Scientific Name	Common Name
Trees	
Acer rubrum	red maple
Acer saccharum	sugar maple
Betula lenta	black birch
Carya glabra	pignut hickory
Carya ovata	shagbark hickory
Carya tomentosa	mockernut hickory
Prunus serotina	black cherry
Quercus alba	white oak
Quercus coccinea	scarlet oak
Quercur velutina	Black oak
Quercus rubra	red oak
Sassafras albidum	sassafras

Table 3-9 (Continued)
Dominant Plant Species List for Upland Forest

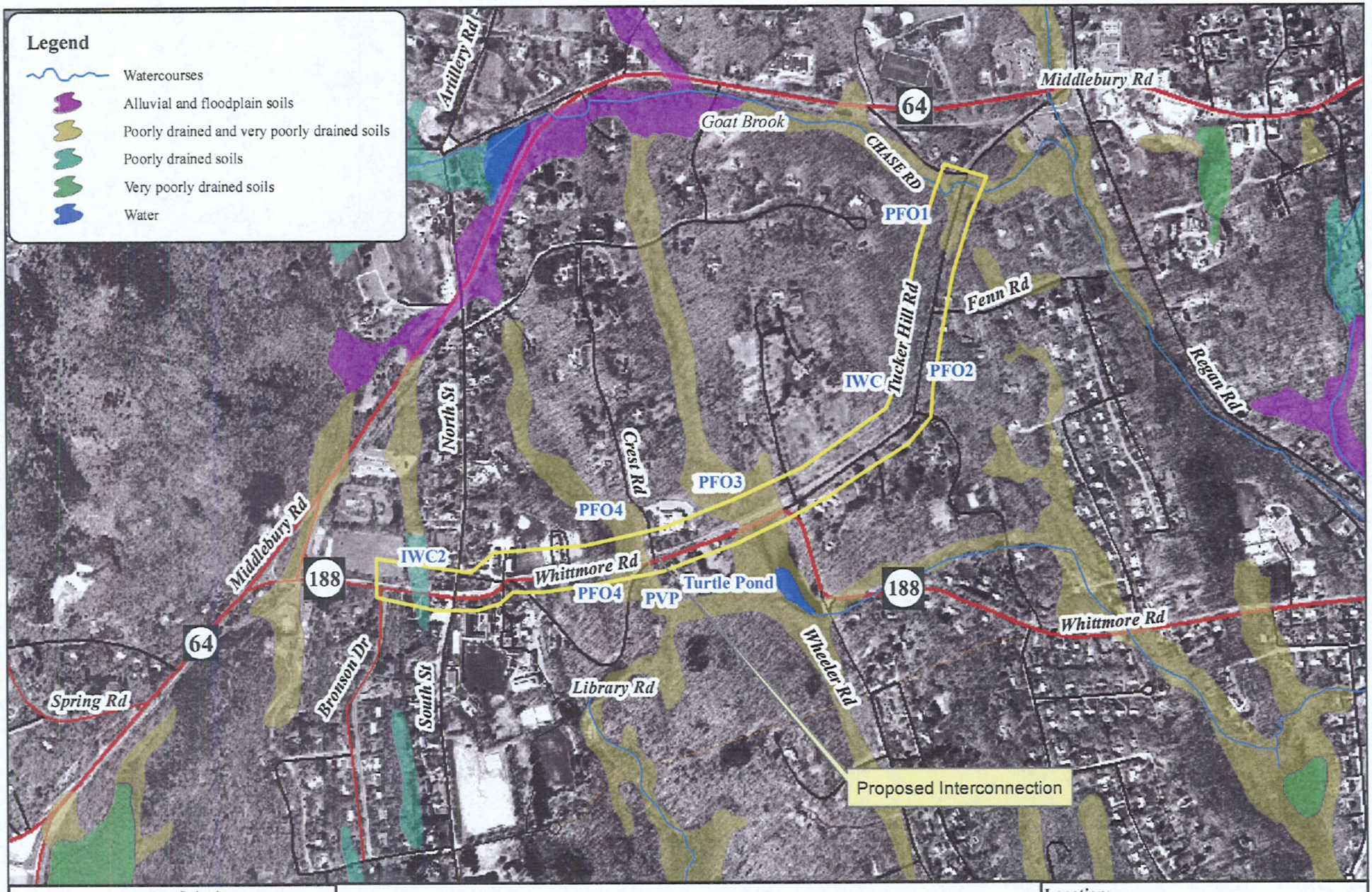
Scientific Name	Common Name
Shrubs and Vines	
Aralia nudicaulis	wild sarsaparilla
Berberis thunbergii	Japanese barberry
Gaylussacia sp.	huckleberry
Hamamelis virginiana	witch hazel
Rosa multiflora	multiflora rose
Rubus sp.	blackberry
Sambucus canadensis	elderberry
Toxicodendron radicans	poison ivy
Vaccinium sp.	lowbush blueberry
Vaccinium recognitum	northern arrowwood
Viburnum acerifolium	maple-leaf viburnum
Herbaceous Plants	
Aster sp.	aster
Lycopodium sp.	club moss
Maianthemum canadense	Canada mayflower
	various fern species

3.10.3 Inland Wetlands

The proposed interconnection route intersects wetland designated areas in five instances as depicted on Figure 3-10. The different wetland classifications along the route, using the Cowardin (1979) system for classification of wetlands and deepwater habitats of the United States, were determined to be Riverine Upper Perennial Rock Bottom/ Unconsolidated Bottom (RUP RB/UB), Palustrine Forested Wetland (PFW), Palustrine Open Water Wetland (POWW), Palustrine Emergent Wetland (PEW), Palustrine Scrub-Shrub Wetland (PSSW), and Intermittent Water Course (IWC).

Riverine Upper Perennial Rock Bottom/ Unconsolidated Bottom

One instance of a RUP RB/UB is located along the preferred interconnection route, at Goat Brook. Goat Brook, a perennial watercourse, is a coldwater fishery habitat with a diverse macroinvertebrate assemblage. The Brook's geomorphology is characterized as riffle-pool-step. This characterization can be best observed east of its intersection with Tucker Hill Road. Goat Brook within the vicinity of the project is underlain by thin till. These deposits are associated with glacial laid deposits from the late Wisconsinan period. The wetlands found along the project reach would also be classified as thin till.



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NRCS Wetlands

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\3-10-Wetlands.mxd
Source: CT DEP; Aerials 2004 CLEAR

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: Figure 3-10

Palustrine Forested Wetland

Four instances of PFW's are located along the preferred interconnection route. The first occurs along Tucker Hill Road near its intersection with Goat Brook and Chase Road (PFW 1). The second occurrence (PFW 2) is again along Tucker Hill Road just south of its intersection with Fenn Road. PFW 3 is found on the North side of Route 188 across from Turtle Pond and the Route 188 intersection with Tucker Hill Road. PFW 4 is located on either side of Route 188 at its eastern most intersection with Library Road.

A potential vernal pool is associated with PFW 4. A vernal pool is defined as a temporary body of water occurring in a shallow depression of natural or human origin that fills during spring rains and snow melt and typically dries up during summer months. Vernal pools support populations of species specially adapted to reproducing in these habitats. Such species may include wood frogs, mole salamanders, fairy shrimp, fingernail clams, and other amphibians, reptiles, and invertebrates. Vernal pools lack breeding populations of fish.

Palustrine Open Water Wetland, Palustrine Emergent Wetland, Palustrine Scrub-shrub Wetland

All three of these classifications are associated with Turtle Pond and its corresponding wetland system. Turtle Pond is located near the intersection of Route 188 and Tucker Hill Road and is classified as a POWW as it is a permanent, shallow, defined water body. At its Northern border, the pond transitions to a PEM and eventually a PSSW.

Intermittent Water Course

Two IWCs are located along the preferred interconnection route. IWC 1 is located along the west side of Tucker Hill Road and is associated with PFO 2. The second IWC (IWC 2) is located intersect Route 188 between Bronson Drive and South Street.

3.10.4 Wildlife

The mix of habitats provided by the forested wetlands, forested uplands, manicured green space, open meadows, trails, and right-of-ways provide structural and floral diversity that is likely to attract a variety of wildlife species. Several habitat features can be found adjacent to the project area that add to its overall value to wildlife. Nevertheless, the fragmented character of the area combined with surrounding land uses result in a habitat that attracts edge-dwelling species while discouraging species typically associated with large stands of unbroken forest.

Table 3-10 is a list of wildlife species that, based on the habitat types present, are likely to occur adjacent to the project site. It should be noted that this list consists of species that have a strong potential to occur near the project area. It is not based on an on-site biological inventory.

Table 3-10
Potential Wildlife Species in the Project Area

Amphibians	marbled salamander (*Ambystoma opacum*) spotted salamander (*Ambystoma maculatum*) northern dusky salamander (*Desmognathus fusco*) redback salamander *(Plethodon cinereus)* eastern American toad *(Bufo americanus)* northern spring peeper (*Hyla crucifer*) gray treefrog (*Hyla versicolor*) wood frog *(Rana sylvatica)*	
Reptiles	eastern box turtle (*Terrapene carolina*) northern brown snake *(Storeria dekayi)* northern redbelly snake *(Storeria occipitomaculata)* eastern garter snake *(Thamnophis sirtalis)* northern ringneck snake (*Diadophis punctatus*) northern black racer *(Coluber constrictor)* black rat snake (*Elaphe obsolete*)	
Birds	red-tailed hawk (*Buteo jamaicensis*) ruffed grouse (*Bonasa umbellus*) wild turkey (*Meleagris gallopavo*) American woodcock (*Scolopax minor*) mourning dove (*Zenaida macroura*) eastern screech owl (*Otus asio*) great horned owl (*Bubo virginianus*) red-bellied woodpecker (*Melanerpes carolinus*) downy woodpecker *(Picoides pubescens)* hairy woodpecker (*Picoides villosus*) northern flicker (*Colaptes auratus*) eastern wood-pewee (*Contopus virens*) great crested flycatcher (*Myiarchus crinitus*) blue jay *(Cyanocitta cristata)* American crow *(Corvus brachyrhynchos)* black-capped chickadee *(Parus atricapillus)* tufted titmouse *(Parus bicolor)* white-breasted nuthatch *(Sitta carolinensis)* brown creeper (*Certhia americana*) Carolina wren (*Thryothorus ludovicianus*) house wren (*Troglodytes aedon*) blue-gray gnatcatcher (*Polioptila caerulea*) veery (*Catharus fuscescens*) wood thrush (*Hylocichla mustelina*) American robin (*Turdus migratorius*) gray catbird (*Dumetella carolinensis*)	northern mockingbird (*Mimus polyglottos*) cedar waxwing (*Bombycilla cedrorum*) white-eyed vireo (*Vireo griseus*) red-eyed vireo *(Vireo olivaceus)* blue-winged warbler (*Vermivora pinus*) chestnut-sided warbler (*Dendroica pennsylvanica*) black and white warbler (*Mniotilta varia*) American redstart (*Setophaga ruticilla*) worm-eating warbler (*Helmitheros vermivorus*) ovenbird (*Seiurus aurocapillus*) northern waterthrush (*Seiurus noveboracensis*) common yellowthroat (*Geothlyois trichas*) scarlet tanager (*Piranga olivacea*) northern cardinal (*Cardinalis cardinalis*) rose-breasted grosbeak (*Pheucticus ludovicianus*) indigo bunting (*Passerina cyanea*) eastern towhee (*Pipilo erthrophthalmus*) American tree sparrow (*Spizella arborea*) chipping sparrow (*Spizella passerina*) field sparrow (*Spizella pusilla*) song sparrow (*Melospiza melodia*) brown-headed cowbird (*Molothrus ater*) Baltimore oriole (*Icterus galbula*) American goldfinch (*Carduelis tristis*) house Sparrow (*Passer domesticus*)

Table 3-10 (Continued)
Potential Wildlife Species in the Project Area

Mammals	Virginia opossum *(Didelphis virginiana)* masked shrew (*Sorex cinereus*) northern short-tailed shrew (*Blarina brevicauda*) little brown myotis (*Myotis lucifugus*) big brown bat (*Eptesicus fuscus*) eastern cottontail (*Sylvilagus floridanus*) New England cottontail (*Sylvilagus transitionalis*) eastern chipmunk (*Tamias striatus*) gray squirrel *(Sciurus carolinensis)*	southern flying squirrel (*Glaucomys volans*) white-footed mouse (*Peromyscus leucopus*) meadow vole (*Microtus pennsylvanicus*) coyote (*Canis latrans*) red fox (*Vulpes vulpes*) raccoon *(Procyon lotor)* striped skunk (*Mephitis mephitis*) white-tailed Deer *(Odocoileus virginianus)*

3.10.5 Threatened, Endangered, and Species of Special Concern

The Connecticut DEP Natural Diversity Data Base (NDDB) was accessed in order to determine if any areas of special concern for endangered and threatened species or significant natural communities exist within the project area. The 2006 NDDB mapping (Figure 3-11) indicates that the project corridor does not likely support threatened or endangered species and is not within an area of special concern.

3.11 Physical Environment

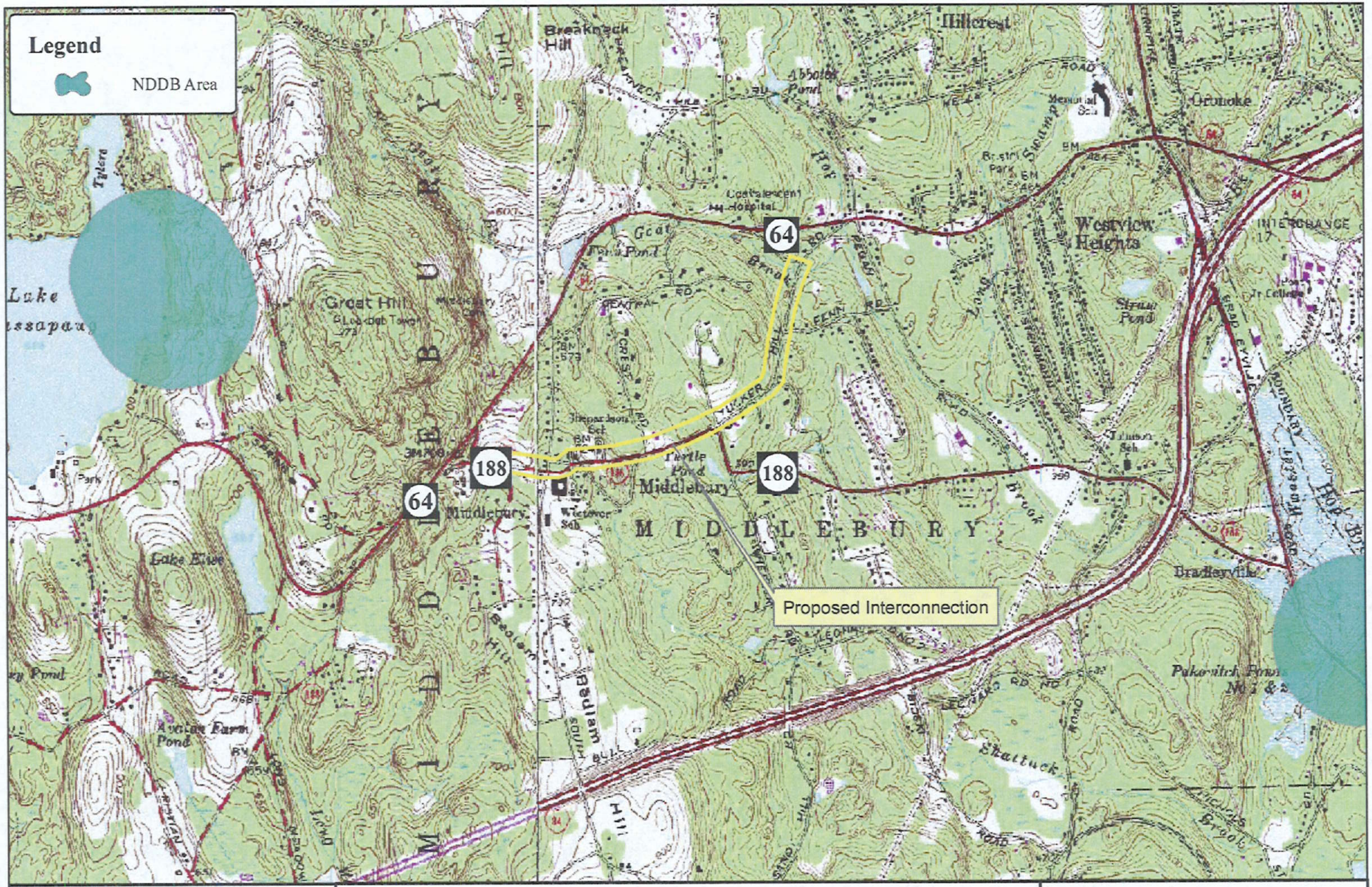
3.11.1 Topography

The project area is located on the Woodbury and Waterbury Quadrangles. Figure 3-12 depicts the proposed interconnection on a topographic base map. The proposed route for the interconnection has an elevation change of approximately 200 feet from approximately 740 feet to 540 feet NGVD.

The Town of Middlebury is geologically located within the crystalline highlands of western Connecticut. The project area's topography is primarily shaped according to the underlying bedrock, composed of metamorphic rock such as gneiss. The overlying glacial till deposits smooth the lines of the hills and valleys.

3.11.2 Bedrock Geology

The bedrock geology underlying the project area (depicted in Figure 3-13) and the surrounding vicinity have been mapped and described in the publications "The Bedrock Geology of the Woodbury Quadrangle" and "The Bedrock Geology of the Waterbury Quadrangle" by Robert M. Gates and Robert M. Gates with Charles W. Martin respectively. Both reports were published by the State Geological and Natural History Survey of Connecticut.



