Town of Waitsfield Wastewater Facilities Plan Update
Community Wastewater Loan Fund Program

Waitsfield Village and Irasville, Vermont

CWSRF Loan Number RF1-164-1

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for Local, Vermont DEC, and US EPA Review

December 5, 2012

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Executive Summary

This Wastewater Facilities Plan Update summarizes the proposed Community Wastewater Loan Fund Program (CWLFP), which is intended by the Town of Waitsfield to represent a permanent, long-term solution to the provision of publicly-supported wastewater treatment capacity in the Waitsfield Village and Irasville areas of the Town (Project Area). The CWLFP will be a voluntary program providing project assistance and low-interest loan funds to individual property owners or associations of property owners for the repair, replacement, renovation, enhancement, expansion, or construction of on-site and shared off-site wastewater treatment systems within Waitsfield Village and Irasville. It is the Town's intent that the CWLFP will (1) provide a reliable source of low-cost financing and project development assistance to support the development of modern, reliable and safe wastewater treatment, (2) enable property owners and the Town to address known and ongoing environmental and public health issues, and (3) support the economic health and vitality of the Town's historic and primary economic centers by enabling adaptive re-use and expansion of existing facilities, as well as a limited amount of additional growth over and above what would occur without the CWLFP.

Through the CWLFP, the Town of Waitsfield will provide property owners with a source of low-interest, long-term (20 year) loan funds for the repair, replacement, renovation, expansion, enhancement, or construction of on-site and shared off-site wastewater treatment and dispersal systems. To enhance the value of participating in the CWLFP, the Town also will provide engineering, permitting, and management assistance to participating property owners. Funding to capitalize the CWLFP will come from grant monies available through a US Environmental Protection Agency State and Tribal Assistance Grant (STAG) to the Town, and State Revolving Fund (SRF) monies.

In proposing the CWLFP, the Town is addressing ongoing, documented public health and environmental issues related to wastewater treatment and disposal in the Project Area. While many previously documented issues related to the proximity of on-site water supplies and wastewater systems are being rectified through the Town's ongoing construction of its new public water system serving the Project Area, the Town has carefully documented both the need for wastewater treatment capacity, and the opportunity to achieve improved environmental and public health protection and a limited amount of expanded treatment capacity through a loan program directed to on-site systems.

Because the CWLFP is a voluntary, site-specific program for wastewater treatment systems, the specific wastewater treatment methods, the number and location of sites involved, and the total new wastewater treatment capacity that will be created as a result of the CWLFP cannot be determined absolutely. Nonetheless, based on detailed studies of Waitsfield Village and Irasville, engineering and planning

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conducted between 2010 and 2012, and the amount of funding available, this Facilities Plan and the estimated impacts evaluated herein anticipate the following maximum scope:

(1) Construction of roughly six (6) to ten (10) systems, each serving 1 to 10 properties with design capacities ranging from 1,500 to 12,000 gallons per day, dispersed throughout the Project Area.
(2) Use of a combination of different treatment and dispersal technologies approved by the Vermont Department of Environmental Conservation (under either the Indirect Discharge Rules or the Wastewater System and Potable Water Supply Rules) as appropriate to individual uses and site circumstances.
(3) Limited construction disturbance for collection and treatment infrastructure, as well as new, expanded or renovated dispersal (leach) fields, associated with each system.
(4) In the context of each project supported, provision of sufficient new or additional wastewater treatment capacity not presently permitted within the Project Area to support adaptive re-use of existing buildings, and new or expanded uses or buildings. Based on studies, property owner surveys, and the proposed Pilot Project, full implementation of the CWLFP will enable new or expanded uses or buildings representing approximately a twenty-five percent (25%) increase over existing conditions, for those six to ten properties or associations participating in the program.
(5) Total expenditure of US EPA STAG and Vermont SRF funds under this Facilities Plan of $1.2 million.

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1.0 Project Background

Since the mid-1980s, the Town of Waitsfield has studied the issue of how best to provide public support for wastewater treatment capacity in Irasville and Waitsfield Village, which are the historic population and development centers of the Mad River Valley and which serve as the economic and social hubs of the Town and larger community (Figure 1). An organized wastewater system has long been studied that would replace currently inadequate and failing septic systems and increase capacity for new development within the Mad River Valley's commercial and residential core. Subsequent to planning studies completed in February 1987 and August 1997, and funded by State Revolving Fund planning advance RF1-164, the Town undertook preparation of a full Wastewater Facilities Plan Report for public wastewater collection and treatment in the Irasville and Waitsfield Village areas (Figure 2).

The Wastewater Facilities Plan Report, submitted on August 31, 2004, focused on a proposal for a centralized wastewater collection system providing up to 80,000 gpd of wastewater treatment and dispersal capacity in two phases, at a projected cost of $12 million. Due to the 2004 Facilities Plan's assumed goal of supporting substantial future growth, particularly in Irasville, decentralized options to supply substantial wastewater capacity were considered but did not receive detailed study. Design work on the proposed centralized system continued after the submittal to VANR of the Wastewater Facilities Plan Report, leading up to a bond vote on the municipal funding necessary to construct the proposed system, held in March 2008.

The estimated costs of a conventional gravity collection system, engineering and environmental limitations on the capacity of the centralized dispersal field, and the estimated costs of construction and operation per user were among the factors cited by voters in the defeat of one of the two proposed wastewater project bond issues at the March 2008 Town Meeting. After the failed bond vote, the Town essentially abandoned the consideration of a single, "big pipe" solution to the problem of wastewater. A parallel municipal bond vote for the construction of a municipal water project, while initially defeated at the 2008 Town Meeting, was ultimately approved in November 2008, and Waitsfield's Municipal Water Project is nearing completion of construction as of this writing (November 2012).

Although the bond for the centralized wastewater project was defeated, the Town recognized that wastewater capacity and proper system function remained significant public health and economic concerns for Irasville and Waitsfield Village, and that construction of the public water system serving Waitsield Village and Irasville removed a significant constraint to the use of on-site treatment systems. The Town of Waitsfield's Selectboard subsequently requested that the Planning Commission review the potential options for wastewater management in Waitsfield Village and Irasville. The Planning Commission appointed a Wastewater Committee to undertake this effort in the spring of 2010. The Wastewater Committee obtained

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a Vermont Municipal Planning Grant in order to explore new options for providing wastewater treatment capacity in Waitsfield's villages.

The resulting *Assessment of Decentralized Wastewater Options: A Survey of Needs, Capacity, and Solutions for Historic Waitsfield Village and Irasvile, Vermont*, submitted January 25, 2011, had three objectives:

- Update the existing survey of water supply and wastewater treatment infrastructure;
- Re-evaluate wastewater treatment and dispersal capacity and needs in light of the municipal water project now under construction; and
- Evaluate wastewater management options and develop a summary report.

The 2011 *Assessment of Decentralized Wastewater Options* recommended establishment of a structured program that can provide incremental support for improved wastewater management to the community:

> In summary, this study recommends that the Town of Waitsfield consider implementation of a revolving loan fund based on relevant Vermont precedent, and to proceed by first establishing a Wastewater Management District. This District would oversee a structure and process for directing existing EPA State and Tribal Assistance Grants, Clean Water State Revolving Loan Funds, and other available funding solutions, to support the provision of appropriately managed decentralized wastewater treatment and dispersal capacity in Waitsfield Village and Irasville (p. iii).

In December 2011, the Wastewater Committee continued to refine this recommendation by determining the specific steps needed for the Town to move forward. The work focused on the steps needed to support a community loan program using funds from the Vermont State Revolving Fund (SRF) and funds from the Town's existing, obligated State & Tribal Assistance Grant (STAG) of $906,100. Members of the Committee, the Town's consultants, and the Town Attorney met with staff of the Vermont Agency of Natural Resources and made further progress on the specific steps and actions needed to establish such a program.

The results of the working sessions were presented to the Select Board on December 12, 2011, at which time the Select Board approved the Wastewater Committee securing additional services to further develop the structure of the community loan program, including:

- Draft legal agreements for property owners to make use of public funds to construct decentralized systems;
- Complete necessary documentation for EPA, SRF paperwork and agreements, SRF priority list forms, and determine scope of NEPA (Federal environmental) review for the loan fund project;

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- Develop outline of scope to amend the 2004 Engineering Facilities Plan Report from into an approvable Facilities Plan, including loan program documentation and the construction of at least one pilot project; and
- Develop engineering cost estimates to assist in NEPA review and preparation of Facilities Plan and pilot project construction

From February to July of 2012, the Wastewater Committee and its consultants completed this work, which is detailed in Section 3.0. A bond vote was held concurrently with Waitsfield's Town Meeting in March 2012, and the voters approved borrowing of up to $250,000 from the Vermont State Revolving Fund "for the purpose of funding loans for the construction, repair, replacement or expansion of privately-owned on-site wastewater systems, with said loans to be repaid by the individuals or associations receiving funds therefor pursuant to agreements approved by the Town and Vermont Department of Environmental Conservation"[1]. A summary of the legal agreements, financial *pro forma*, mechanics of the community loan program, and the scope of work needed to bring the 2004 *Wastewater Facilities Plan Report* into line with the Town's current plan to implement a Community Wastewater Loan Fund Program, was presented to the Select Board on July 9, 2012. At its July 9, 2012 meeting, the Select Board voted to continue moving forward with the CWLFP, including securing consulting services to prepare this update of the 2004 *Wastewater Facilities Plan Report*, and to authorize an application for a SRF loan amendment to accommodate costs associated with this Facilities Plan Update.

1.1 Plan Organization and Use

This Facilities Plan is intended to describe Waitsfield's plan for providing funding to property owners or groups of property owners in support of wastewater infrastructure projects, and to be a roadmap for those interested parties to use in implementing wastewater projects.

Section 2.0 draws extensively on the 2011 *Assessment of Decentralized Wastewater Options* to provide a detailed summary of existing conditions in Waitsfield Village and Irasville, including population trends, the current state of water supply and wastewater treatment infrastructure, and a statement of project need.

Section 3.0 describes the structure of Waitsfield's proposed Community Wastewater Loan Fund Program, including the scope of the proposed program, the expected legal structure and necessary agreements, mechanics of project construction payments and loan repayments, and a financial *pro forma* illustrating likely project costs and re-payment schedules.

Section 4.0 includes a discussion of expected regulatory review and permitting requirements for the CWLFP, from the submittal of this Facilities Plan through the

[1] See entire bond article at http://www.waitsfieldvt.us/annualmeeting/2012/bond_warning.cfm.

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implementation of individual wastewater improvement projects under the CWLFP and Vermont's wastewater and environmental regulations.

Sections 5.0, 6.0, and 7.0 describe the wastewater collection, treatment, and dispersal options available to property owners under Vermont's various wastewater regulations, and provide recommendations about the range of alternatives that are both feasible to permit, and most reliable in practice.

Section 8.0 outlines the first project to be implemented under the CWLFP: a pilot system that will use well-known, reliable treatment and dispersal components to replace and upgrade an existing shared system in Irasville, enabling both expansion and changes of use within existing building footprints and a limited amount of new construction or building expansion, consistent with the capacity and growth impact projections in this Facilities Plan Update.

Section 9.0 briefly summarizes the recommendations of this Facilities Plan Update.