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June 2006 Natural Diversity Database Areas

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\3-11-NDDB.mxd
Source: CT DEP

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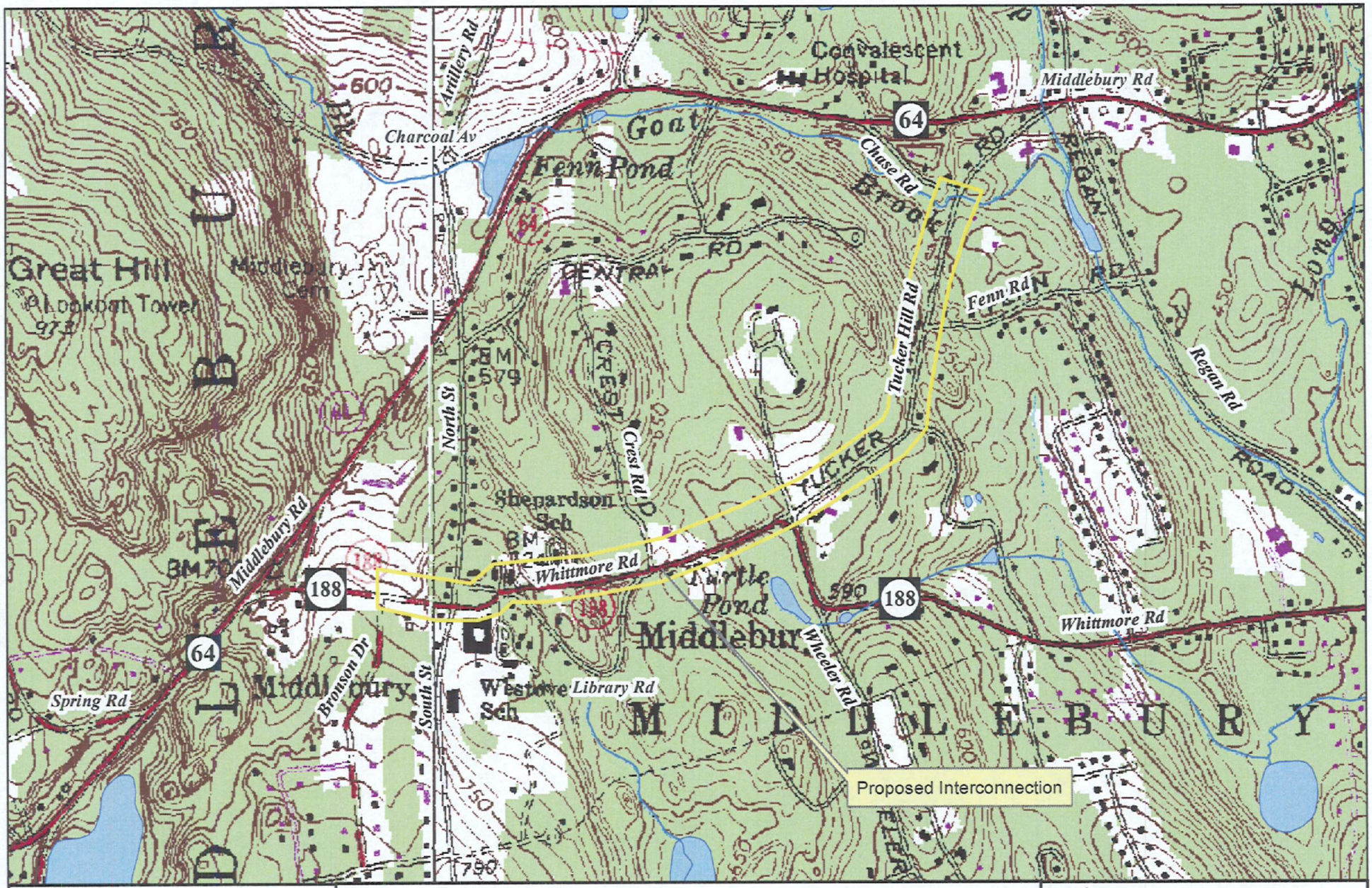
Environmental Impact Evaluation for Middlebury Interconnection

Date: Nov. 2006

Scale: 1" = 2,000'

Sheet: **Figure 3-11**



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Topographic Map

Location: Middlebury, CT

MMI#: 1573-22-1
MXD: H:\3-12-Topo.mxd
Source: CT DEP

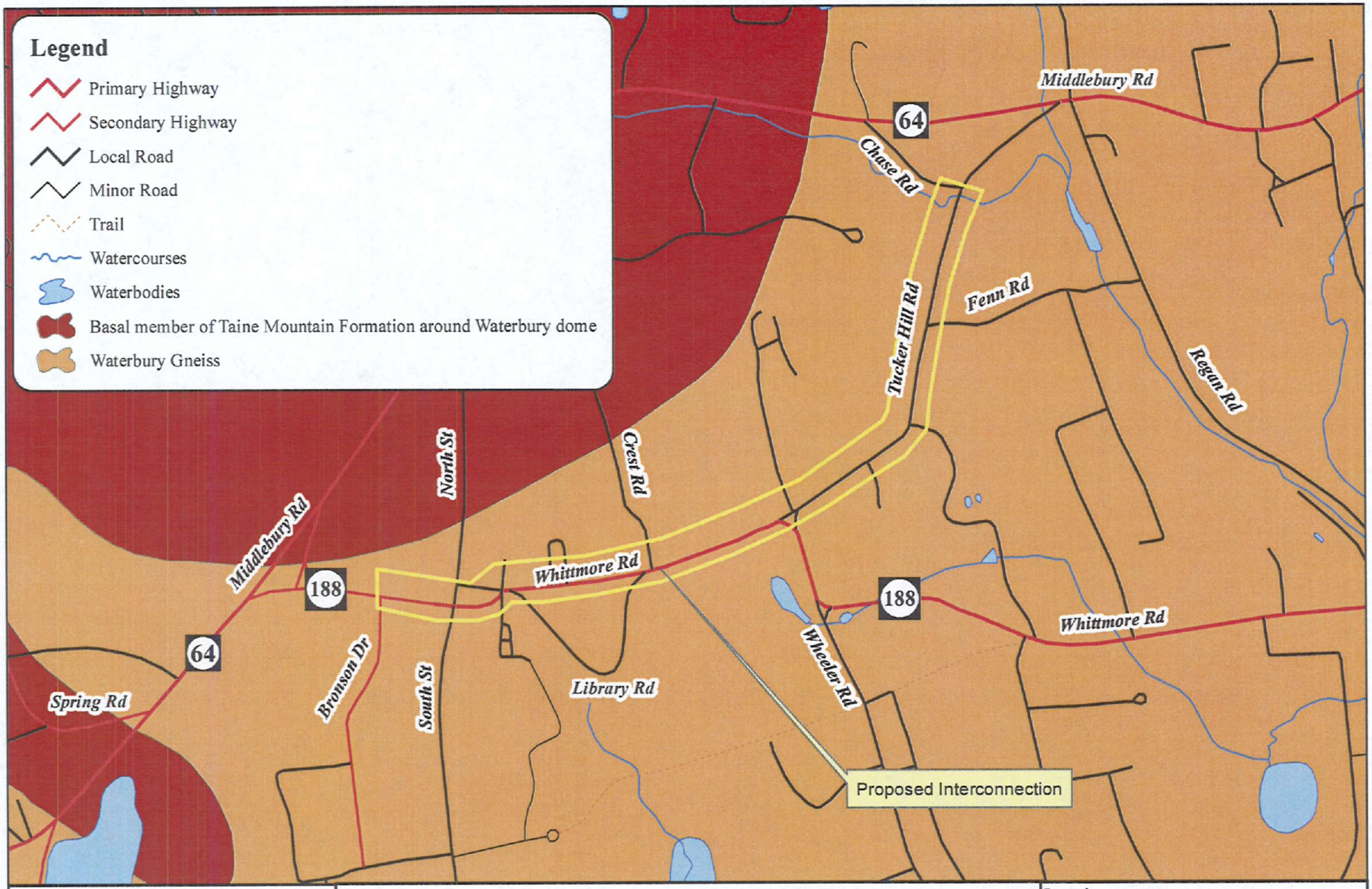
N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Nov. 2006

Scale: 1" = 1,000'

Sheet: Figure 3-12



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Bedrock Geology

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\3-13-Bedrock.mxd
Source: CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 1,000'

Sheet: **Figure 3-13**

The project area is underlain by the Waterbury gneiss, a metaphoric rock complex of Paleozoic, Cambro-Ordovician era. The Waterbury formation consists of a heterogeneous sequence of quartzites and biotite-muscovite schists interbanded with gneiss showing marked alterations of bands of dark and light minerals. The basal member of Taine Mountain Formation around the Waterbury dome is in close proximity to the project area.

3.11.3 Surficial Geology

Figure 3-14 depicts the surficial geology in the project area. According to surficial geology reports for the region, Middlebury is covered with glacial till from the late Wisconsin age. The till represents a compact, non-sorted sediment deposited by glacial ice. Features in the area were made by glacial erosion, resulting in striations and grooves, whaleback knobs, and streamline hills. These features and sediment deposits are the result of the passage of a thick ice sheet, occurring more than 15,000 years ago. The average thickness of till in the area typically does not exceed 20 feet.

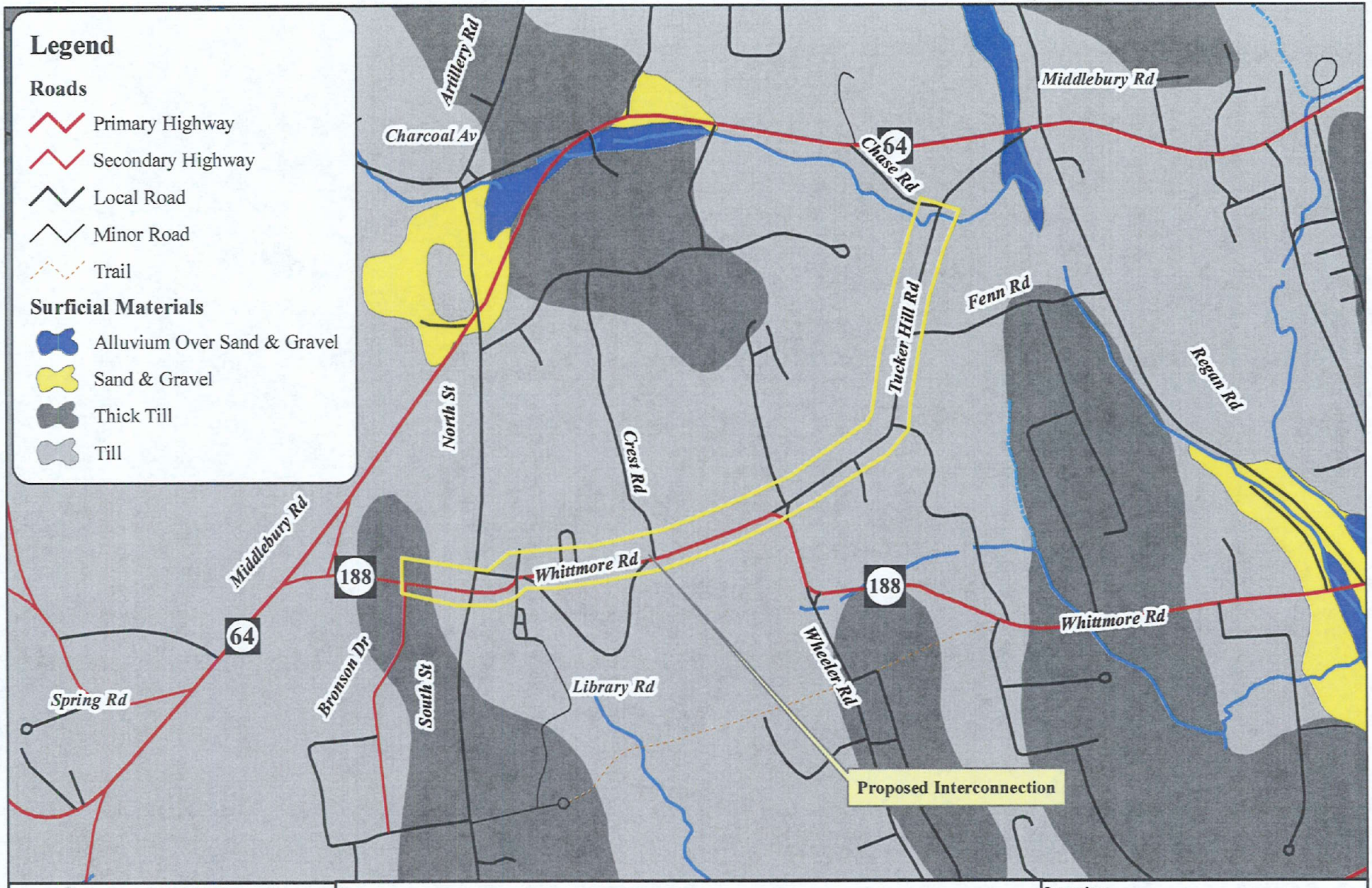
Goat Brook is underlain by thin till within the vicinity of the project. These deposits are associated with glacial laid deposits from the late Wisconsinan period. The wetlands found along the project reach would also be classified as thin till.

3.12 Air Quality

3.12.1 Federal Air Quality Regulations and Criteria

The Federal Clean Air Act was passed by Congress in 1970 and signed into law by former President Nixon. This Act required the EPA to ensure that all Americans have safe air to breathe. The Act requires the EPA to (1) review the public health standards for six major air pollutants every five years; (2) update the standards as necessary to "protect the public health with an adequate margin of safety" based on the most recent studies available and; (3) consider only the public health, not the cost of compliance, when setting air quality standards.

In an effort to achieve the Clean Air Act goals, the EPA promulgated primary and secondary national ambient air quality standards (NAAQS) in 1971 for six pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), and particulate matter smaller than 10 micrometers in diameter (PM_{10}). Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The NAAQS pollutants and standards are listed in Table 3-11.



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Surficial Materials

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\3-14-Surficial.mxd
Source: DEP Bulletin No.40

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Nov. 2006

Scale: 1" = 1,000'

Sheet: **Figure 3-14**

Table 3-11
National Ambient Air Quality Standards

Pollutant	Primary Standards	Averaging Times	Secondary Standards
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour[1]	None
	35 ppm (40 mg/m^3)	1-hour[1]	None
Lead	1.5 µg/m^3	Quarterly Average	Same as Primary
Nitrogen Dioxide	0.053 ppm (100 µg/m^3)	Annual (Arithmetic Mean)	Same as Primary
Particulate Matter (PM_{10})	50 µg/m^3	Annual[2] (Arith. Mean)	Same as Primary
	150 ug/m^3	24-hour[1]	
Particulate Matter ($PM_{2.5}$)	15 µg/m^3	Annual[3] (Arith. Mean)	Same as Primary
	65 ug/m^3	24-hour[4]	
Ozone	0.08 ppm	8-hour[5]	Same as Primary
	0.12 ppm	1-hour[6]	Same as Primary
Sulfur Oxides	0.03 ppm	Annual (Arith. Mean)	-------
	0.14 ppm	24-hour[1]	-------
	-------	3-hour[1]	0.5 ppm (1300 ug/m^3)

[1] Not to be exceeded more than once per year.
[2] To attain this standard, the expected annual arithmetic mean PM10 concentration at each monitor within an area must not exceed 50 ug/m^3.
[3] To attain this standard, the 3-year average of the annual arithmetic mean $PM_{2.5}$ concentrations from single or multiple community-oriented monitors must not exceed 15 ug/m^3.
[4] To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 65 ug/m^3.
[5] To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
[6] (a) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is <= 1.
(b) The 1-hour NAAQS will no longer apply to an area one year after the effective date of the designation of that area for the 8-hour ozone NAAQS.
Source: DEP Bureau of Air Management, 2005

3.12.2 Air Quality Attainment Designations for New Haven County

Project-related air quality impacts are assessed relative to existing ambient air quality and attainment status in the project area. Per the *2005 Connecticut Annual Air Quality Summary,* the current air quality attainment designations for the six criteria pollutants in New Haven County are:

- *CO*: New Haven County, and entire state of Connecticut, is currently designated as attainment for CO.

- *Ozone*: The entire state of Connecticut is designated as non-attainment for the 1-hour ozone standard. New Haven County is classified as "serious non-attainment" for the 1-hour standard. In April of 2004 the EPA determined the entire state of Connecticut

to be in moderate non-attainment for the newer eight-hour ozone NAAQS. The maximum attainment date is projected to be June 2010.

- *Particulate Matter*: EPA has established NAAQS for two size ranges of PM. New Haven County is currently in attainment of PM_{10} (particulate matter with a diameter of 10 microns or less) and $PM_{2.5}$ (particulate matter with a diameter of 2.5 microns or less).

- *NO_2*: The entire state of Connecticut is in attainment for NO_2.

- *Pb*: Exceedances or violations of the quarterly lead (Pb) national standard have not occurred for many years. By the end of 1996, the Connecticut ambient air monitoring program was reduced to one site (Waterbury). In 2002 the Waterbury monitoring site reported a maximum quarterly average Pb concentration of 0.02 ug/m3 (less than 2% of the NAAQS). Monitoring for lead in Connecticut was terminated late in 2002.

- *SO_2*: The entire state of Connecticut is in attainment for SO_2.

3.12.3 Statewide Air Quality Policies and Regulations

The *Conservation and Development Policies Plan for Connecticut* recognizes that Connecticut has seen major improvements in air quality over the past 20 years. However, additional affects of air pollution are being identified, and new concerns are emerging that will require greater control efforts. Balancing air quality gains with the costs of such controls and the ability to provide for economic development is a critical planning concern. Below is a list of the policies and strategies for air quality from the Plan:

- Seek to attain National Ambient Air Quality Standards by the applicable deadlines with emphasis on cost-effective strategies and effective enforcement.