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2.0 Summary of Existing Conditions

2.1 Definition of the Service Area

The proposed service area (Project Area) for the Community Wastewater Loan Fund Program will be the same area served by the public water project presently under construction (Figure 2, Project Area). This area encompasses the three zoning districts that are designated in the July 2010 *Waitsfield Town Plan*, and in the Waitsfield Zoning Bylaws as adopted May 17, 2010, as village or growth centers (Figure 3)[2]. The purposes of each of these zoning districts, as stated in the Waitsfield Zoning Bylaws, are included below:

- The purpose of the [Waitsfield] Village Business District is to promote a mix of uses in the traditional center of Waitsfield Village while preserving the area's historic character, architectural resources and ability to function as a livable community, as described in the Waitsfield Town Plan. A mix of residential, civic, cultural, and commercial uses are allowed, providing such uses are compatible with existing uses.
- The purpose of the [Waitsfield] Village Residential District is to maintain and enhance the residential and historic character of Waitsfield Village outside of the commercial core, as described in the Waitsfield Town Plan, and to allow for additional residential, public, institutional, and very limited commercial uses in a manner that supports the historic settlement pattern of the Village and maintains the Village's ability to function as a livable community.
- The purpose of the Irasville Village District is to function as the town's growth center as defined in the Waitsfield Town Plan, to enable coordinated expansion of residential development, shopping facilities, and other commercial uses that minimize traffic impacts, and which concentrate development into a more compact village setting.

It is the express intent of the Town of Waitsfield to utilize State and Federal funds to make loans to construct, expand, renovate, enhance, replace or repair wastewater treatment systems serving properties within the Project Area only. At such time in the future as the Town chooses to expand the loan program to serve a wider

[2] The Town of Waitsfield, in its Comprehensive Plan adopted pursuant to 24 V.S.A. Chapter 111, has designated the Irasville portion of the Project Area as its local and Town-specific "growth center," and the historic Waitsfield Village area as a town-specific "village center." The Irasville area has not, as will be discussed, received state approval under the Growth Centers program in 24 V.S.A. § 2793c. The Waitsfield Village historic district is a State-designated Village Center under 24 V.S.A. § 2793a.

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geographic area, and to utilize public funds for this purpose in a manner requiring this level of Facilities Plan analysis and review, further analysis will be provided.

Unlike the proposal for a centralized system articulated in the 2004 *Wastewater Facilities Plan Report*, the CWLFP does not include the construction of collection, treatment or dispersal infrastructure outside the boundaries of the service area. This project will support a series of soil-based on-site or clustered off-site wastewater treatment systems for those properties located wholly or substantially within the Project Area; as such, it is a stated objective of the project to minimize collection infrastructure and to treat wastewater as close to its source as possible, given soil, topographic, and building constraints. Other than allowing for a case in which a component of a treatment system may be located partially outside the Project Area due to site constraints, this project contemplates construction only within the boundaries of the Project Area.

2.2 Community Profile and Growth Center Designation Status

Waitsfield serves as the commercial center of Central Vermont's Mad River Valley, and is located between the village centers in Moretown and Warren. The Town is bordered by Moretown and Duxbury to the north, Northfield to the east, Warren to the south, and Fayston to the west. Waitsfield Village contains residences and commercial development, as well as municipal services including the Waitsfield Elementary School, fire and ambulance services, the Town Offices, the General Wait House welcome center and offices, the Mad River Valley Health Center, and the Joslin Memorial Library. Existing development in Irasville is primarily commercial, although there are a few residences, as well as apartments and senior housing. Woodlands, rural residential areas, and agricultural land surround the Project Area.

The Waitsfield Village and Irasville Project Area includes 139 individual tax parcels, totaling approximately 255 acres (Table 2-1). Within the Waitsfield Village area, 21 parcels contain single-family residences or multi-unit residential condominiums. The Village contains over a dozen small retail stores, offices, cafés, and restaurants, some with accessory apartments or residences, as well as the Mad River Valley Health Center. There are also several public buildings including the Town Offices, post office, library, Waitsfield-Fayston Fire Station, Mad River Valley Ambulance, the Waitsfield United Church of Christ, Mad River Valley Welcome Center in the General Wait House, and the Waitsfield Elementary School.

The Irasville area, in contrast, functions as the Mad River Valley's "downtown" for commercial and service businesses (Waitsfield Town Plan, 2010), and hosts two grocery stores and a natural foods market, several restaurants, the Mad River Green and Village Square shopping centers, the Waitsfield Inn, a movie theater, lumber yard, and three gas stations, as well as senior and affordable housing, additional commercial enterprises, and 10 residences. Parcel sizes for developed properties in both areas range from less than 0.1 acre to about 26 acres.

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Table 2-1 Summary of Property Uses in Waitsfield Village and Irasville

	Total of Properties		
Property Use	**Waitsfield Village**	**Irasville**	**Total**
Single-Family Residence	23	12	35
Multi-family residence	1	2	3
Commercial properties	12	37	49
Mixed residential/ commercial	15	11	26
Municipal or institutional use	8	3	11
Open/unbuilt	4	7	11
Total	**63**	**72**	**135**

Data source: *Assessment of Decentralized Wastewater Options*, January 2011

A number of important policy, planning and implementation steps for the Study Area are on hold while plans for wastewater treatment solutions are developed. Zoning district and bylaw changes to incentivize adaptive re-use of existing buildings and promote limited expansion and infill development have been proposed for the Irasville Village District for some time, but these changes are on hold primarily due to a lack of supporting municipal utility infrastructure. The Master Development Plan for the Irasville Growth Center (2002) and resulting proposed zoning revisions (Town of Waitsfield, 2007) all were conditioned upon the provision of municipal, centralized water supply, and wastewater treatment infrastructure.

Formal growth center designation for Irasville also is on hold pending an approach for wastewater treatment. The Town of Waitsfield applied for State of Vermont Growth Center Designation in February 2008; the designated area is to include Waitsfield's historic Village Center and Irasville (Town of Waitsfield, 2008). The proposal received general support in its preliminary review by the Growth Center Planning Coordination Group. However, submission of the final application to the Expanded Downtown Board was dissuaded until an approach for wastewater and water infrastructure within the proposed growth center was substantially established.

The lack of a growth center designation also stopped the Town from applying for the formation of a Tax Increment Financing (TIF) district, which had the potential to encourage public and private real property development or redevelopment while providing some revenue to the Town in the form of property taxes that would be utilized to pay the debts incurred to provide municipal water supply and wastewater infrastructure.

It is the express intent of the Town that the Community Wastewater Loan Fund Program provide the needed approach, complementing the municipal water system now under construction. Once the CWLFP is in place, the Town will be able to revisit the Growth Center application process.

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2.3 Condition of Existing Facilities (Water & Wastewater Infrastructure)

(Note: The information provided in this section relies heavily upon the writing in the 2011 *Assessment of Decentralized Wastewater Options*, but has been updated where appropriate to accurately describe current conditions related on on-site wastewater permitting and the status of connections to the Waitsfield Municipal Water Project.)

Currently, all properties within the Project Area are served by individual or shared water supplies and wastewater treatment systems. Information about the locations and types of water and wastewater infrastructure in the study area, as well as the protective buffer distance or "well shield" for each water supply, is shown on Figure 4. Many properties within the Project Area are in the process of connecting to the public water supply system, as shown on Figure 5. Current water supply infrastructure by property type, including the status of connections to the municipal water system following completion of that project, is summarized in Table 2-2. Current wastewater treatment infrastructure by property type is summarized in Table 2-3.

Table 2-2 Summary of Water Supply Infrastructure by Parcel

	Current Condition		**Following Municipal Water Project**		
Water Supply Type	**Waitsfield Village**	**Irasville**	**Waitsfield Village**	**Irasville**	**Total**
Municipal water connection	0	0	30	46	76
Public Water Supply (drilled well)	2	8	1	1	2
Individual or shared drilled well	45	51	20	15	35
Individual or shared shallow well/spring	7	5	3	2	5
Open/unbuilt or no water supply	9	8	9	8	17
Total	**63**	**72**	**63**	**72**	**135**

Data source: *Assessment of Decentralized Wastewater Options*, January 2011, as updated.

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Table 2-3 Summary of Wastewater Treatment Infrastructure by Parcel

Wastewater System Type	Waitsfield Village	Irasville	Total
Septic tank and drywell(s)	14	7	21
Septic tank and in-ground leachfield	34	39	73
Septic tank and raised leachfield (at-grade or mound)	0	3	3
Advanced treatment and filtrate leachfield	0	1	1
Indirect Discharge (large scale) system	0	3	3
Leachfield type unknown	6	7	13
Open/unbuilt or no wastewater system	9	12	21
Total	**63**	**72**	**135**

Data source: *Assessment of Decentralized Wastewater Options*, January 2011, as updated

2.4 Project Need

Within Waitsfield Village and Irasville, there continues to be a documented, demonstrated need for *system correction*, in the form of renovation, repair or replacement, to correct failing or substandard treatment conditions; for *system replacement options*, to ensure that treatment provided by systems that do not meet current Vermont standards (particularly setbacks) can be replaced either on site or in an off-site option; and for *capacity expansion*, to enable the adaptive re-use of existing structures, expansion of existing uses (notably restaurants and food processing), and a limited amount of new construction.

2.4.1 Inventory of Existing Systems

In order to construct an inventory, Stone Environmental began with the existing water supply and wastewater treatment inventory compiled by the staff of Phelps Engineering, Inc. during the completion of the 2004 *Wastewater Facilities Plan Report*. This inventory was updated with information from Vermont DEC WSPWSR permits and Indirect Discharge permits issued since the inventory was compiled in 2001-2002, as well as with information provided by respondents to property owner surveys in 2010. Figure 4 clearly illustrates the overlap on many parcels between well buffers, within which soil based wastewater dispersal should not occur, and onsite wastewater treatment and dispersal components.

In order to illustrate how the implementation of the municipal water project alters the picture regarding onsite wastewater treatment capacity, the well buffers associated with water supplies that will be decommissioned after connections to the municipal water system are made were hidden in the infrastructure inventory (Figure 5). The status of connections to the municipal water project shown on this figure is based on the project's master customer spreadsheet dated June 26, 2012, as provided by the Municipal Water Task Force. It is apparent that the incidence of wastewater treatment infrastructure potentially interfering with potable water supplies in the Irasville area will be reduced once the water project is complete. Within the Waitsfield Village area, however, a significant number of well shields will remain once the municipal water project is complete, and many of the remaining

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well shields will still overlap with onsite wastewater treatment components on the same or neighboring parcels. Connection to the municipal water system was voluntary for existing properties; therefore, where owners have opted not to connect to the municipal system, wellhead protection areas for public or private water supplies will remain in effect after the municipal water project is complete. In the future, there may be opportunities for additional connections to the municipal water system to allow the abandonment of these remaining wells, thus freeing up additional land for wastewater capacity (Section 4.2.1).