- Develop strategies to achieve and maintain healthy air quality that will enable and foster economic development within the urban areas of the state as designated within this Plan.

- Foster transportation and development plans and projects that promote attainment and maintenance of healthy air.

- Establish and maintain standards that will protect citizens from the dangers of hazardous air pollutants and integrate monitoring and regulation of such pollutants into air quality enforcement activities.

- In order to reduce the risk of global climate change, seek to reduce statewide carbon dioxide emissions to 1990 levels and to reduce further where technically and

economically feasible. Also seek to reduce emissions of other substances that contribute to global warming.

3.13 Noise

Connecticut state policy is to promote an environment free from noise that jeopardizes the health, welfare or quality of life. On a municipal level, any municipality may adopt, amend and enforce a noise control ordinance that may include the following:

- Noise levels that will not be exceeded in specified zones or other designated areas;
- Designation of a noise control officer and the designation of a board or commission to direct such a program;
- Implementation procedures of such a program and the relation of such program to other plans within the jurisdiction of the municipality;
- Procedures for assuring compliance with state and federal noise regulations;
- Noise level restrictions applicable to construction activities, including limitation on on-site hours of operation.

Section 61.3 of the Town of Middlebury's zoning ordinance reads "With the exception of time signals and noise necessarily involved in the construction or demolition of buildings and other structures, no noise shall be transmitted outside the lot where it originates when noise has a decibel level, octave band, intermittence and/or beat frequency which endangers the public health and safety or impairs safety on or the value and reasonable use of any other lot."

3.14 Solid Waste and Hazardous Materials

3.14.1 Solid Waste

According to the *Connecticut Conservation and Development Plan*, Connecticut has put into place most of the components of a new system for the management of municipal solid waste. This system has largely replaced past reliance on landfills, with a new emphasis on reducing the amount of waste generated and on capturing reusable materials and energy before disposal. Waste avoidance, recycling, composting, resource recovery, and properly sited and regulated landfills constitute an integrated system for solid waste management in Connecticut.

The statewide policy on solid waste is to continue the timely planning, financing, construction, and operation of a statewide integrated recycling, composting, resource recovery, and landfill system.

The State of Connecticut passed a mandatory recycling law in 1987 that prohibits glass bottles, cans, and newspapers from being disposed at landfills or at resource recovery facilities. This legislation was specifically designed to reduce Connecticut's solid waste stream by 25%.

In conformance with State regulations, Middlebury has maintained a recycling station, located at its transfer station at 1 Service Road. The station/center is open Monday through Friday from 7:00 am to 2:45 pm and Saturday from 7:30 am to 3:15 pm. Each household or individual must either deliver recyclable materials to the common transfer station or make arrangements with a private hauler for curb-side pick up.

Residents may also dispose of bulky wastes at the transfer station for no cost assuming items do not contain Freon. In the case where Freon is present, a $10 dollar charge applies. Garbage or household waste produced on a daily basis is the residents' responsibility, and is either delivered to the transfer station personally or handled by private vendors.

3.14.2 Hazardous Materials

Hazardous wastes are defined by corrosive, reactive, ignitable, or toxic characteristics that can potentially harm human health or the environment when improperly managed. Hazardous waste generation, treatment, storage, and disposal are regulated by the federal Resource Conservation and Recovery Act.

According to the *Conservation and Development Policies Plan for Connecticut*, common waste streams among the state's hazardous waste generators include heavy metal-bearing sludges, used solvents, and inorganic liquids such as spent acids and caustic solutions. Connecticut generators rely on out-of-state access to disposal capacity because increased federal regulatory requirements imposed in the mid-1980's effectively ended in-surface disposal practices. Previously, industrial wastes were often directly discharged to surface impoundments adjacent to manufacturing plants or disposed in municipal landfills that accepted such wastes.

As in-state disposal options disappeared, exports of hazardous wastes rose from 42,200 tons to 121,000 tons between 1983 and 1989. During the same period generation of recurrent waste, including waste from ongoing production processes, declined from 188,100 tons to 127,000 tons. In addition, one-time waste generation from spill clean-ups and site remediation in the 1980's has slowed as surface impoundments, landfill and

plant closures have been completed. Regional hazardous waste programs are available, for a fee, to residents of the Town.

4.0 IMPACT EVALUATION

Potential impacts have been evaluated for the preferred alternative presented in Section 2.0 of this document. This impact evaluation has been organizationally structured to be compatible with the existing conditions inventory presented in Section 3.0 of this document.

The major concern associated with the interconnection is that induced growth could be promoted and supported as a result of its construction and use. This can be a particularly adverse impact if this growth occurs in areas meant for preservation and conservation, such as those areas where such growth is unsupported by the State Conservation and Development Plan.

The primary importance of any mitigation is to limit the potential for such induced growth. The Town has agreed to adopt more restrictive language within its local Conservation and Development plan and amend its zoning regulations to restrict induced growth in areas where such growth is not consistent with the *Conservation and Development Policies Plan for Connecticut (2004–2009).* Such mitigation is described in Section 5.0. Nevertheless, substantial induced growth is also limited in this area by the existing physical conditions. A large portion along the route is comprised of steep slope areas. Finally, aside from a property owned by Westover School, a parcel large enough to support a large amount of induced growth is not available along the interconnection route.

Induced growth in the other two municipalities served by HVWC (Southbury and Oxford) is not evaluated in this EIE because HVWC already possesses sufficient available supply to meet projected average day demands in its service area. HVWC currently can not meet its peak day demands with the required 15% margin of safety, and the interconnection will allow HVWC to meet these existing peak day demands. The availability of the interconnection alone will not cause or promote growth in Southbury and Oxford.. Furthermore, as noted in section 4.19.8, water transferred through the interconnection will be required to be metered and a diversion permit will be requested for quantities at or above 50,000 gpd that are not otherwise exempt or authorized for emergency purposes. Any such routine use will need to be undertaken in conformance with an application made for the purpose, as well as any conditions established under the permit. Finally, future expansion of the HVWC system would be funded by its customer base, such that any water main installation through a conservation or preservation area would not be funded by State grants or loans.. This is an important distinction and ensures that the focus of this EIE remains on the proposed interconnection through central Middlebury.

4.1 State Policy, Land Use, and Zoning Impacts

Detailed discussions of statewide land use policies and municipal zoning regulations are presented in Section 3.1 of this document. A brief summary is presented below, along with an assessment of the project's consistency with these policies and regulations.

4.1.1 Consistency with the Conservation and Development Policies Plan for Connecticut

Section 16a-31 of the Connecticut General Statutes requires State agencies to be consistent with the *Conservation and Development Policies Plan for Connecticut* when undertaking certain actions, including authorization of any state grant for an amount in excess of $100,000 for the acquisition, development, or improvement of real property. The public water supply system expansion and regional interconnection will receive state funding as described in Section 1.0 of this document. Therefore consistency with the state Plan is evaluated herein. Figures 4-1 through 4-3 and Table 4-1 identify the parcels adjacent to the interconnection route and their respective *Conservation and Development Policies Plan for Connecticut* designation.

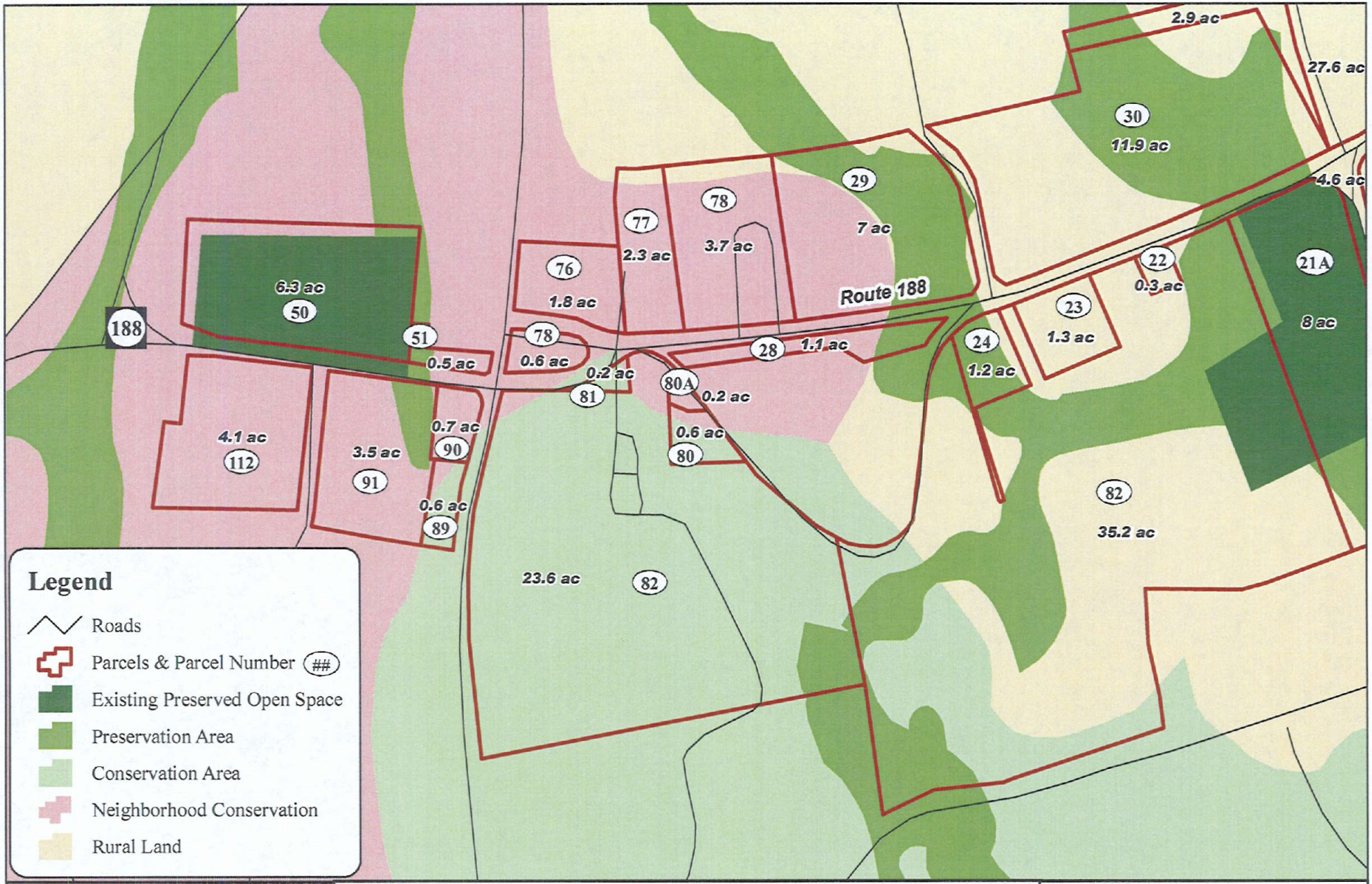
TABLE 4-1
Land use and Conservation and Development Plan Designations

Map ID	Owner of Record	Parcel Size	Road Frontage (LF)	Linear Feet of C/D Plan Designations	Land Use
6-08.112	Julia Keggi	4.10 acres	0	Not Applicable	Residential
6-08.91	Westover School	3.49 acres	339	122 PR 217 NC	Institutional
6-08.90	St John of the Cross Church	0.61 acres	170	170 NC	Religious
6-08.82	Westover School	81.26 acres	746	119 PR 339 NC 288 RR	Institutional
6-08.81	State of Connecticut	0.24 acres	255	21 NC 234 CO	Vacant
6-08.80	Westover School	0.64 acres	0	Not Applicable	Institutional
6-08.80A	Town of Middlebury	0.24 acres	0	Not Applicable	Open Space
6-08.50	Middlebury Land Trust	6.33 acres	300	300 EX	Preserved Open Space
6-08.51	Southeast Corner LTD	0.51 acres	255	71 PR 184 NC	Residential
6-08.79	Congregational Society of Middlebury	0.63 acres	314	314 NC	Village Green

TABLE 4-1 (Continued)
Land use and Conservation and Development Plan Designations

Map ID	Owner of Record	Parcel Size	Road Frontage (LF)	Linear Feet of C/D Plan Designations	Land Use
6-08.76	Middlebury Congregational Church	1.80 acres	158	158 NC	Religious
6-08.77	Town of Middlebury	2.31 acres	181	181 NC	Town Hall
6-08.78	Town of Middlebury	3.68 acres	343	343 NC	Shepardson Community Building
5-06.28	Town of Middlebury	1.13 acres	865	195 PR 675 NC	Vacant
5-06.29	Town of Middlebury	7.00 acres	595	274 PR 297 NC 24 RR	Vacant
5-06.24	St. John of The Cross Church	1.20 acres	166	121 PR 45 RR	Religious
5-06.23	St. John of The Cross Church	1.30 acres	251	251 RR	Religious
5-06.22	Donna Greene	0.29 acres	104	104 RR	Residential
5-06.30	Town of Middlebury	11.89 acres	1123	364 PR 759 RR	Town of Middlebury Library
5-06.21A	Middlebury Land Trust	8.06 acres	381	381 EX	Preserved Open Space
5-06.34	St. George's Church	4.60 acres	513	513 RR	Religious
5-06.33B	Stephen Owens	11.30 acres	505	505 RR	Residential
5-06.32	Richard Ulbrich	16.95 acres	246	246 RR	Residential
5-08.33	Dudley Ashwood	3.0 acres	1	1 RR	Residential
5-08.35	Claire Goss	27.63 acres	961	961 RR	Residential
5-08.35A	Edwin Goss	1.54 acres	493	493 RR	Vacant
5-08.36	Edwin Goss	23.95 acres	1562	428 PR 1134 RR	Vacant
5-08.26	Jessamine Goerner	1.50 acres	194	194 RR	Residential
5-08.25	Salvatore Guerrera	1.00 acres	234	234 RR	Residential
5-08.27	James Rosetti	0.34 acres	101	101RR	Residential
5-08.32	Daria Ventura	2.90 acres	263	263 RR	Vacant
5-08.29B	Yilida Zyko	4.86 acres	375	312 PR 63 RR	Residential
5-08.31	Drita Bushka	4.88 acres	476	306 PR 170 RR	Residential

PR- Preservation Areas
CO- Conservation Areas
NC- Neighborhood Conservation Areas
EX- Existing Preserved Open Space
RR- Rural Lands



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Adjacent Parcels with State Conservation & Development Plan Underlay (1 of 3)

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\4-1-ParcelCD1.mxd
Source: COGCNV, CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 400'

Sheet: **Figure 4-1**

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Adjacent Parcels with State Conservation & Development Plan Underlay (2 of 3)

Location: Middlebury, CT

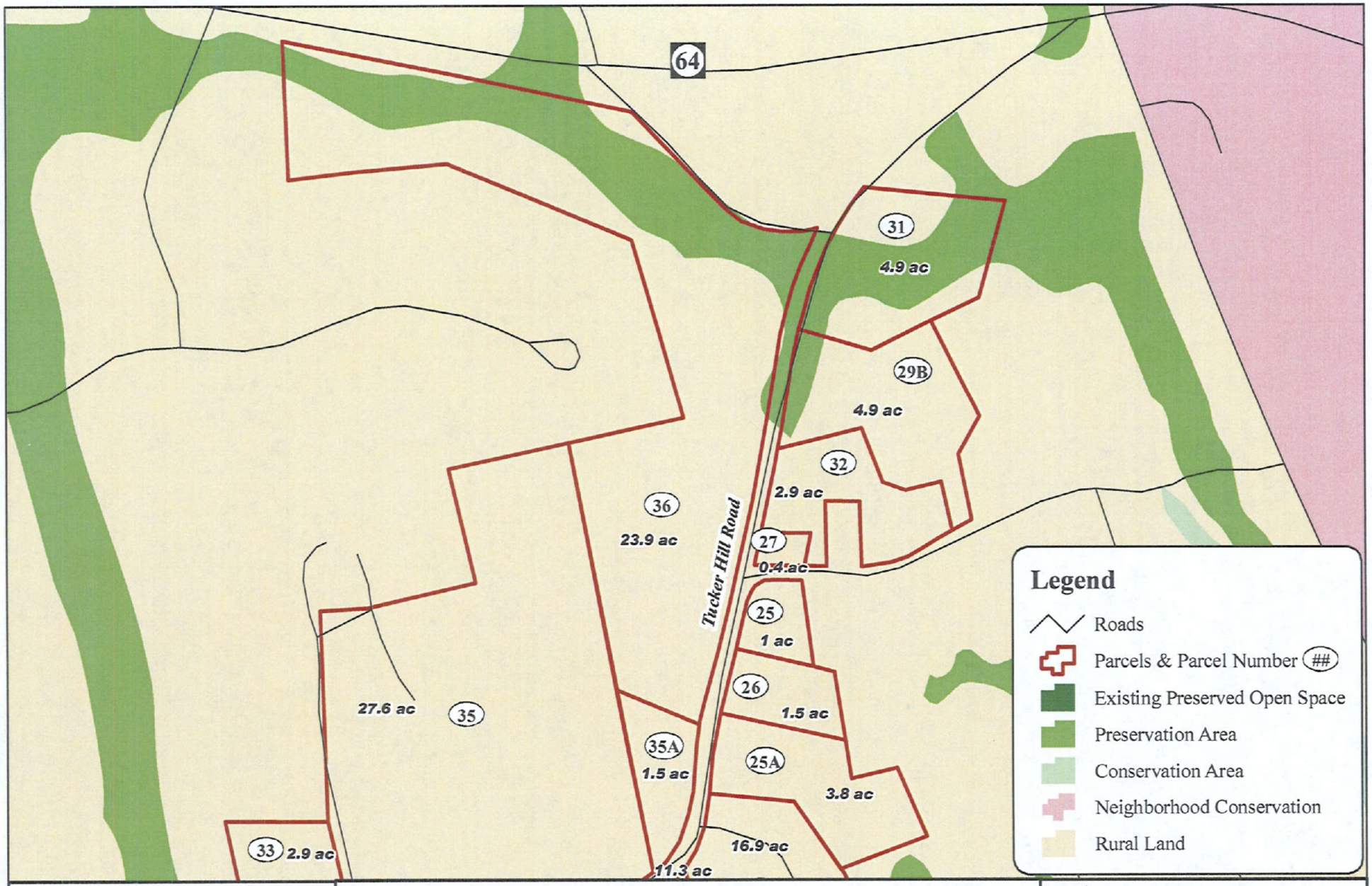
MMI#: 1573-22-1
MXD: H:\4-2-ParcelCD2.mxd
Source: COGCNV, CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007
Scale: 1" = 400'

Sheet: Figure 4-2



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Adjacent Parcels with State Conservation & Development Plan Underlay (3 of 3)

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\4-3-ParcelCD3.mxd
Source: COGCNV, CT DEP

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007
Scale: 1" = 400'

Sheet: **Figure 4-3**

Consistency with Neighborhood Conservation Area Policies

The land between Bronson Drive and the eastern most intersection of Route 188 and Library Road, near the Middlebury Town Green and Town Center, have been designated in the Plan as Neighborhood Conservation Area (Figure 4-1 through Figure 4-3). Neighborhood Conservation Areas are typically characterized by lands without the high incidence of the structural, occupancy, and income characteristics of Regional Centers yet are significantly built-up and well populated. These areas generally reflect stable, developed neighborhoods and communities and are often contiguous to Regional Centers, although it is not the case in this instance.