2.5 Wastewater Flows and Potential for Replacing Existing Systems

As part of the *Assessment of Decentralized Wastewater* Options, two different methods were used to determine the volume of wastewater (in gallons per day) that would need to be treated on each developed parcel. If a DEC permit existed that specified the capacity of the wastewater treatment system, that volume was assumed to be the capacity that would need to be located on the parcel if the existing wastewater system were to be replaced. If no permitted capacity for the wastewater system was available, the flow that would need to be treated and dispersed on that parcel was estimated based on the water supply allocation for the parcel in the master spreadsheet for the municipal water project. The methodology was generally to multiply that water supply allocation by a factor of two, because while the municipal water allocation is relatively low to account for flow equalization over many connections, each wastewater system is still on-site or shared among a relatively small number of users. The factor of two is somewhat conservative, but represents the likely peak flow that an individual wastewater system might reasonably be expected to treat.

The available land area for an onsite system on each property was compared to the area that would be required to replace an existing wastewater system using a GIS analysis based on the predominant soil type, design flow, and assumptions about environmental setbacks and leachfield design (methodology details may be found in Section 4 of the *Assessment of Decentralized Wastewater Options*) (Figure 6). Once the results of the GIS analyses were produced, a lot-by-lot review was conducted in order to gain an approximate understanding of the potential needs for wastewater treatment capacity in Waitsfield Village and Irasville. The wastewater design flows utilized in the needs assessment were summarized for each of several categories of need (Table 2-4) as follows:

- Parcels with physical constraints on existing wastewater systems
- Parcels that the GIS analysis indicated may have challenges replacing onsite systems in the future
- Parcels where property owners indicated that they planned to change use in the future but had no wastewater-related constraints
- Parcels where the GIS analysis and/or property owners indicated both future plans and current or future capacity needs

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The summary wastewater flow numbers were estimated simply, by adding together the estimated water use/wastewater design flow numbers for each parcel that were developed for the GIS needs assessment (Figure 6). As such, these flows are indicative of the total design flow that would likely be needed if each property's wastewater treatment system were replaced on that property.

The results of the needs assessment and the lot-by-lot review indicate some clear contrasts between Waitsfield Village and Irasville. Within Waitsfield Village, the remaining presence of many public and private water supplies results in a significant number of properties where, if a system were to need replacement in the future, the resulting system would likely be installed in a "best fix" situation if it were installed on the property. The relatively high number of parcels identified by the GIS analysis as potentially limited does result in a significant amount of potential

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Table 2-4 Summary of Design Flows by Need Category, Waitsfield Village and Irasville

Property Type	Total properties		Physical constraints on existing system		Physical constraints on replacement system		Desire for expansion/ change of use, NO existing or replacement constraints		Desire for expansion/ change of use, existing or replacement constraints	
	Number of properties	Design flow (gpd)	Number of properties	Design flow (gpd)	Number of properties	Design flow (gpd)	Number of properties	Design flow (gpd)	Number of properties	Design flow (gpd)
Single family residential	35	23,074			12	8,190	4	3,124	1	490
Multi-family residential	3	13,510			3	12,790			1	3,120
Mixed use residential /commercial	26	27,210	1	340	12	10,675	3	1,515	2	1,595
Commercial	49	59,257	4	2,490	12	23,210	9	15,864	6	4,390
Municipal/institutional	11	10,755			2	1,850	3	4,990	1	1,360
Open/unbuilt	11	0								
Total	135	133,806	5	2,830	41	56,715	19	25,493	11	10,955

Data source: *Assessment of Decentralized Wastewater Options*, January 2011, as updated

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wastewater capacity needed. In the Waitsfield Village area, significant areas of relatively suitable soils correspond closely with the pattern of existing dense development, and the potential future plans indicated by property owners may in some cases be accommodated through the addition of advanced wastewater treatment components to existing systems (thus increasing the capacity of pre-existing leachfields by improving the quality of the effluent these fields receive), or by providing some relatively small shared off-site dispersal capacity for extremely small lots. Both of these approaches to providing wastewater capacity would be eligible for funding under the CWLFP.

Within the Irasville area, a significant number of both public and private water supplies will be taken off-line once the municipal water project is complete, and parcel sizes are generally larger than in the Waitsfield Village area. As a result, there are fewer overall parcels in this area that the GIS analysis identified as potentially limited—but because of the more water-intensive, commercial uses of most of these properties, the potential wastewater treatment capacity need identified in the GIS analysis alone is approximately 33,600 gallons per day. As should be expected in an area that acts as the commercial center for much of the Mad River Valley, property owners in this area indicated that they remain interested in growing their businesses, and in changing the uses of their properties in ways that require additional wastewater treatment capacity.

In summary, the potential future needs or changes in use identified through the 2011 *Assessment of Decengralized Wastewater Options* needs assessment and property owner survey indicate that there is potential demand for solutions to improve existing or replacement systems serving 33,600 gallons per day of existing flows, and potential demand for expanded capacity of approximately 22,500 gallons per day in Irasville alone. Within Waitsfield Village, there is potential demand for solutions that enhance the capacity of existing fields and off-site shared systems providing a limited amount of further additional capacity.

2.6 Population Trends and Buildout Analysis

2.6.1 Population

The Town of Waitsfield's population grew from 1,422 in 1990 to 1,659 in 2000 (US Census, 2000 and Waitsfield Town Plan, 2010), representing a 17% increase in this ten year period. However, population growth was slower in the last decade, when Waitsfield's population grew by 68 persons to 1,719 in 2010 (US Census, 2010), a 4% increase and well below the projected 15% increase (255 additional persons) that was anticipated in the 2010 Waitsfield Town Plan. The 2010 Town Plan projected a 2020 population of 2,250; however, the unexpectedly slow growth in the 2000s is likely to reduce this estimate as new projections are prepared.

Beyond year-round population projections, a crucial component in understanding the infrastructure need in Irasville and Waitsfield Village, and the need for the CWLFP, is the impact of seasonal and tourism-related population fluctuations on the

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infrastructure and wastewater needs in the Project Area. In addition to serving as the economic and service center for the Town of Waitsfield an the Mad River Valley, Irasville and Waitsfield Village also contain a large share of the restaurant, retail, and lodging base that expands in response to seasonal and tourism-related increases in population. The prevalence of restaurant and lodging uses, and their positive economic impact on the Town, Valley and State in terms of sales, rooms, meals and alcohol taxes generated, directly underscores the economic need to provide for more robust wastewater infrastructure.

The Town Plan describes the importance of Waitsfield as the Valley's commercial center, and the associated need for infrastructure management:

> Though Waitsfield's 159 seasonal housing units represent only 8.3% of second homes in the Valley, the town houses approximately 30% of the valley's commercial lodging beds. Waitsfield is also the Valley's regional commercial center, serving the needs of nearly all the Valley's seasonal and year-round residents. It is estimated that the Valley's temporary population can reach 13,000 during the peak tourist season. Past growth projections often assumed that future vacation housing would be located adjacent to recreation attractions, and therefore result in only minor seasonal population increases in Waitsfield. Experience has shown, however, that any growth in population or seasonal visitation in the Valley impacts town infrastructure, services and facilities. The larger effective population—the year-round population plus the total visitors who could be expected to be in town for a sustained (as opposed to peak) period—is a critical factor in determining the town's capacity for future growth, and the impact of future regional development on Waitsfield. (2010 Town Plan, page 54)

Seasonality and fluctuations in population and use, particularly for lodging and restaurants, requires a robust and well-maintained wastewater and water infrastructure. The improved infrastructure anticipated through the CWLFP is intended in large part to ensure that uses with seasonal variability have reliable, modern wastewater treatment to cover peak use periods.

2.6.2 Build-Out and Growth Assessments

The interaction of wastewater capacity and growth potential in Waitsfield Village and Irasville has been studied in depth since the 1990s. The prior proposal for a conventional sewer collection and treatment system was designed, in pertinent part, to accommodate projected and well-studied growth in the Project Area by providing some off-site treatment capacity, and leaving some properties to utilize exiting on-site wastewater systems.

As outlined in Section 2.4 above, the CWLFP is intended to meet demonstrated needs and desires for capacity in the Study Area by supporting repair, renovation,

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enhancement, expansion, or construction of on-site systems, principally for those properties whose existing or replacement systems are not suitable for expansion or enhancement without public support and investment. Under the CWLFP, the wastewater capacity available to support ultimate build-out in the Project Area will be limited by the carrying capacity of soils within the Project Area, and the willingness and initiative of property owners to form associations for the purpose of managing shared wastewater systems. It is unlikely, therefore, that the maximum buildout envisioned in the studies described below will be achieved within the foreseeable future as a result of this initiative, as no additional capacity outside the Project Area will be developed through this program.

2002 Irasville Master Development Plan

In 2002, a build-out analysis reflecting the existing conditions and likely future development patterns for Irasville if municipal infrastructure for water or wastewater was not provided was completed as part of the 2002 *Master Development Plan for the Irasville Growth Center.* This analysis indicated that given then-current zoning and ***without*** municipal water or wastewater infrastructure, future development in Irasville was likely to be comprised of a limited amount of new development, potentially totaling 57,500 SF, divided as follows:

- 26 new 1,250 square foot (sf) residential footprints
- 2 new 1,250 sf commercial footprints totaling 2,500 sf
- 4 new 1,250 sf mixed use footprints totaling 5,000 sf.
- 7 new 2,500 sf mixed use footprints totaling 17,500 sf.

The 2002 build-out analysis clearly illustrated that without a plan and supporting infrastructure, little additional development would be realized in Irasville. The *Master Development Plan* work also included projections of wastewater capacity that would be needed to support a maximum build-out as described in the Plan (p. 28). Per this Plan, the maximum potential buildout in Irasville, if approximately 70,000 gallons per day of wastewater capacity were available, would include:

- Up to 270 new residential units (including single family residences, apartment units, etc.) requiring roughly 54,000 gpd of wastewater capacity
- Up to 125,000 square feet of commercial development requiring roughly 6,250 gpd of wastewater capacity
- Up to 100,000 square feet of office space requiring roughly 9,375 gpd of wastewater capacity.

2008 Vermont Growth Center Application

Based on public input and economic analyses, the 2002 Master Plan build-out projections were actually reduced in the Town of Waitsfield's *Final Application for Growth Center Designation*, completed in April 2008. The Application included another build-out analysis for both Waitsfield Village and Irasville, based on a set of draft zoning regulations that were planned to be adopted if Growth Center Designation were approved (p. 1-3). Public lands, Class 2 wetlands, steep slopes, and floodplains were considered to be unbuildable in the 2008 analysis, but no

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provision was made for on-site wastewater treatment, as the analysis assumed that municipal water and sewer connections would be provided for all properties in the Project Area. This build-out assessment indicated that if water and approximately 60,000 gallons per day of off-site wastewater capacity were provided to all properties:

- Up to 208 additional residential units could be constructed, and
- Up to 259,297 square feet of additional commercial development could be constructed.

2.7 Projected Design Flows under the CWLFP

The CWLFP does not rely on a design flow approach to determine the necessary wastewater treatment facilities. Instead, this project assumes that roughly six to ten on-site wastewater treatment projects, each serving one or more properties, will be proposed by property owner groups over the next six to ten years, with maximum design capacities determined by the limitations of permitting soil-based dispersal of treated wastewater. Projected wastewater flows thus reflect estimates of the maximum design flow that may be achieved through the construction, enhancement, repair, or rehabilitation of a series of soil-based dispersal systems on sites in the Service Area that appear to have suitable soils and no water supply-related constraints.