State policy seeks to support the maintenance of these basically stable, developed neighborhoods and communities and also intensify development when it is supportive of community stability and consistent with the capacity of the existing urban services. This project is supporting community stability in that it is providing a safe, reliable source of water in an area of water quality problems, pressure problems, and potential water service reliability concerns. Running a water main extension through a Neighborhood Conservation Area is consistent with the policies of this land designation.

Consistency with Existing Preserved Open Space Policies

The proposed route has two adjacent areas designated as existing preserved open space (Figure 4-1 through Figure 4-3). The area located at the intersection of Bronson Drive and Route 188 is an open hay field owned by the Middlebury Land Trust. The Land Trust also owns Turtle Pond located at the intersection of Route 188 and Wheeler Road. Existing Preserved Open Space represents areas with the highest priority for conservation and permanent use as open space.

State policy supports the idea of the permanent continuation of such areas as public or quasi-public open space, and discourages the sale and structural development of such areas except as may be consistent with the open space functions served. Induced growth of any variety would be strongly discouraged in this land area.

The extension of a water main through an area designated as Existing Preserved Open Space is not consistent with the policies of this designation. However, because all construction activities will be within the roads or their previously disturbed shoulders, the project will not result in any additional disturbance to either of the Existing Preserved Open Space Areas. Furthermore, these two areas are already owned by the Land Trust and would not be in danger of development.

Consistency with Conservation Area Policies

A small portion of the route is bordered by land designated as Conservation Area (Figure 4-1 through Figure 4-3). Conservation Areas represent a significant portion of the state and a myriad of land resources. Proper management of Conservation Area lands provides the state with its best opportunity to provide for the state's future need for food, fiber, water and other resources. The extension of a water main and the potential growth it could support are inconsistent with the policies of a Conservation Area.

State policy attempts to plan and manage, for the long-term public benefit, the lands contributing to the state's need for food, fiber, water and other resources, open space, recreation, and environmental quality and ensure that changes in use are compatible with the identified conservation values. Therefore, the Town of Middlebury has indicated it will take the appropriate measures to ensure this land remains undeveloped.

Consistency with Preservation Area Policies

The five wetland corridors, including Goat Brook, have been classified as Preservation Areas (Figure 4-1 through Figure 4-3). State policies regarding preservation areas promote preservation and management of these areas as open space. Plans and proposals that are incompatible with open space uses should demonstrate overriding public benefits and the lack of viable alternative sites.

Although the project is consistent with most of the policies of Preservation Areas since all construction activity is within previously disturbed area (the roads themselves or their shoulders) and no additional land designated as a Preservation Area will be disturbed, it is inconsistent with the designation in that running a water main through preservation area supports the growth of that area. Therefore, the Town of Middlebury has indicated it will take the appropriate measures to ensure this land remains undeveloped.

Consistency with Rural Lands Policies

The majority of the land adjacent to the preferred route is designated as Rural Lands (Figure 4-1 through Figure 4-3). Rural Lands are those areas that fall outside any other Guide Map category.

A water main in Rural Lands is generally believed to be inconsistent with the policies of the designation. State policy discourages structural development forms and intensities which exceed on-site carrying capacity for water supply and sewage disposal and therefore cannot function on a permanent basis and are inconsistent with adjacent open rural character or conservation areas or which are more appropriately located in Rural Community Centers. Although the project will provide land adjacent to the preferred route with an adequate water supply, the Town of Middlebury has indicated it will take

the appropriate measures to ensure this land remains undeveloped and maintain its rural character.

4.1.2 Consistency with Regional Land Use Goals and Objectives

In 1998, the COGCNV published the *Central Naugatuck Valley Regional Plan Conservation and Development.* In the chapter pertaining to water supply and sewage service, the plan recommends that any future development of these systems must continue to provide a water supply that is of adequate quality and quantity to maintain the health and safety of the residents within the region. The primary purpose of the interconnection is to meet precisely this objective. The interconnection will provide emergency water supplies to both the HVWC and the Westover School water systems thereby ensuring a greater degree of public health and safety.

The *Regional Plan* also suggests that water systems should provide public facilities with service to accommodate the needs of the region's residents. The interconnection will provide Town Hall, the Shepardson Community Center, and the Town Library with a public water supply.

4.1.3 Land Use Impacts

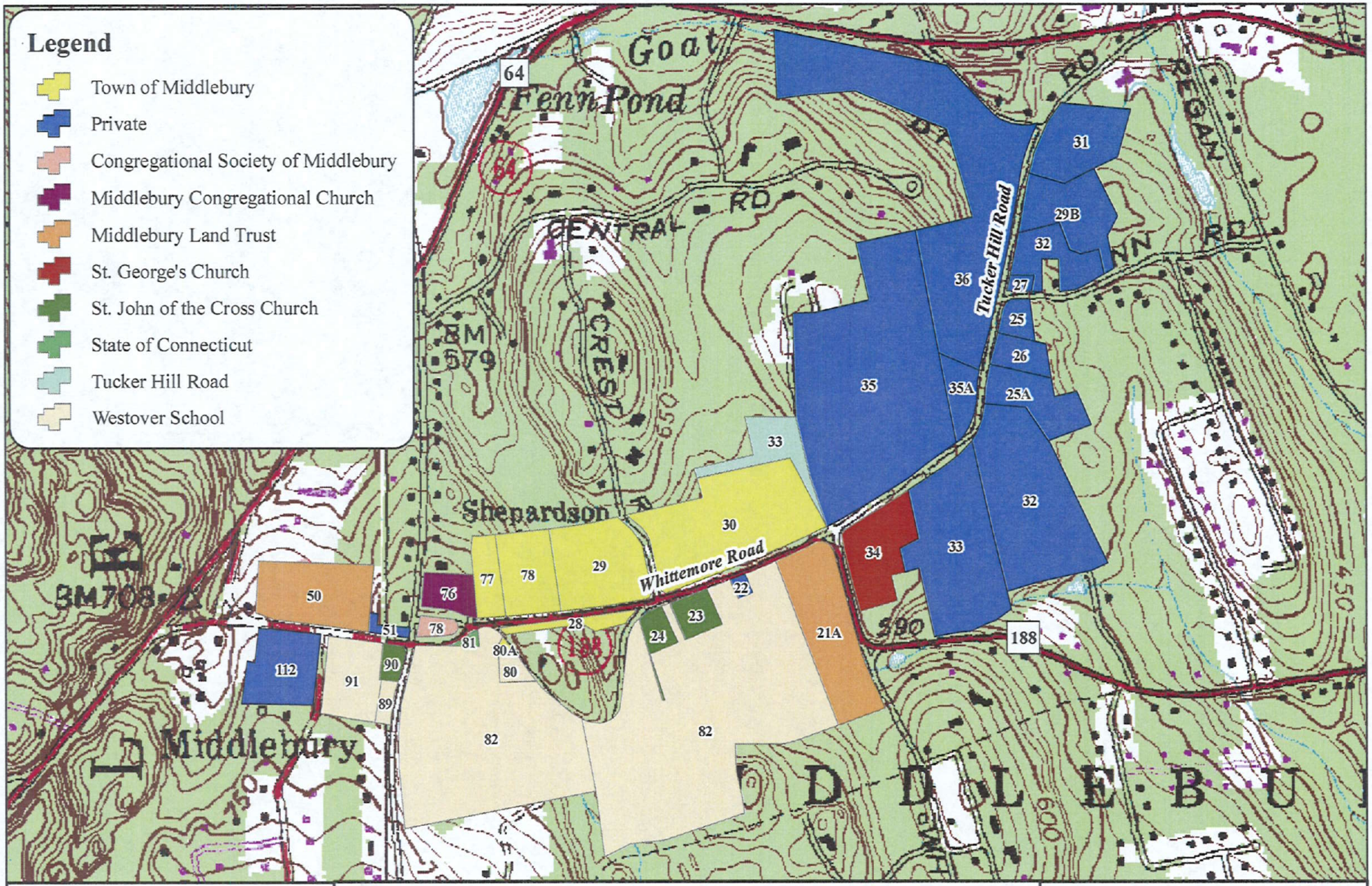
The proposed interconnection route will be located along Route 188 and Tucker Hill Road. The land uses along the route will not undergo a change from existing conditions. The project conforms to the land use plans, policies, and regulations established by the Town of Middlebury for this area and is consistent with surrounding development (Figure 4-4).

Zoning

The Town of Middlebury has indicated it would be willing to prevent extensive development along the route, through conservation easements, a zoning overlay district or other means, to maintain the existing open space and rural character of the neighborhood.

4.2 Socioeconomic Impacts

The proposed interconnection project is expected to have a positive impact on the regional socioeconomic horizon by enabling HVWC to meet its peak day demands. The project is not expected to create a significant amount of new employment, nor is it expected to displace any existing employment.



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Ownership of Adjacent Parcels

Location: **Middlebury, CT**

MMI#: 1573-22-1
MXD: H:\4-4-Parcel.mxd
Source: CT DEP; Town of Middlebury

N

Environmental Impact Evaluation for Middlebury Interconnection

Date: Dec. 2007

Scale: 1" = 800'

Sheet: **Figure 4-4**

4.3 Community Facilities and Services Impacts

Public Safety and Emergency Services

The project is expected to have a positive impact on the public's health and safety. It will provide an acceptable margin of safety to the HVWC system, emergency water service to HVWC and the Westover School, improved water pressure for Heritage-Middlebury system in Bronson Drive area, replacement of the Town Library's contaminated water source, and the availability of fire protection to various municipal buildings.

The one potential negative impact resulting from the interconnection is the pressure that induced growth could affect the Town's emergency service departments. At some point, as the population continues to grow, both the police and fire departments would have to expand if they are going to continue to provide an acceptable level of protection. This is another reason that mitigation has been proposed to prevent growth along the interconnection route.

Parks and Recreation

A component of the overall project was to supply Ledgewood Park with a clean, reliable public water supply. As a result, the well serving the park has been abandoned and replaced with a service connection, resulting in a positive impact on the area's parks and recreational opportunities.

4.4 Aesthetic/Visual Resource Impacts

The project area currently supports several public community buildings and residential development. During the construction phase of the project, a short-term negative visual impact will be manifested. However, as the interconnection will be below-grade, long-term aesthetic/visual impacts are not anticipated. Furthermore, because the proposed mitigation will prevent induced growth along the interconnection, additional aesthetic impacts are not anticipated.

4.5 Public Utilities and Services Impacts

4.5.1 Water Systems

The proposed interconnection will have a positive impact on the public water systems serving within the Town of Middlebury. As explained previously, the interconnection will provide HVWC with an adequate margin of safety and emergency supply, the

Westover School system with an emergency water source, and provide improved water pressure for fire suppression purposes to several areas of the Town. However, an additional overall benefit of the interconnection is that the Town will increase its overall water supply redundancy, with the ability to draw water from the HVWC system in the west and the two existing CWC interconnections in the east.

4.5.2 Sanitary Sewer System

An 8-inch sewer pipe runs in a westerly direction away from the project area, from the intersection of Bronson Drive and Route 188 towards Store Road. Another 8-inch sewer pipe runs along Route 188 from the Shepardson Community building to the intersection of Route 188 and Tucker Hill Road and then continues along Route 188. The interconnection project is not expected to have any adverse impacts to the existing sewer system. Furthermore, because the proposed mitigation will prevent induced growth along the interconnection, additional use of the sewer system will not occur in the project area.

4.5.3 Storm Drainage System

Approximately 17 four-foot by three-foot catch basins are located along the route. Several outlet pipes are located along the route. One daylights into the open field owned by the Middlebury Land Trust near Benson Road; another daylights near the sharp corner of Tucker Hill Road.

Since the interconnection will run within or along the shoulder of two roads, the proposed project is not expected to directly change the amount of impervious coverage. Negative impacts on water quality are not anticipated. Furthermore, because the proposed mitigation will prevent induced growth along the interconnection, additional burden to the stormwater systems will not occur.

4.5.4 Natural Gas

Natural gas is not available in the project area and therefore gas utilities will not be impacted by the proposed interconnection.

4.5.5 Telephone and Cable

Telephone and cable service are already available in the area via overhead lines. No significant impacts are anticipated relative to telephone and cable service as a result of the interconnection project.

4.5.6 Summary of Direct and Indirect Public Utilities and Services Impacts

In summary, the existing public utilities and services in the project area are believed to be improved by this project. No adverse direct or indirect impacts could be identified, and additional burden to stormwater and sewer utilities will not occur because proposed mitigation will prevent induced growth along the interconnection.

4.6 Cultural Resources Impacts

Both the State Archeologist and the Connecticut Historical Commission were contacted and have indicated that no adverse impact will come to any cultural resources at the site and that the project will have no effect on the state's archeological heritage.

4.7 Traffic and Parking Impacts

The project will have a short-term negative impact on traffic along Route 188 and Tucker Hill Road. Traffic will be interrupted during the construction phase of the interconnection project. Construction of the project is expected to take approximately six to eight weeks.

Once completed, the project is not expected to have any adverse long-term impacts on traffic and parking patterns or flow. Because the proposed mitigation will prevent induced growth along the interconnection, additional traffic and parking needs will not be generated along the interconnection route.

4.8 Water Resources Impacts

The predominant nearby water resources are Goat Brook and Turtle Pond. Goat Brook is classified as a Class A surface water resource according to Connecticut's Water Quality Standards. The water quality goal is to remain a Class A resource. Ground water in the project area is classified GA in Connecticut's Water Quality Standards, denoting a resource suitable for direct human consumption without the need for treatment. The goal for Class GA groundwater is to maintain drinking water quality. In addition to Goat Brook and Turtle Pond, the proposed route comes into contact with three additional areas designated as wetlands.

Work is not proposed in Goat Brook, Turtle Pond or in any wetlands, and therefore direct impacts are not anticipated to occur. Construction of the project is expected to take approximately six to eight weeks. Erosion and sedimentation controls will be designed

and installed in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* to protect nearby wetlands and watercourses. As a result, indirect impacts to the wetlands are not expected because of the project. Because the interconnection will not result in increased impervious surfaces, the project is not expected to increase storm water runoff. Finally, because the proposed mitigation will prevent induced growth along the interconnection, encroachment on wetlands and watercourses is not anticipated.

4.9 Flood Hazard Impacts

The proposed interconnection route briefly falls within the 100-yr floodplain along 166 linear feet of Tucker Hill Road at Goat Brook. This project is not expected to directly or indirectly impact flood flow conveyance or floodplain functions in this area, as the interconnection will be below-grade in its entirety except for where it crosses Goat Brook. The interconnection pipe will be hung from an existing bridge when crossing the brook. Flood conveyance capacity will not be compromised, as the main will be located beside the bridge and not beneath it.

4.10 Biological Environment Impacts

4.10.1 Fisheries

Two fisheries are present along the proposed route, Turtle Pond and Goat Brook. Goat Brook is a coldwater fishery with a natural streambed substrate, instream cover, and is well shaded by streamside vegetation. Natural or manmade impediments to fish passage were not observed at the Brook. Turtle Pond is a shallow body of water that supports a warmwater fishery.

The interconnection does not propose to alter either fishery or construct a physical structure which may in any way act as a barrier. Neither an increase in stormwater runoff nor any long-term impacts due to erosion are expected. Best management practices will be utilized during the construction phase of the project to limit any impacts due to erosion and sedimentation. Furthermore, because the proposed mitigation will prevent induced growth along the interconnection, additional stormwater runoff to Turtle Pond and Goat Brook will not occur.

4.10.2 Vegetation

Most of the flora found along the preferred route are native species generally associated with a southern New England mixed hard wood forest. As the project will take place in

the roads themselves or their shoulders, the clearing of any substantial vegetation is not expected as part of the interconnection project. Furthermore, because the proposed mitigation will prevent induced growth along the interconnection, additional impacts to vegetation will not occur.

4.10.3 Inland Wetlands

State and Federal wetlands occur along the route. The predominate wetland types present, according to the U.S. Fish and Wildlife classification system (Cowardin, et al 1979), are Riverine Upper Perennial Rock Bottom/ Unconsolidated Bottom (RUP RB/UB), Palustrine Forested Wetland (PFW), Palustrine Open Water Wetland (POWW), Palustrine Emergent Wetland (PEW), Palustrine Scrub-Shrub Wetland (PSSW), and Intermittent Water Course (IWC). The five principal functions and values associated with the wetlands and watercourses present along the route are reviewed in detail in Section 3.10.3. They are groundwater discharge, flood attenuation, water quality protection, production export and wildlife habitat.