Under the CWLFP, it is anticipated that projects will include a mix of design intents—managing existing flows with improved and more robust treatment, adaptive re-use of existing structures that potentially increase wastewater flows, and new projects associated with new or substantially expanded buildings. Using the pilot project (Section 8.0) as a rough indicator of the make-up of future projects, approximately 50% of project design flows will be associated with improved management of existing flows, 25% will be devoted to adaptive re-use, and 25% will be devoted to new construction (Table 2-5).

Table 2-5 Projected CWLFP Projects and Estimated Order of Magnitude Wastewater Flows

Scenario	Total Capacity Funded by CWLFP (gpd)	Capacity used for existing flows (gpd)	Capacity used for adaptive re-use (gpd)	Capacity used for new or expanded construction (gpd)
Ten 6,500 gpd systems	65,000	32,500	16,250	16,250
Two 1,500 gpd, four 6,500 gpd, four 10,000 gpd systems	69,000	34,500	17,250	17,250
Six 10,000 gpd systems	60,000	30,000	15,000	15,000
Future Phases Including All Flows Currently in Project Area:				
Systems treating 133,800 gpd (all existing flows)	133,800	66,900	33,450	33,450

Thus, of the 133,800 gpd of total wastewater flows currently documented in the Project Area (Table 2-4), a maximum of roughly 25%, or about 33,450 gpd, of

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wastewater treatment capacity reasonably can be expected to serve future new construction.

Based on this analysis, implementation of the CWLFP has the potential to address the existing and identified short-range future needs as outlined in the Needs Assessment, and approximately one-half of the 60,000 gallons per day estimated to be required for buildout in the Growth Center application. Ultimately, if future phases of a CWLFP are funded and additional systems can be provided that address all existing sites and flows in the Project Area, implementation of additional enhanced on-site systems may provide the 60,000 gallons per day estimated to be needed for Growth Center buildout. However, this scenario would not free up as much land for development, since treatment will be accomplished on site, and would require many years to complete, additional funding for the CWLFP. Nonetheless it represents a logical and realistic path forward to providing necessary wastewater infrastructure for the area. Ultimately, the final total new capacity and the nature and extent of supported new growth will be entirely dependent upon the nature of the projects brought forward by property owners or associations, and associated site and engineering constraints, over the life of the project.

It is explicitly recognized by the Town of Waitsfield that this approach represents a more constrained scenario with respect to enabling future growth than the prior Wastewater Facilities Plan Report and design work for a central collection system with off-site treatment and dispersal. The CWLFP approach will not free up as much physical land area for development as the prior sewer proposal would have done, since all dispersal will occur on-site within the Project Area. Therefore, any and all growth resulting from implementation of the CWLFP will be less than what was the projected buildout of the Growth Center application.

However, given slower than expected population growth in the past decade, and the immediate importance of capacity to deal with existing flows, flexibility for use of existing structures, the CWLFP provides an immediate solution to the community's demonstrated needs, at far lower cost than the previous proposal for a conventional sewer system. From an economic standpoint, the provision of adaptive re-use capability and the ability to appropriately manage food-related uses and flows are the most important aspects of the CWLFP. If in the future additional phases of the CWLFP are needed to support additional growth, the Town will have the option to apply for additional funds to expand the program, and support implementation of additional capacity within the Project Area.

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3.0 Community Wastewater Loan Fund Program Description

The Community Wastewater Loan Fund Program or "CWLFP" is intended to provide a permanent, long-term solution to providing needed and desired future wastewater treatment capacity in the Waitsfield Village and Irasville districts of the Town of Waitsfield (Figure 2). The CWLFP also is intended to replace entirely the Town's prior proposals to develop centralized, conventional wastewater treatment (sewer) service for the Waitsfield and Irasville areas.

It is the intent of the Town of Waitsfield to provide loan funds that support construction, rehabilitation, expansion or repair of as many on-site wastewater systems within the Project Area as can be supported with available funds. Loans will be made to properties within the Project Area shown on Figure 2, within the structure of an administrative program described in Sections 3.1 and 3.2 below. The proposed project financing plan is described in Section 3.3.

3.1 Administrative Structure of the Loan Fund Program

The Community Wastewater Loan Fund Program consists of the following actions and conditions on the part of the Town:

(1) The Town of Waitsfield will establish and administer a **loan program** by which a property owner or owners (including the municipality or a subdivision thereof) may apply to the Town to receive funds for the design, permitting, construction, expansion, enhancement or repair of an on-site wastewater system that will serve one or more properties located within the Project Area. To be eligible to receive loan funds, the property owner(s) must have or plan to develop an on-site wastewater system with a design flow of at least 1,500 gallons per day as determined by the provisions of Chapter 1 (Wastewater System and Potable Water Supply Rules) or Chapter 14 (Indirect Discharge Rules) the Vermont Environmental Protection Rules, as applicable.

(2) The Town of Waitsfield will provide limited support which may include assistance with system management, engineering, permitting, and organization, to help property owner(s) utilize the loan fund and manage their on-site wastewater systems.

(3) The Town of Waitsfield may, at its discretion, participate in developing reserve wastewater capacity within one or more on-site wastewater systems funded through the CWLFP as a means of promoting its adopted community planning goals and providing for emergency or unforeseen wastewater capacity needs in the Project Area.

The CWLFP is established as a purely voluntary program operated on a "first-come, first-served" basis with respect to funding. Property owner(s) who would like to expand, repair, or construct an on-site wastewater treatment systems serving properties within the service area may make application to the Town for a loan, at

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which time the Town will, subject to the availability of funds, assist the property owner(s) in securing approvals as outlined in this Facilities Plan (see Section 4.0).