The use of sound engineering practices during design and careful attention to best management practices during construction will protect wetlands and watercourses from negative impacts. Excavated material will be stockpiled in vehicles or offsite rather than along the shoulder of the road. When crossing Goat Brook, the interconnection will be hung from an existing bridge. The watercourse will not be disturbed during this process. Erosion and sedimentation controls will be designed and installed in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* to protect nearby wetlands and watercourses. Finally, because the proposed mitigation will prevent induced growth along the interconnection, encroachment on wetlands and watercourses is not anticipated.

4.10.4 Wildlife

Development of the interconnection as proposed is not expected to result in any adverse impacts to the wildlife habitat found adjacent to the project. During the construction of the interconnection no forested land is proposed to be cleared nor are any wetlands proposed to be filled or altered. Because the proposed mitigation will prevent induced growth along the interconnection, encroachment into wildlife habitats is not anticipated.

4.10.5 Threatened, Endangered, and Species of Special Concern

The Natural Diversity Data Base, maintained by DEP, contains no records of extant populations of federally listed endangered or threatened species or species listed by the State, pursuant to section 26-306 of the CGS, as endangered, threatened or special concern in the project area. Thus, impacts to threatened, endangered, and/or special concern species are not expected.

4.10.6 Summary of Direct and Indirect Impacts

The biological environment along the project route and in the surrounding area will not be affected by the proposed action. Direct impacts due to construction will be minimal and temporary, and indirect impacts due to induced growth will be prevented.

4.11 Physical Environment Impacts

Significant changes to the physical environment are not anticipated as a result of the proposed interconnection project. Agricultural soils and significant farmlands will not be adversely impacted as a result of the interconnection. Extreme modifications to area topography are not contemplated. The general erodibility of soils that occur in the project area is low. However, site specific sedimentation and erosion controls will be implemented as part of the construction phase of the project. In summary, the proposed action will not result in significant direct or indirect impacts to the physical environment of the project site or surrounding areas.

4.12 Air Quality Impacts

The primary short-term air quality concerns relate to construction activities and their potential to generate fugitive dust and mobile source emissions. Meteorological conditions and the intensity of the activities as well as soil moisture content also govern the extent to which particles will become airborne. Wind erosion could become a source of mobilization of dust during construction. Standard controls can be implemented to reduce the impact from such fugitive dust emissions as well as the affects of wind erosion. Proper phasing during construction can reduce the potential for impact by minimizing the length of time that the soil remains exposed.

Additionally, use of water or wetting agents to control dust from exposed soil or gravel areas can further minimize airborne particulate matter, as well as periodic sweeping and daily rinsing of truck tires.

Furthermore, even well maintained trucks and other construction equipment typically emit small amounts of pollutants such as nitrogen oxides, sulfur oxides, and carbon monoxide related to internal combustion or diesel engines. Proper maintenance is therefore important to reduce the potential for higher smoke emissions associated with improperly operating equipment.

Construction related air quality impacts are anticipated to be localized, temporary, and minimal. Mitigation of short-term air quality impacts is described in Section 5.0 of this document.

With regard to air quality impacts connected to induced growth and its generation of traffic, these impacts will be prevented by controlling the land use as explained in Section 5.0.

4.13 Noise Impacts

The primary short-term noise concerns relate to construction activities and their potential to generate unacceptable levels of noise from construction vehicles and equipment. Construction activities will be limited to daytime hours when traffic noise is at a higher level. The additional traffic and construction related noise is anticipated to be minimal in this environment. With regard to increased noise connected to induced growth and its generation of traffic, these impacts will be prevented by controlling the land use as explained in Section 5.0.

4.14 Solid Waste and Hazardous Materials Impacts

The project is not expected to generate any hazardous materials nor have a substantial impact on solid waste. Any excess material will be removed from the project area and utilized elsewhere by the Town of Middlebury.

4.15 Cumulative Impacts

Land Use – The potential for induced growth exists as a result of the interconnection project. This project will make public water available to areas that otherwise would not have it. The interconnection will result in an increase in the size and capacities of existing water distribution systems, thereby eliminating what may have once been a limiting factor in the amount of growth the region could support.

Community Facilities and Services – The interconnection project is expected to have a positive cumulative impact on the Town's facilities and services. The project has or will provide three community buildings and additional community resources (Town Hall, Shepardson Community Building, Town Library, Ledgewood Park, and Middlebury Convalescent Home) with a clean, reliable source of public water.

Public Utilities and Services – The proposed project will cause minimal demand for any other public utilities and services and therefore will not have a measurable cumulative adverse impact on such resources.

4.16 Unavoidable Adverse Environmental Impacts

Although a goal of this project has been environmental impact avoidance, minimization, and mitigation, certain adverse impacts are unavoidable. These are predominantly in the category of short-term construction related impacts. The project will undergo a construction phase wherein additional equipment will be utilized at the site. Mitigation measures have been identified with respect to associated short-term air and noise quality. However, a certain degree of additional truck and equipment use and access will be necessary during this time period, which is unavoidable. Potential soil erosion and sedimentation impacts have also been identified. These will be largely mitigated through proper construction management techniques. No other unavoidable adverse environmental impacts have been identified.

4.17 Irreversible and Irretrievable Commitment of Resources

The construction of the interconnection will utilize nonrenewable resources during the construction and implementation (i.e., construction supplies, fuel, etc). Since these resources can not be reused, they are considered to be irreversibly and irretrievably committed. Similarly, storage of excess material at the Town's garage facility will take up capacity in such facilities which is irreversible and irretrievable.

4.18 Cost Benefit Analysis

4.18.1 Cost Analysis

The total funding for this project is $2,265,000. Funding sources were identified in Section 1.0 of this document.

4.18.2 Benefit Analysis

The following positive benefits are expected to occur as a result of the construction and operation of the public water supply system expansion and regional interconnection:

- Supply the Town of Middlebury Convalescent Home with public water and fire protection, bringing the facility into compliance with State fire suppression codes.

- Supply the existing town library with public water and fire protection, replacing the well that has suffered from bacteria contamination.
- Provide an emergency backup supply for Westover School's existing community water system.
- Provide a new public water supply for off-campus customers of the Westover School community water system, including municipal buildings.
- Provide improved water pressure to the Heritage-Middlebury system in the Bronson Drive area.
- Supply HVWC with an adequate margin of safety for peak demand purposes and emergency supply.
- Provide an overall high level of redundancy to all water customers in the Town of Middlebury, with availability of one additional source of supply if the Waterbury or Naugatuck supply were compromised.

The multiple benefits far outweigh the costs of the project.

4.19 Certificates, Permits, Approvals

4.19.1 Pertinent Regulations and Statutes

Table 4-2 presents pertinent local, state, and federal regulations and statutes that may affect this project.

Table 4-2
Pertinent Regulations and Statutes

Activity	Local	State Agency and Type	Federal
Soil Erosion & Sed. Control	Section 68, Town of Middlebury Planning & Zoning Regulations	N/A	N/A
Wetlands Crossing	Town of Middlebury Inland Wetlands and Watercourses Regulations	N/A	N/A
Traffic	Town of Middlebury Board of Selectmen Road Opening	Dept. of Transportation Encroachment permit PMT 2B	N/A
Pump Station and Water main Extension Design Review	Town of Middlebury Water Commission	N/A	N/A
Diversion permit	N/A	DEP Diversion Permit	N/A
Floodplain crossing	N/A	DEP Flood Management Certification	N/A
Sale of excess water permit	N/A	DPH Sale of Excess Water Permit	N/A
Pumping Station Application	N/A	DPH Pumping Station Application	N/A
Water main Application	N/A	DPH Water Main Application	N/A

4.19.2 Section 68 Town of Middlebury Planning and Zoning Regulations

Section 68 of the Middlebury Planning and Zoning Regulations regulates activities requiring a Certified Erosion and Sediment Control Plan. Section 68 states that "Any proposal for development that will cumulatively create a disturbed area more than one-half acre in area on land being developed must have a Certified Erosion and Sediment Control Plan." To be eligible for certification, a soil erosion and sediment control plan shall contain proper provisions to adequately control accelerated erosion and sedimentation and reduce the danger from storm water runoff on the proposed site based on the best available technology. Such principals, methods and practices necessary for certification are found in the *Connecticut Guidelines for Soil Erosion and Sediment Control.*

4.19.3 Town of Middlebury Inland Wetlands and Watercourses Regulations

The Town of Middlebury Inland Wetlands and Watercourses Regulations define wetlands as "land, including submerged land not regulated pursuant to Sections 22a-28 through 22a-35, inclusive, of the Connecticut General Statutes, which consists of the soil types designated as poorly drained, very poorly drained, alluvial and floodplain by the Natural Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service of the U.S. Department of Agriculture (USDA)." Such areas may include filled, graded or excavated sites which possess an aquic (saturated) soil moisture regime as defined by the USDA Cooperative Soils Survey." The preferred interconnection crosses five regulated areas as defined. Regulated activities include the construction, encroachment, or placement of any obstruction within stream channel encroachment lines pursuant to Sections 22a-342 through 22a-349a of the Connecticut General Statues, as amended.

4.19.4 Town of Middlebury Board of Selectman

The Town of Middlebury Board of Selectman will require the project obtain a road opening permit. This permit will regulate the construction processes and establish the rehabilitation specifications of the project.

4.19.5 Town of Middlebury Water Commission

The Town of Middlebury Water Commission will issue approvals relative to the design of the pump station and water main extension.

4. 19.6 Department of Transportation Encroachment Permit

The Connecticut Department of Transportation (DOT) governs any construction activity within State roadways and their accompanying rights-of-way. It is one of DOT's operating principles that public welfare and safety make it essential that reasonable regulations shall be exercised by the Transportation Commissioner to control the manner in which any change is made by any person in the structure, layout, drainage or topography of a State highway and its appurtenances.

4.19.7 Department of Public Health

Water Main Extension Application

The DPH regulates the design and specifications of any water main extension. The water main design and construction guidelines and water main application are provided in the interest of facilitating the approval process for federally or state funded projects such as Drinking Water State Revolving Fund and STEAP grant projects that may include water main replacements or installations.

Pumping Station Application

The DPH governs the construction of pumping stations throughout the state. This application is for a permit to size, design and construct a pumping station.

Sale of Excess Water Permit

The DPH regulates the sale of excess water. This application is for a permit under Section 22a-358 of the Connecticut General Statutes for a public water system to sell water reserves in excess of those required to maintain an abundant supply of water to customers in its service area. The applicant, in this case CWC, must provide the department with sufficient information to verify that the water proposed for sale is in excess of that required to meet their system needs.

4.19.8 Department of Environmental Protection

Water Diversion

The DEP oversees the withdrawal, usage, and distribution of water at rates exceeding 50,000 gpd. The diversion permit applies to diversions of water for consumptive uses, including water supply system interconnections. Water transferred through the interconnection will be required to be metered and a permit will be required for quantities at or above 50,000 gpd that are not otherwise exempt or authorized for emergency purposes.

Flood Management Certification

The DEP oversees proposed activities within or affecting a floodplain or activities that impact natural or man-made storm drainage facilities. Applicants must submit a floodplain management certification. Such activities include, without limitation: a) any structure, obstruction or encroachment proposed for emplacement within the floodplain area; b) any proposal for site development which increases peak runoff rates; c) any grant or loan which affects land use, land use planning or the disposal of state properties in floodplain; or d) any program regulating flood flows within the floodplain.

5.0 MITIGATION OPPORTUNITIES

5.1 Overview

The lands adjacent to the proposed route are classified as Rural Lands, Preservation Area, Conservation Area, Existing Preserved Open Space, and Neighborhood Conservation in the *Conservation and Development Policies Plan for Connecticut (2004–2009)*. The proposed interconnection is consistent with the policies of Neighborhood Conservation Area but inconsistent with the remaining designations in that they do not support constructing a water main extension through these areas.

Throughout the development of this project, attempts have been made to avoid impacts. In instances where impacts were unavoidable, mitigation measures have been sought. In general, direct impacts as related to installation of the interconnection are not anticipated. Instead, indirect impacts related to secondary or induced growth are emphasized in this document. As a result, efforts have been concentrated on developing reasonable and effective means of controlling growth along the interconnection route. This proposed mitigation is described in this section.

5.2 Land Use Mitigation Opportunities

The underlying R-40 and R-80 zones along the interconnection route provide some level of protection against induced growth in that they do not permit commercial or industrial development. However, the zones do permit a higher degree of residential development in areas that are not already developed, or that are developed at a low density. This is a potential issue regardless of the fact that Middlebury's existing overlay districts (Planned Residential Development District, Planned Residential Recreational Development District, Planned Residential Development for Elderly Persons, Senior Residential District, and AR Senior Residential District) could not be applied to the properties located along the preferred interconnection route.

Although induced growth needs to be prevented, it is important that mitigation allow for existing developed properties to connect to the water system, and that individual homes that are developed on lots with interconnection frontage be allowed to connect as well. In other words, a moratorium on connections is not workable because it will not provide for improved water service to existing and some future potential homes. For example, it is desired that subdivisions allowed through a simple division that yield lots with interconnection frontage should be permitted to connect to the water main. One way to control this process would be to exclude any development project that needs a special permit from the Middlebury Zoning Commission.

In summary, the following objectives must be considered in the development of mitigation in the form of land use controls:

- Allow existing transient non-community and non-transient non-community public water systems such as the library to connect to the water main along Whittemore Road and Tucker Hill Road.
- Allow existing homes on Whittemore Road and Tucker Hill Road to connect to the water main.
- Allow individual new homes on existing lots or first-cut lots with frontage on Whittemore Road and Tucker Hill Road to connect to the water main.
- Do not allow homes on new public or private streets to connect.
- Do not allow homes to connect if they are part of subdivisions or planned developments that require local special permits.

Potential methods of meeting these objectives and their pros and cons are as follows:

a) *Rezone the R-40 & R-80 zones* – This may be difficult to accomplish, and may not have the desired effects.
b) *Change underlying language for R-40 & R-80* – This may be difficult to accomplish, but may have the desired effects.
c) *Change the underlying language in Planned Development districts* – This may be a partial solution, although the existing planned development districts have geographic constraints anyway.
d) *Change Middlebury Plan of Conservation & Development* – This may not have any immediate regulatory power but it would be a strong basis for related controls.
e) *Create an overlay zone for the route that will prohibit certain developments from connecting but allow individual lots to connect* – This could be a good solution if it can be designed in a way that it is workable.
f) *Change the subdivision regulations* – This could be effective if the modified language specifically addresses the project area. However, the current Subdivision Regulations were adopted in 1966 and amended in 1981, and are considered to be out of date relative to today's standards.

The Town of Middlebury has agreed to amend both its zoning regulations (option b) and its local Conservation and Development plan (option d) to restrict induced growth along the proposed interconnection route. The following represents the proposed language to be added to the local Conservation and Development plan:

- *In land use designations where the extension of public water or sewer service is not compatible with the policies of said designations, as determined by the State of Connecticut Conservation and Development Policies Plan (Conservation areas, Preservation areas, Existing preserved open space, and Rural Lands), only previously-developed parcels and those allowed to develop in accordance with the R-40 or R-80 zoning through a simple division will be eligible to receive water service.*

The following language is proposed to amend the town's R-40 and R-80 zoning regulations:

- *In land use designations where the extension of public water or sewer service is not compatible with the policies of said designations, as determined by the State of Connecticut Conservation and Development Policies Plan (Conservation areas, Preservation areas, Existing preserved open space, and Rural Lands), and that are located along Route 188(Whittemore Road) and Tucker Hill Road between their respective intersections with Bronson Drive and Chase Road; only previously-developed parcels and those allowed to develop in accordance with the R-40 or R-80 zoning through a simple division will be eligible to receive water service.*

Before the interconnection project proceeds it will be subject to the DEP approvals listed in Table 4-2. The selected mitigation measures to restrict induced growth will be adopted prior to seeking any DEP permits or approvals.

The following sections and subsections describe the selected methods of controlling (preventing) induced growth.

Neighborhood Conservation Areas

State policy seeks to support the maintenance of these basically stable, developed neighborhoods and communities and also intensify development when it is supportive of community stability and consistent with the capacity of the existing urban services. This project is supporting community stability in that it is providing a safe, reliable source of water in an area of water quality problems, pressure problems, and potential water service reliability concerns. Running a water main extension through a Neighborhood Conservation Area is consistent with the policies of this land designation.

Existing Preserved Open Space

Existing Preserved Open Space represents areas in the state with the highest priority for conservation and permanent use as open space. State policy supports the permanent continuation of these areas as public or quasi-public open space, while discouraging the sale and structural development of such areas unless they are consistent with the open space functions served. The two areas along the proposed interconnection route are owned by the Middlebury Land Trust thereby ensuring they will forever remain as open space. The two areas of existing preserved open space will not be affected, adversely or otherwise, by the proposed action.

Conservation Areas

State policy seeks to plan and manage, for the long-term public benefit, the lands contributing to the state's need for food, fiber, water and other resources, open space,

recreation, and environmental quality and ensure that changes in use are compatible with the identified conservation values. The proposed action is not expected to immediately, adversely impact any of these resources.

The Town of Middlebury has agreed to take the steps necessary to ensure these resources are not impacted in the future. As previously stated these steps include modifications to the local Conservation and Development plan, keeping the land in the existing R-40 and R-80 zoning designations (where high intensity development is prohibited), and utilize the underlying zoning language to prohibit certain water service connections on land designated as Conservation Areas.

Preservation Areas

The five wetland corridors have been classified as Preservation Areas. State policies regarding preservation areas promote preservation and management of these areas as open space. It is not expected that any of the areas designated as preservation area will be disturbed.

The Town of Middlebury has indicated it would take the appropriate measures to ensure additional development along the proposed route will be limited, and particularly in these areas. As previously stated these steps include modifications to the local Conservation and Development plan, maintaining the existing R-40 and R-80 zoning designations (where high intensity development is prohibited), and utilize the underlying zoning language to prohibit certain water service connections located on land designated as Preservation Areas.

Rural Lands

Rural Lands are those areas falling outside any other Guide Map category. Most of the land adjacent to the preferred route falls within this category. State policies regarding rural lands seek to discourage structural development forms and intensities that exceed on-site carrying capacity for water supply and sewage disposal. Rural Land uses must be consistent with their adjacent rural character or conservation areas.

The Town of Middlebury has indicated it would take the appropriate measures to ensure additional development along the proposed route will be consistent with the areas character. As previously stated these steps include modifications to the local Conservation and Development plan, maintaining the existing R-40 and R-80 zoning designations (where high intensity development is prohibited), and utilize the underlying zoning language to prohibit certain water service connections located on land designated as Preservation Areas.

5.3 Community Facilities and Services Mitigation Opportunities

No significant negative impacts have been identified with respect to community facilities and services. The project will have positive impacts in that it allows several municipal buildings to receive public water and fire suppression, provides emergency water to the Westover School, and provides emergency and peaking water supply to HVWC. No other mitigation opportunities have been identified.

As explained in Section 4.3, secondary growth could affect the Town's emergency service departments. This is another reason that land use controls have been proposed to prevent growth along the interconnection route.

5.4 Aesthetic/Visual Resource Mitigation Opportunities

Long term, negative impacts to the aesthetic/visual resources along the proposed route are not anticipated. Mitigation opportunities are not necessary to identify for direct impacts. Because the proposed land use controls will prevent secondary growth along the interconnection, additional aesthetic impacts are not anticipated.

5.5 Public Utilities and Services Mitigation Opportunities

As explained in Section 4.5, the existing public utilities and services in the project area are believed to be improved by this project. No adverse direct or indirect impacts could be identified, and additional burden to stormwater and sewer utilities will not occur because proposed land use controls will prevent secondary growth along the interconnection.

5.6 Cultural Resources Mitigation Opportunities

Both the State Archeologist and the Connecticut Historical Commission have indicated that no adverse impact will come to any cultural resources at the site and that the project will have no effect on the state's archeological heritage. Because potential adverse effects have not been identified to either historic or archaeological resources, mitigation measures are not proposed.

5.7 Traffic and Parking Mitigation Opportunities

There are no anticipated long term impacts to the areas traffic or parking conditions. Traffic will be disrupted during the construction phase of the project but is expected to

return to its previous state once this phase is complete. Because the proposed land use controls will prevent secondary growth along the interconnection, additional traffic and parking needs will not be generated along the interconnection route. Additional mitigation opportunities are not necessary.

5.8 Water Resources Mitigation Opportunities

Because adverse effects to the area's water resources are not anticipated, mitigation measures are not proposed. Also, because the proposed land use controls will prevent secondary growth along the interconnection, encroachment on water resources such as wetlands and watercourses is not anticipated.

5.9 Flood Hazard Mitigation Opportunities

Impacts to the flood flow conveyance and floodplain functions in the project area are not anticipated and therefore no mitigation opportunities to the flood hazard potential of the project area are necessary.

5.10 Biological Environment Mitigation Opportunities

Direct impacts due to construction will be minimal and temporary, and indirect impacts due to secondary growth will be prevented. Because significant impacts to the biological environment are not anticipated, additional mitigation is not necessary.

5.11 Physical Environment Mitigation Opportunities

Significant impacts to the physical environment in the project area are not anticipated. Therefore, mitigation opportunities have not been identified.

5.12 Air Quality Mitigation Opportunities

5.12.1 Short-Term Impact Mitigation Measures

Several controls are proposed for minimizing short-term impacts to air quality from fugitive dust and other pollutant emissions. The following mitigation measures have been identified for reducing the length of time in which soils are exposed, off-site tracking, and vehicle and equipment emissions:

1. Construction will be properly phased to minimize the length of time which soils are exposed before final materials are placed and landscaping is completed;

2. Exposed earth will be stabilized with grass, pavement, or other cover as early as possible.
3. Water or wetting agents will be used on exposed soil or gravel areas.

4. Stockpiled material will be covered, shielded, or stabilized as necessary.

5. Periodic sweeping of construction site will be performed.

6. Truck tires and equipment leaving the construction site will be periodically cleaned.

7. Vehicles will be properly maintained.

8. Consideration will be given to using construction equipment with air pollution control devices and/or use of "clean" fuels including ultra-low sulfur diesel fuel (15 ppm sulfur), compressed natural gas or emulsified fuels (e.g., Purinox, approved by the California Air Resources Board).

9. Anti-idling regulations will be followed.

5.12.2 Long-Term Impact Mitigation Measures

Long-term adverse air quality impacts are not projected to occur as a result of the project. With regard to air quality impacts connected to secondary growth and its generation of traffic, these impacts will be prevented by controlling land use.

5.13 Noise Mitigation Opportunities

The project will not result in a noise impact to any noise sensitive land uses identified in the study area. As such, mitigation measures are not proposed as part of the project. With respect to noise generated during construction, noise abatement measures included in project construction specifications may include:

1. Erection of temporary noise barriers around the work site where such barriers are deemed effective at buffering adjacent land uses from construction noise;

2. Installation and maintenance of properly functioning muffler devices on all construction equipment;

3. Compliance with the Town of Middlebury's zoning regulations; and

4. Limiting construction activities to the hours designated by the Town of Middlebury;

5. Connecticut DOT's Special Provision on construction noise will be included in the construction contract.

With regard to increased noise connected to secondary growth and its generation of traffic, these impacts will be prevented by controlling the land use.

5.14 Solid Waste/Hazardous Materials Mitigation Opportunities

Significant impacts to the solid waste/hazardous materials operations in the area are not anticipated. Therefore, mitigation opportunities have not been identified

5.15 Construction Related Mitigation Opportunities

Sections 5.13.1 and 5.14 identify measures that will be taken to mitigate construction related air and noise impacts. The following additional measures will be taken to mitigate potential short-term, localized construction related impacts:

Disposal of Debris and Soils - Major excavation is not an element of this project. Material will be reused on-site where appropriate. Disposal of unusable debris and soils will proceed in accordance with pertinent local, state, and federal regulations.

Water Quality & Runoff – Potential construction related water quality and runoff impacts will be mitigated through using stormwater management and erosion control best management practices. Construction related erosion controls will be designed and installed in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* to protect nearby wetlands and watercourses.

Safety & Security – Safety and security at the construction route will be the responsibility of the contractor and will be reflected in the project specifications. Provisions for safety controls will be included in the project design.

Business Disruption – There are no commercial or retail businesses along the preferred route. Municipal buildings, Westover School, and several churches may experience a minor disruption as part of the project but are expected to be short term only. Access to all these uses will be maintained throughout construction.

6.0 CONSULTATION AND COORDINATION

6.1 Scoping

A scoping notice was published in the Environmental Monitor on December 7, 2006. A copy of that notice is included in Appendix A. Agency comments were received from the Connecticut DPH Drinking Water Division (DWD) and the Connecticut DEP. A copy of each of the comment letters received as a result of the scoping notice are included herein as Appendix B. A summary of the nature of these comments is as follows:

Connecticut Department of Public Heath – In a letter dated January 18, 2007, the DPH indicated that it had reviewed the scoping notice for the regional water supply interconnection. The letter indicated that DWD supported the project and suggested that public water supply wells in close proximity to the project would benefit from connecting to the water main. These included:

- Westover Water Company
- Middlebury Elementary School
- Middlebury Commons
- American Savings Bank
- Middlebury Mobil
- Middlebury Hamlet
- Fire and Police Stations
- Four Corners Store
- Middlebury Professional Building
- Middlebury Public Library
- St. George Church
- Wesson Shell #4
- Village Square

Of the regulated systems listed above, five will have access to the public water system expansion and interconnection water main. These are the Westover Water Company, Middlebury Elementary School, Middlebury Hamlet, Middlebury Public Library, and St. George's Church. Of the five, two will be connected to the system.

Connecticut Department of Environmental Protection – In a letter dated February 22, 2007, DEP issued a letter which addressed the proper handling and disposal procedures of any hazardous materials which may be encountered during the construction process.

Neither an individual nor a State agency requested a formal scoping meeting. However, informal scoping sessions have also taken place via telephone, email, and written

correspondence with DEP, the Connecticut Historical Commission, various Town of Middlebury offices, and COGCNV, as described in the next two subsections.

6.2 Consultation and Coordination with Agencies/Organizations

During the preparation of this EIE, numerous agency representatives were consulted. Table 6-1 lists these representatives in alphabetical order.

Table 6-1
Agencies/Organizations Consulted

Affiliation	Contact
Connecticut Historic Commission	Dave Poirier
The Connecticut Water Company	Terry O'Neill
The Connecticut Water Company	Craig Patla
The Connecticut Water Company	David Radka
The Connecticut Water Company	Maureen Westbrook
Council of Governments Central Naugatuck Valley	Virginia Mason
Department of Environmental Protection	Cheryl Chase
Department of Public Health	Mike Hage
Department of Public Health	Lori Mathieu
Heritage Village Water Company	Ray Adamaitis
Office of Policy and Management	Dan Morley
Office of Policy and Management	Jeff Smith
Town of Middlebury First Selectman's Office	Edward St. John
Town of Middlebury First Selectman's Office	Claudia Tata
Town of Middlebury Engineer	John Calabrese
Westover School	Stephen Ladd

6.3 Public Outreach

A meeting was held on January 24, 2007 prior to the end of the scoping comment period to present the project to the relevant agencies and members of the public. A local newspaper published a meeting notice and also covered the meeting. Copies of the notice and article are attached as Appendix C.

Also during the preparation of this EIE, two additional meetings of note were convened to discuss and define the scope of the project. Table 6-2 lists all project-related meetings.

Table 6-2
Summary of Project Meetings

Meeting Date	Location	Principal Purpose	Overview of Representation
8/10/06	DEP, Hartford, CT	Project Status Meeting	MMI, DEP, CWC, HVWC, TOWN, OPM, OPH, CNV
1/24/07	Shepardson Community Building, Middlebury, CT	Public Informational Meeting	MMI, DEP, CWC, HVWC, TOWN, OPM, DPH, WEST, CNV
2/27/07	Town of Middlebury Town Hall	Project Status Meeting	MMI, TOWN

MMI = Milone & MacBroom, Inc.
DEP = Connecticut Department of Environmental Protection
CWC = The Connecticut Water Company
HVWC = Heritage Village Water Company
TOWN = Town of Middlebury
WEST = Westover School
OPM = Connecticut Office of Policy and Management
DPH = Connecticut Department of Public Health
CNV = Council of Governments Central Naugatuck Valley

6.4 Public Review

Formal notice of the availability of this document has been published in the Waterbury Republican-American and in the Environmental Monitor. A period of no less than 45 days will be provided for notice, distribution, and review of the Draft EIE by any interested parties. Upon receiving comment, comments will be reviewed, additional environmental study and analysis will be performed, if warranted, and the evaluation will be amended as appropriate.

Upon completion of the 45 day public comment period, the sponsoring state agency must forward the following information to OPM for determination of the adequacy of the evaluation: (1) all public notice documentation; (2) a brief summary of the public hearing, if one is held, (3) comments received from all interested parties; (4) the agency decision relative to proceeding with the proposed action; and (5) a discussion of the intentions for initiation of actions for minimizing impacts. This constitutes the Record of Decision (final EIE document and the measures for mitigation identified therein).

The CEPA process concludes with the review of the EIE and Record of Decision by OPM, and its determination of whether regulatory requirements have been satisfied. The final EIE is the basis for the design and implementation of the project.

7.0 DOCUMENT PREPARERS

The following individuals, agencies, and organizations have contributed to this document.

Sponsoring Agencies: Connecticut Department of Environmental Protection

Implementing Agency: Town of Middlebury
Middlebury, Connecticut

Primary Author: Milone & MacBroom, Inc.
99 Realty Drive
Cheshire, Connecticut 06410

A brief description of authors and contributors follows.

The primary author of this Environmental Impact Evaluation is the consulting firm of:

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Cheshire, Connecticut 06410
(203) 271-1773

Milone & MacBroom, Inc. is a professional consulting firm comprised of engineers, planners, environmental scientists, landscape architects, and surveyors. A brief description and list of Milone & MacBroom, Inc. staff involved with the preparation of this document follows.

Jeanine Armstrong Bonin, P.E., Vice President

Ms. Bonin's background is in planning and engineering in the areas of water supply, water resources, wastewater, wetlands, hydraulics, hydrology, resource management, and environmental regulations.

David Murphy, P.E., Project Manager

Mr. Murphy's experience is in the areas of hydrology, geology, and water resources. Project experience includes water supply planning, water diversion permitting, and water system emergency response planning.

Mark Kinsley, Senior Planner

Mr. Kinsley has over eight years of planning and consulting experience and a MS in environmental science. Mr. Kinsley spent roughly 4 years working for an upstate New York Planning Department where he participated in the preparation of numerous environmental impact evaluations.

Additional graphic and technical support was provided by the following individuals:

Matthew Sanford, Environmental Analyst
Scott Bighinatti, Environmental Analyst

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8.0 References.doc

APPENDIX A
Scoping Notice

Scoping Notice

Project Title: Public Water Supply System Expansion and Regional Interconnection. Middlebury, CT

Municipality where proposed project might be located: Middlebury, CT

Address(es) of Possible Project Location(s): Tucker Hill Rd. and CT Route 188 from Chase Rd. to Bronson Dr.

Project Description: An Environmental Impact Evaluation under CEPA and possibly an Environmental Assessment under NEPA will be prepared for the following proposed action. The Town of Middlebury, Heritage Village Water Company and Connecticut Water Company propose a water system expansion project that will connect water systems from the eastern and western portions of Town. The driving force behind this project is the need to fulfill certain public water supply-related objectives in Middlebury and allow the Heritage Village Water System to maintain an adequate margin of safety through the use of shared regional resources

Project Map(s): Click here to view a map of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on:

Monday, January 8, 2007

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below by Monday, January, 8, 2007. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting.

Additional information about this project can be viewed in person at Connecticut Department of Environmental Protection, 79 Elm Street, Hartford, CT 06106

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name: Cheryl Chase
Agency: Connecticut Department of Environmental Protection
Address: 79 Elm Street
Hartford, CT 06106
E-Mail: Cheryl.chase@po.state.ct.us

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Cheryl Chase
Agency: Connecticut Department of Environmental Protection
Address: 79 Elm Street
Hartford, CT 06106
E-Mail: Cheryl.chase@po.state.ct.us
Phone: (860) 424-3860

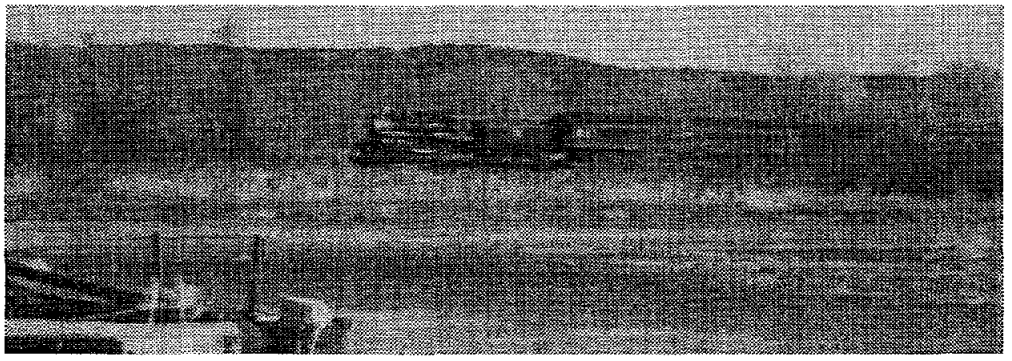
The agency expects to release an Environmental Impact Evaluation for this project, for public review and comment, in

February, 2007

Connecticut Council on Environmental Quality
79 Elm Street
Hartford, CT 06106

Phone:
(860) 424-4000
Fax:
(860) 424-4070

Karl J. Wagener,
Executive Director
E-Mail Address:
karl.wagener@po.state.ct.us



ENVIRONMENTAL MONITOR

The official site for project information under the Connecticut Environmental Policy Act

January 16, 2007

Scoping Notices

1. Middlebury Public Water Supply System Expansion and Regional Interconnection

Environmental Impact Evaluations available for review and comment

1. **NEW!** Colchester Maintenance and Repair Facility

Notice of UConn Comparative Project Evaluation available for review and comment

1. **NEW!** North Campus Master Plan EIE, University of Connecticut, North Hillside Road Extension (Storrs)

The next issue will be published on February 6, 2007.
Subscribe to e-alerts to receive an e-mail when The Environmental Monitor is published.

Scoping Notices

Scoping Notices have been issued for the following state projects. These projects are in the earliest stages of planning. At the scoping stage, detailed information on a project's design, alternatives, and environmental impacts does not yet exist. Sponsoring agencies are asking for comments from other agencies and from the public as to the scope of alternatives and environmental impacts that should be considered for further study. Send your comments to the contact person listed for the project by the date indicated.

1. Notice of Scoping for Middlebury Public Water Supply System Expansion and Regional Interconnection

Municipality where proposed project might be located: Middlebury

Project Description: The Town of Middlebury, Heritage Village Water Company and the Connecticut Water Company propose a water system expansion project that will connect water systems from the eastern and western portions of Town. The driving force behind this project is the need to fulfill certain public water supply-related objectives in Middlebury and allow the Heritage Village Water System to maintain an adequate margin of safety through the use of shared regional resources.

Project Map: Click here to view a map of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on: ***February 2, 2007***

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, by *January 12, 2007*, the Department of Environmental Protection must schedule a Public Scoping Meeting.

Additional information about the project can be viewed in person at:

Department of Environmental Protection
Inland Water Resources Division (3rd Floor)
79 Elm Street, Hartford, CT 06106

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name: Cheryl Chase
Agency: Department of Environmental Protection
Address: 79 Elm Street
Hartford, CT 06106
Phone: (860) 424-3860
Fax: (860) 424-4075
E-Mail: cheryl.chase@po.state.ct.us

If you have questions about a public scoping meeting or other questions about the scoping for this project, contact Ms. Chase, as directed above.

The agency expects to release an Environmental Impact Evaluation for this project, for public review and comment, shortly after the scoping period.

APPENDIX B
Scoping Comments

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

RECEIVED

FEB 7 2007

DEP OFFICE OF
LONG ISLAND SOUND PROGRAMS

January 18, 2007

Cheryl Chase
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

RE: Scoping notice for Middlebury Public Water Supply System Expansion and Regional Interconnection

Dear Ms. Chase:

The Drinking Water Section of the Department of Public Health has reviewed the above-mentioned project for potential impacts to any sources of public drinking water supply; please see the attached memorandum for comments.

Thank you for providing the opportunity to comment on this project. If you have any questions regarding these comments, please contact this office at (860) 509-7333.

Sincerely,

Lori Mathieu, Supervising Environmental Analyst
Source Water Protection Unit
Drinking Water Section

Cc: Mike Hage, DWP
PWS Contacts of attached list

jp

Post-it® Fax Note 7671	Date 2/13/07	# of pages ▶ 2
To Jessica Murphy	From Cheryl Chase	
Co./Dept. M-NN	Co. DEP	
Phone #	Phone #	
Fax #	Fax #	

Phone: (860) 509-7333
Telephone Device for the Deaf: (860) 509-7191
410 Capitol Avenue - MS # 51 WAT
P.O. Box 340308 Hartford, CT 06134

From: Jennifer Pagach, Environmental Analyst II
Source Water Protection Unit
Drinking Water Section

Subject: Scoping notice for Middlebury Public Water Supply System Expansion and Regional Interconnection

Date: January 17, 2007

The Department of Public Health – Drinking Water Section (DWS) has reviewed the information package regarding the Public Water Supply System Expansion and Regional Interconnection in Middlebury, Connecticut.

The Department of Public Health Drinking Water Section supports the concept of this project and has been involved in preliminary discussions and planning. If any construction activity is located on water company lands and not just limited to the road right of way, a Water Company Land permit from this office may be required.

This proposed project is located in very close proximity to several public drinking water wells (see list). These public water systems should be notified prior to initiating construction and ideally be connected to the water main as well.

Westover Water Company
Middlebury Elementary School
Middlebury Terrace Water Supply
Middlebury Commons
Middlebury Convalescent Home
American Savings Bank
Middlebury Mobil
Middlebury Hamlet
Fire and Police Stations
Four Corners Store
Ledgewood Park
Middlebury Professional Building
Middlebury Public Library
St. George Church
Wesson Shell #4
Village Square

Information on the system contacts in the Public Water System Classification spreadsheets available on the Drinking Water Section's webpage www.dph.state.ct.us/brs/water/dwd.htm under "Information for Public Water Systems".

STATE OF CONNECTICUT

DEPARTMENT OF PUBLIC HEALTH

February 22, 2007

Cheryl Chase
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106

RE: Scoping Documents for Middlebury Public Water Supply System expansion and Regional Interconnection

Dear Ms. Chase:

The following comments are offered in response to your request concerning the State Agency scoping information for the proposed Middlebury Public Water Supply Expansion and regional Interconnection. A review of the scoping documents reveals limited information at this stage of the project. Should the project include any demolition of existing buildings or excavation of soils, then a plan must be in place to address lead contaminated soils, lead-based paint, and asbestos since these materials may be encountered during demolition or excavating activities. This type of construction activity could result in the disturbance of surfaces that may contain asbestos, lead-based paint and/or lead contaminated soils.

The following summarizes the Department's position with regard to lead and asbestos.

A. Lead-Based Paint:

It does not appear that excavation or construction activities that may be associated with this project are subject to the Department of Public Health (DPH), Childhood Lead Poisoning Prevention and Control Regulations (§§19a-111-1 through 19a-111-11). However, there are other issues that must be addressed related to lead-based paint. Among these issues are the following:

- Testing of paint on existing structures marked for demolition or lead in soils should be performed by a lead inspector or lead inspector/risk assessor certified by the DPH.
- Planned demolition or soil removal activities should be performed using lead-safe work practices.

Phone:

Telephone Device for the Deaf: (860) 509-7191
410 Capitol Avenue - MS # _____
P.O. Box 340308 Hartford, CT 06134

- If lead-based paint or lead contaminated soil is identified, the classification and disposal of generated waste must comply with the Resource Conservation Recovery Act (RCRA) and Connecticut Department of Environmental Protection standards (e. g., Toxicity Characteristics Leaching Procedure [TCLP] testing, reporting, and record keeping requirements).
- Additionally, if lead-based paint, lead containing paint, or lead contaminated soil is identified, workers must be trained (as a minimum) according to the Occupational Safety and Health Administration (OSHA) lead standards (29 CFR 1926.62). Because other contaminants may also be present on the site, additional health and safety training may be required (e. g., hazardous waste and/or asbestos).

Additional inquires on the subject of lead-based paint can be directed to Alan Buzzetti, Supervising Environmental Sanitarian, Coordinator of the Lead Poisoning Prevention and Control Program at (860) 509-7299.

B. Asbestos Program:
This facility is subject to the provisions of 40 CFR 61, Subpart M, the asbestos national Emission Standards for Hazardous Air Pollutions. As such, a thorough inspection of the facility must be conducted prior to commencement of any renovation or demolition activities. A DPH licensed asbestos inspector or Management Planner is required to conduct this asbestos inspection. In the event that asbestos-containing material is identified that will be impacted by the renovation or demolition activities, the material must be properly abated. A DPH licensed asbestos abatement contractor must conduct any asbestos abatement that involves more than three (3) linear feet or more than three square feet of asbestos-containing material. Additionally, the DPH must provide with notification prior to asbestos abatement that involves greater than 10 linear feet or greater than 25 square feet. Asbestos abatement must be performed in accordance with all applicable federal, state, and local regulations.

Additional inquiries on the subject of asbestos abatement can be directed to Ronald Skomro, Supervising Environmental Sanitarian, Coordinator of the Asbestos Program at 860-509-7367.

Sincerely,

Suzanne Blancaflor, MS, Chief
Environmental Health Section

C: J. Smith, Office of Policy Management

Post-it® Fax Note 7671	Date 3/12/07	# of pages ▶ 2
To Conrad Murphy	From Cheryl Chase	
Co./Dept. MRA	Co. DEP	
Phone #	Phone #	
Fax # 203 272 9733	Fax #	

APPENDIX C
Record of Public Outreach

INTRODUCTION

- Project Overview
- Purpose of Environmental Impact Evaluation
- Roles of Participants
  - Town of Middlebury
  - Heritage Village Water Company (HVWC)
  - Connecticut Water Company (CWC)
  - Department of Environmental Protection

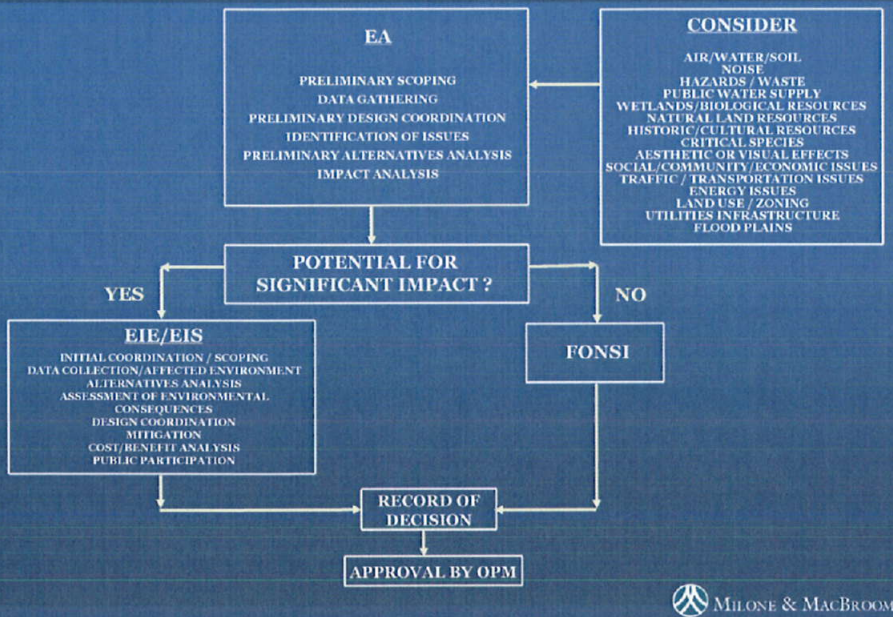
MILONE & MACBROOM

PURPOSE OF TODAY'S MEETING

- Provide background information
- Present the project's scope and objectives
- Provide information relative to the overall schedule and future efforts of the project
- Provide a forum for gathering input from the public
- Understand the areas of public interest
- Identify questions to be answered

Milone & MacBroom

CEPA/NEPA PROCESS



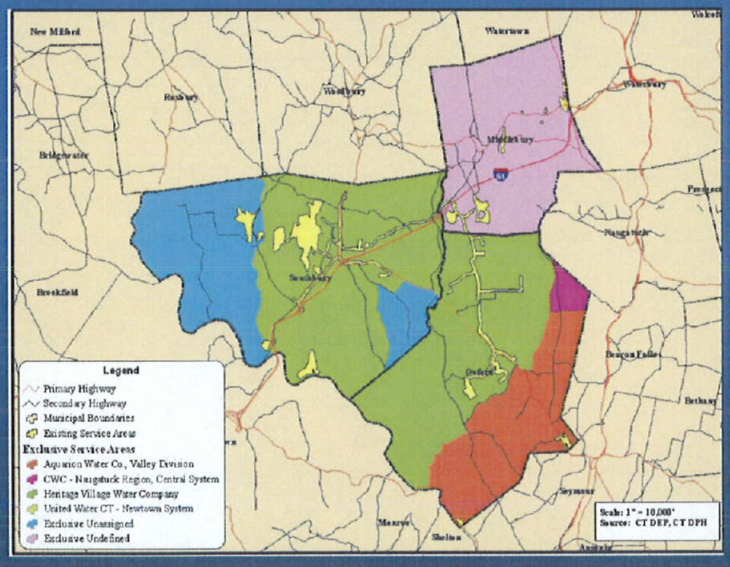
Milone & MacBroom

NATURE OF ACTION

- CWC fund and install water main along Tucker Hill and Chase Roads
- New service lines installed to Ledgewood Park and Convalescent Home
- HVWC will fund the installation of water main along Tucker Hill Road and CT Route 188
- Town will fund and construct a pump station on Town property fronting Tucker Hill Road
- Water service will be provided to the Town Library via the Route 188 extension
- Emergency interconnection will be made to Westover School

MILONE & MACBROOM

PROJECT LOCATION



MILONE & MACBROOM

PROJECT LOCATION

MILONE & MACBROOM

PROJECT LOCATION

MILONE & MACBROOM

PROJECT PURPOSE

- Supply the Town Library with public water
- Supply park and Convalescent Home with public water

- Provide an emergency supply for Westover School
- Improve water pressure in the Bronson Road area
- Supply HVWC with an adequate margin of safety for peak demands

Milone & MacBroom

LOCATIONAL OBJECTIVES

- Maintain proximity to several municipal buildings
  - Town Hall
  - Town Library
  - Shepardson Community Center

- Maintain proximity to Westover School
- Maintain proximity to Bronson Drive area
- Maintain cost-effectiveness of project

Milone & MacBroom

DATA COLLECTION

- Conservation and Development Policies Plan for Connecticut
- CWC water supply plan
- HVWC water supply plan
- United Water Company water supply plan
- Department of Public Utilities Docket Number 5-11-06
- Town of Middlebury Water Commission Water Supply Plan
- Source Expansion Study, Heritage Village Water Company

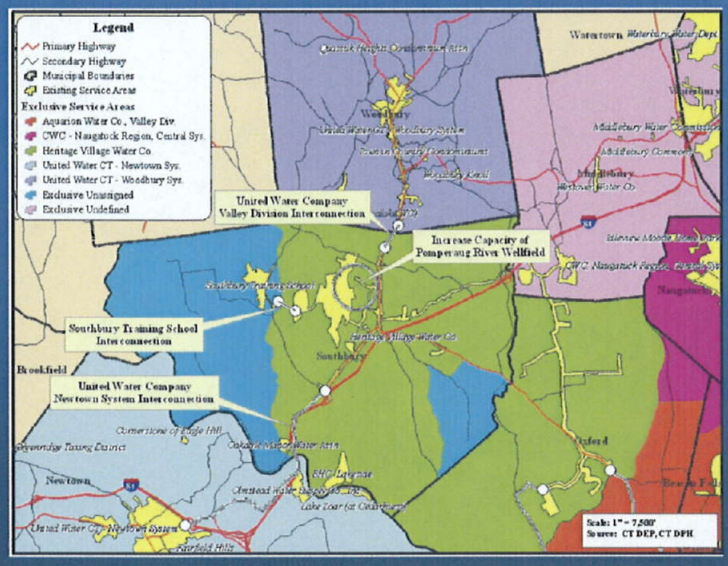
Milone & MacBroom

ALTERNATIVES FOR HVWC SUPPLY

- HVWC and CWC interconnection
  - Route 64 & Route 188
- United Water Company's Newtown system interconnection
- United Water Company's Woodbury system interconnection
- Southbury Training School interconnection
- Increase capacity of existing Pomperaug River wellfield

Milone & MacBroom

ALTERNATIVES FOR HVWC SUPPLY



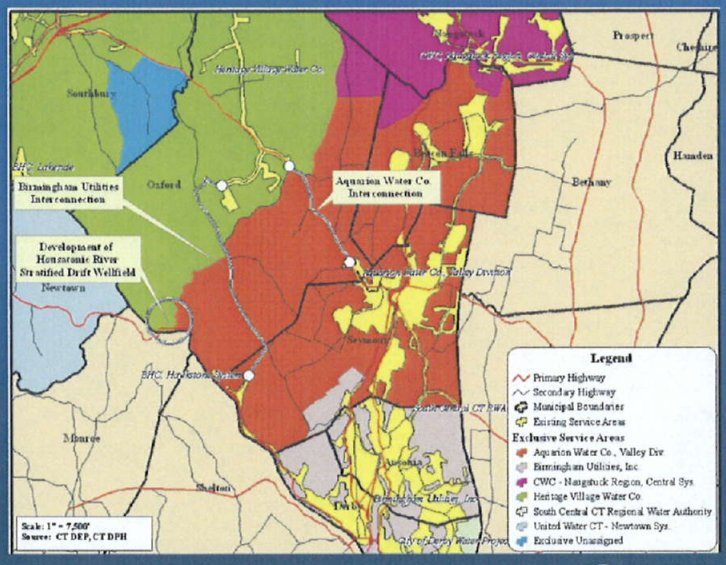
MILONE & MACBROOM

ALTERNATIVES FOR HVWC SUPPLY

- Aquarion Water Company interconnection
- Birmingham Utilities interconnection
- Development of new stratified drift wellfield at Housatonic River
- Development of new bedrock wells in HVWC system

MILONE & MACBROOM

ALTERNATIVES FOR HVWC SUPPLY



MILONE & MACBROOM

ALTERNATIVES FOR OTHER PROJECT OBJECTIVES

- Camp Road pumping station
- Development of fully redundant well system at Westover School
- Increase storage facilities at Westover School
- Interconnect CWC's Heritage-Middlebury and Central Systems
- Consolidate Westover School's off-campus users with CWC's Heritage-Middlebury system

MILONE & MACBROOM

SELECTED ALTERNATIVE

- Provides HVWC with an adequate margin of safety for peak demand purposes
- Provides service to Ledgewood Park and the Middlebury Convalescent Home
- Provides emergency service to Westover School
- Provides public water to the Town Library
- Increases the water pressure to the Bronson Drive area
- Cost-effectiveness of alternative

Milone & MacBroom

CONSIDERATIONS

- Flood hazard potential
- Consistency with the State C & D Policies Plan for Connecticut
- Route Zoning Designations
- Potential to impact sensitive environmental resources
- Compatibility with surrounding aesthetic quality
- Consistency with physical environment
- Ability to meet project needs, goals, and objectives

Milone & MacBroom

EXISTING CONDITIONS ASSESSMENT/IMPACT EVALUATION

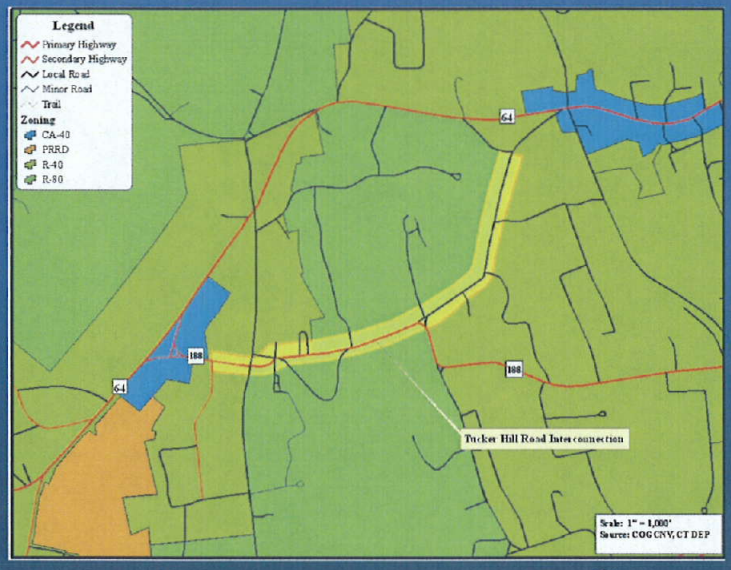
- Land Use & Zoning
  - Statewide Land Use, Conservation and Development
  - Regional Land Use
  - Land Uses and Zoning in the Project Area
- Socioeconomics
  - Demographics
  - Employment

MILONE & MACBROOM

C & D MAP

MILONE & MACBROOM

ZONING MAP



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EXISTING CONDITIONS ASSESSMENT/IMPACT EVALUATION

- Community Facilities and Services
  - Education
  - Public Safety and Emergency Services
  - Parks and Recreation
- Aesthetic / Visual Resources

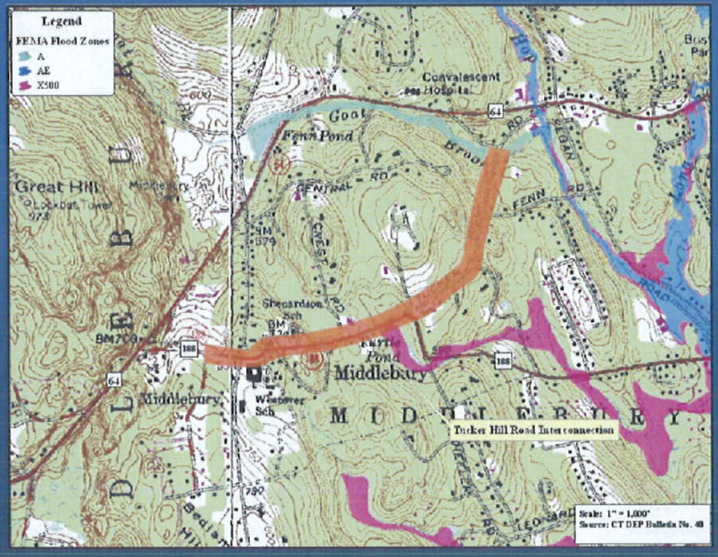
MILONE & MACBROOM

EXISTING CONDITIONS ASSESSMENT/IMPACT EVALUATION

- Public Utilities and Services
  - Water
  - Sanitary and Storm Sewer
  - Electric / Energy and Natural Gas
  - Telephone and Cable
- Cultural Resources
- Traffic and Parking
- Water Resources
  - Surface Water Resources
  - Water Quality
- Flood Hazard Potential

MILONE & MACBROOM

FEMA MAP



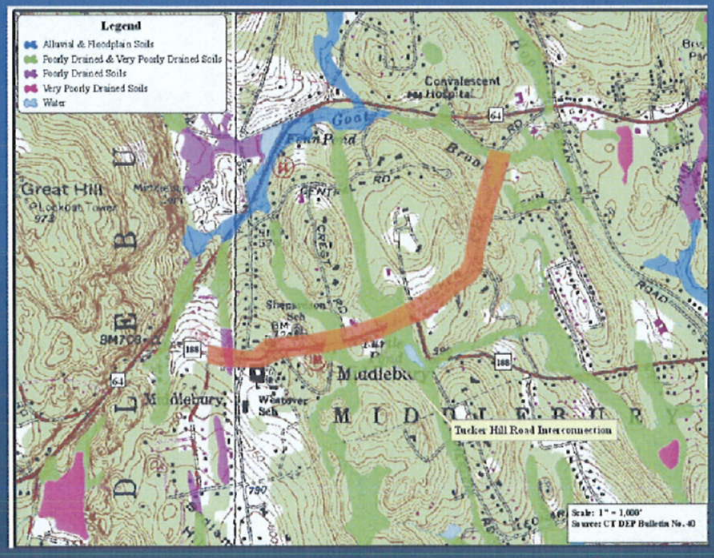
MILONE & MACBROOM

EXISTING CONDITIONS ASSESSMENT/IMPACT EVALUATION

- Biological Environment
  - Fish and Wildlife
  - Inland Wetlands
  - Threatened, Endangered, and Species of Special Concern
- Physical Environment
  - Topography
  - Geology

MILONE & MACBROOM

WETLANDS MAP



MILONE & MACBROOM

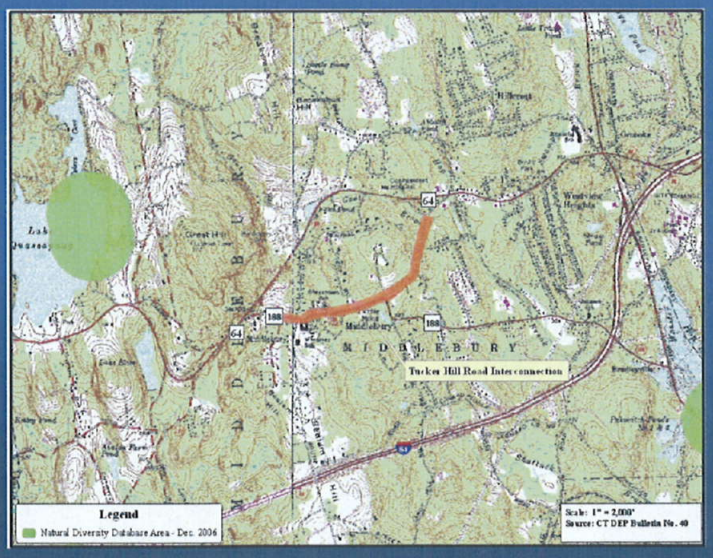
GOAT BROOK

MILONE & MACBROOM

TURTLE POND

MILONE & MACBROOM

NDDB MAP



MILONE & MACBROOM

EXISTING CONDITIONS ASSESSMENT/IMPACT EVALUATION

- Air Quality
  - Federal Air Quality Regulations and Criteria
  - Attainment Designations for County
  - Statewide Air Quality Policies and Regulations
  - Monitored Air Quality
- Noise
- Solid Waste and Hazardous Materials

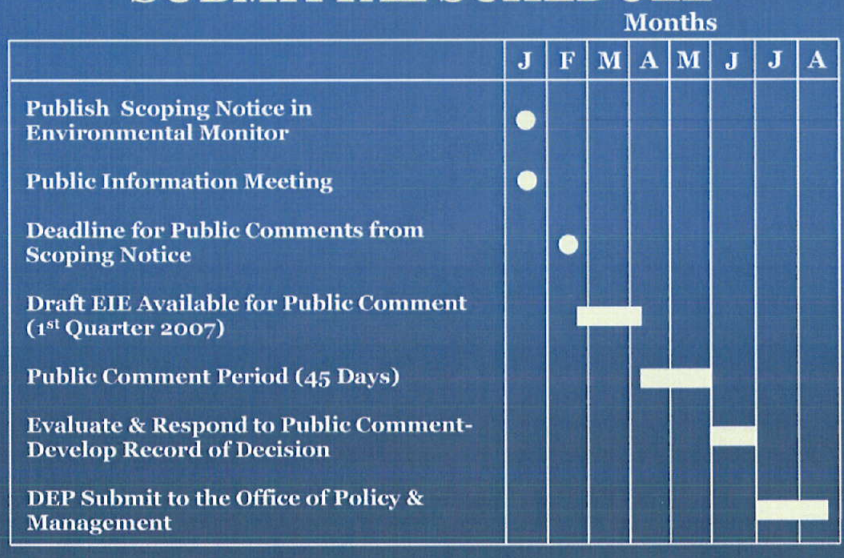
MILONE & MACBROOM

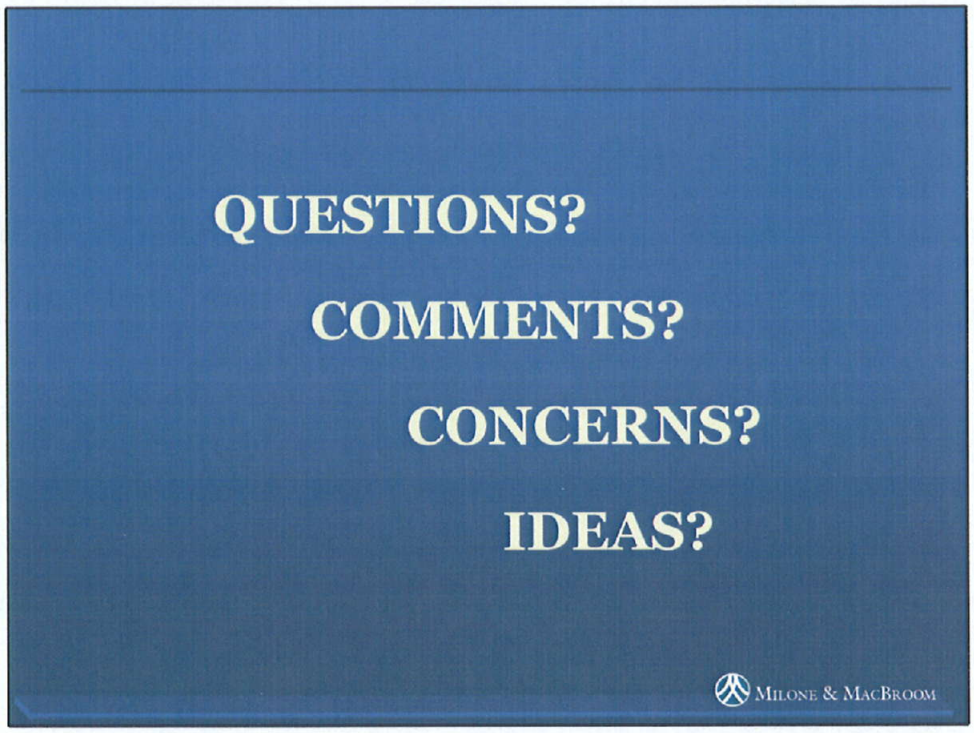
MITIGATION OPPORTUNITIES

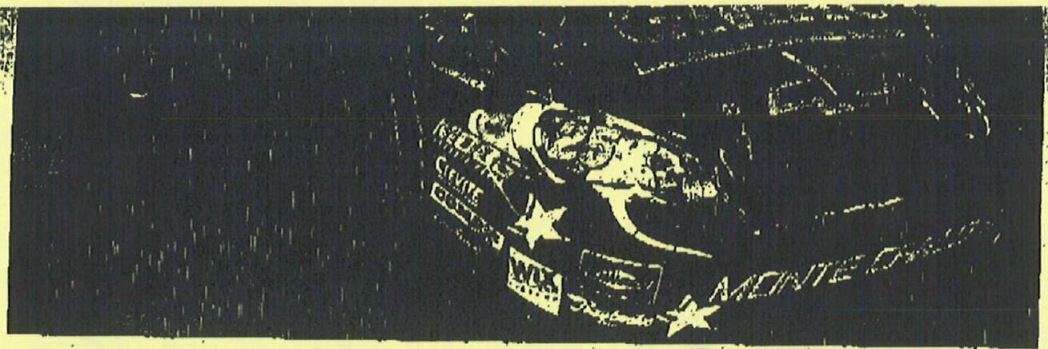
- Land Use
- Socioeconomics
- Community Facilities and Services
- Aesthetic / Visual Resources
- Public Utilities and Services
- Cultural Resources
- Others

Milone & MacBroom

EIE DEVELOPMENT AND SUBMITTAL SCHEDULE




QUESTIONS?
COMMENTS?
CONCERNS?
IDEAS?
MILONE & MACBROOM



STEVEN VALENTI REPUBLICAN-AMERICAN

June Riberio of Northfield and her son, Staff Sgt. Torianno Riberio, look at the National Guard/GMAC Chevrolet Monte Carlo SS NASCAR racer at the Naugatuck Valley Community College Auto Center on Thomaston Avenue in Waterbury on Wednesday. The public was given the opportunity to visit the center and see the stock racing car. Students from Kaynor Tech and the college also checked out the wheels.

Possibility of new water line moves closer

BY DANIEL D'AMBROSIO
REPUBLICAN-AMERICAN

MIDDLEBURY — The town is moving closer to breaking ground on a water project that would involve more than a mile of new line that will solve a number of problems, including bringing public water to the library.

Ray Adamaitis, utility service manager of Connecticut Water Co., said the project would utilize a lot of pipe that's already in the ground. Connecticut Water serves the large majority of Middlebury residents in the central and eastern parts of town.

Adamaitis attended a presentation in the Shepardson Community Building on Wednesday to hear an update on the project by two consultants from Cheshire-based Milone & MacBroom. First Selectman Edward B. St. John and Water Commissioner Jack Proulx also attended the meeting, along with a dozen or so others.

Connecticut Water hired Milone & MacBroom to complete an Environmental Impact Evaluation for the project, required by the De-

See WATER, Page 2B

REPUBLICAN-AMERIC

WATERTOWN — administration unvei liminary operational day that recommen million education b 2007-08, an increase million, or 6.56 per current spending.

Superintendent Jos ardi Jr. said the distri to recapture lost sta programs that began comeback last year w and school budgets the first referendum.

Erardi said the fou areas, developed afte ous consultations wi administrators, will b ing accreditation cc work at Watertow School, re-establishin arts programs at Swi School, keeping class manageable levels an ing school safety and s

The superintendent teaching positions we nated from the district 2003 and 2006. The al learning program at school and a highly Talented and Gifted that serviced student schools both fell by the over the years, he said.

See BUDGET,

ATT
Mark Hinsley
203-272-9733

ist chief

otion with them."
ck said he expects to
those plants when he
s details of the arrests
March 2 hearing, when
will decide whether to
arbero and Litwin into
ram which would allow
e opportunity to clear
ords.
Community Service Pro-
gram is available to cer-
ple charged with drug
, and, upon completion
unity service, the crim-
e could be dismissed.

f delight

tive action movie based
book.
son said other people
nated amenities to the
which opened last

ible rocking chair and a
r storytelling in the chil-
department were con-
l, and members of the
Friends of the Library
money for couches in the
ea.

e money

including an expected
3, or 12 percent, rise in
insurance expenses. The
crease associated with
nel under contract would
t $1.1 million, he said.
d Chairwoman Mary
said Erardi's proposals
discussed at a series of
oard workshops, the first
7 p.m. Monday at the pri-
chool media center, 779
gham St.

the proposal could have been more detailed, while others supported it because it might have provided affordable housing to an area where the median income is around $96,000.

The Potters cited a general atmosphere of contentiousness in town as another reason for withdrawing their offer.

"A friend who wrote a note of support said, 'I don't understand why people are so contentious — why folks can't come together to create solutions (be it farm land or school building issues) with grace and generosity and good hearts — especially since all of us in this area are so blessed,'" their letter states.

development on the property, of up to 25 homes, which would lead to an increase in the cost of town services associated with a population increase.

Officials worked for months to bring the proposal to residents and it was expected to go before voters at a referendum.

"We're disappointed because the people never got the chance to decide on it," said First Selectman Richard C. Sears. "It was the nature of the debate that killed it."

Other properties have been offered to the town that could be used for affordable housing or open space, but those have not been reviewed as fully as the Potter farm proposal, Sears said.

WATER: Middlebury job closer to reality

Continued from 1B

partment of Environmental Protection before it pays for a needed pumping station with a grant in the range of $250,000 to $500,000.

The remaining cost of the project, estimated at about $1 million, would be covered by Heritage Village Water Co., which serves a few Middlebury customers, but mostly wants to take care of peak demand problems in Southbury and Oxford.

The project involves extending an existing water main in the Chase Road area up Tucker Hill Road to Route 188 and the Bronson Road area.

The line would run between 6,000 and 7,000 feet, and along the way would bring water to the town library, improve the supply at Westover School, which has it's own small water system, and increase water pressure in the Bronson Road area, where it is low.

The town installed an ultraviolet filtration system for the library's well water in May 2006 after coliform bacteria was found in the water in December 2005, and the water supply had to be shut down.

For several months library patrons used bottled water and waterless hand-washing solution.

Senior hydrogeologist David Murphy of Milone & MacBroom said Wednesday the draft Environmental Impact Evaluation will be available by March at the latest. He said he expected the project to come before the state Office of Policy and Management for final approval by July.

St. John said he was anxious for the work to begin.

"This is very critical to the town of Middlebury," St. John said. "We're going to push like it's never been pushed."

the city's proposed $100 million downtown redevelopment project. That plan calls for the building's demolition.

"We've been talking about redevelopment for 25 years, so that didn't play much of a factor," said Ferency.

First phase of boat ramp project OK'd

WASHINGTON, Conn. — The first phase of a $216,000 renovation to a town-owned boat launch on Lake Waramaug was approved by the Zoning Commission this week.

The project entails leveling the property on East Shore Road, renovating a submerged boat ramp and adding parking for nine boats with trailers.

A state grant of $100,000 is expected for the project, along with about $25,000 in donations from the Lake Waramaug Association, said First Selectman Richard C. Sears.

Grants and anticipated financial assistance from the neighboring towns of Kent and Warren would leave no cost to Washington taxpayers for the project, Sears has said.

The project will likely go out to bid in the spring, he said.

Two phases for future renovations at the site are in the planning stages and would need approval by the commission for construction to begin.

Special playscape planned in Winsted

WINSTED — Pending stat
Bond Commission approv
that is expected Friday, t
Winsted Area Child Care Ce
ter will receive $26,673 to pu
chase a handicapped-accessit
playscape and child-sized co
modes.

Director Paige Corey s
parents will help to remove
current playground equipm
in the spring, and the plan i
have the new playscape in pl
by the time the spring progr
start.

The center serves 200 c
dren aged 6 weeks to 12 ye
some of whom are unable to
the current structure.

The local grant is part of
million package of grants f