The extent of the scope of this project is governed by the availability of funds for the loan program. The loan program is expected to be funded by three sources:

1. US EPA State and Tribal Assistance Grant (STAG) funds allocated to the Town of Waitsfield, which will reimburse up to 55 percent of eligible project costs;
2. Vermont Clean Water State Revolving Fund (CWSRF) loan funds, and
3. Over time, by the loan repayments from property owners participating in the program.

The types of wastewater treatment technologies anticipated to be used in CWLFP projects will vary based on costs, site conditions, and owner preferences. However, all treatment systems must adhere to the following:

(a) Any treatment technology must be approved for use in Vermont (see Sections 5, 6, and 7 for further discussion of applicable wastewater collection, treatment, and dispersal options)
(b) A maintenance agreement must be in place between the property owner(s) and the manufacturer of any proprietary treatment technology for the duration of the CWLFP agreement.

3.2 Legal documents

Two primary legal documents form the framework of the CWLFP: A loan agreement (Appendix B), which sets the terms of the loan from the Town to a property owner or association, and a model declaration of association (Appendix C), which provides a framework under which property owners may organize themselves for the purposes of receiving public loan funds for the repair, replacement, upgrade or construction of a wastewater system. The declaration of association is prepared under Vermont's Uniform Common Interest Ownership Act (as amended effective January 1, 2012) ("the Act"). Each document's purpose is outlined below.

3.2.1 Security and Loan Agreement between Town and Property Owner Association

The loan document (Appendix B) is intended to govern the terms of loans and repayment. The loan program provides for 20 year financing at 2.5% interest for the total project cost. Engineering and other soft costs are eligible for inclusion in the loan principal; however, property owners must pay for engineering and permitting up front, and must contract for construction services. Engineering/permitting costs will be reimbursed, and construction costs will be paid by the Town, as construction is completed. In this manner, the Town can ensure that property owners have a financial incentive to construct the wastewater treatment upgrades.

The Town's Security and Loan Agreement and the Association's Declaration of Common Interest Community (Section 3.2.2) will be prepared so that sums due the Town will be "assessments" of the Association with the same "lien" status accorded other Association assessments. A lien for an Association assessment is a first priority lien, with some limitations and exceptions. It will be necessary for property

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owners to get any existing mortgage holders to agree that their mortgages will be subordinate to the Declaration (see Section 3-116(b)(1) of the loan agreement).

The documents will be prepared so that the Town will be able to enforce collection of Town assessments if the Association fails to, and thereby preserve the priority status of the lien.

3.2.2 Property Owner Associations: Formation and Requirements

The CWLFP will make loans to property owner Associations formed under the provisions of the Uniform Common Interest Ownership Act of1994 (Title 27A), with amendments effective as of January 1, 2012. To that end, a model Declaration of Association has been developed, which is intended to assist property owners in organizing themselves sufficiently to be able to receive public loan funds (Appendix C). Because the Town Attorney cannot act on behalf of the Town and property owners, property owners are advised to use this document as a possible model and to seek their own legal counsel to develop and finalize association agreements. This model document is, however, a very important 'jump-start' to the process of organizing property owners who will utilize shared systems.

3.2.3 Guidance for Property Owner Associations (Capacity Allocation, etc.)

Although not a legal document, a framework document was also developed to provide guidance to property owner associations with regard to allocating capacity and cost among property owners, both at the outset and over time as their wastewater needs evolve (Appendix D). This guidance document reflects a desire of each property owner to utilize a portion of the total system capacity, and an agreement for the owner of the land on which the dispersal field would sit to participate in the cost of the system if, when, and as he seeks a permit to utilize the capacity. This structure, in principle, can be used as desired by the potential system users to meet the needs of property owners and to outline a path forward to final design and permitting of shared systems.

3.3 Financial pro forma and summary of project costs

The financial spreadsheet model (Table 3-1) illustrates both the anticipated dates of various repayments, and the prospective flows of funds among the Town, property owners borrowing through the CWLFP (loan repayments), the Town, EPA (STAG funds) and VANR (SRF loans and repayment). This spreadsheet has been reviewed in detail by VANR Facilities Engineering Division, and can be considered to represent a reasonable picture of how this program is expected to play out in dollars over time.

The "Project #1", "Project #2", etc. entries represent hypothetical loans for the repair, upgrade, replacement or new construction of wastewater systems using CWLFP financing. Essentially, each system that the Town funds through this program reduces the burden of the Town's outstanding obligation for the "big pipe" loan repayment by creating a stream of property owner loan repayments, and by making the Town eligible to receive EPA STAG grant funding of 55% of total project

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costs. The town would break even over the 20+ year period of the loan fund once a total of approximately $900,000 is loaned to property owners – which would represent about 4 typical systems being constructed. If $1.6 million is loaned out by 2017, the Town would receive all $906,000 of the available STAG funds and would have a net positive inflow of $177,000 through 2038, which funds would then be available to capitalize a second phase of the loan fund and which would be able to leverage additional grants or SRF loans.

This is a dynamic model and projection and does not represent a prescriptive schedule, except for the payback timing and amount of existing ANR SRF obligations. The timing and amounts of system construction are hypothetical, intended to represent placeholders for systems that could be constructed in the Project Area.

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Waitsfield Community Wastewater Loan Fund
Project Financial Worksheet

	Table 3-1. Community Wastewater Loan Fund Financial Pro Forma					1	2	3	4	5	6	7	8	9	10
		Amt	Rate	Term	Principal	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
A	"Big Pipe" SRF Loan Repayment ($547,263)	$547,263	0	15	$547,263		($36,484)	($36,484)	($36,484)	($36,484)	($36,484)	($36,484)	($36,484)	($36,484)	($36,484)
B	Deferred "Big Pipe" costs with new project	$125,507	0	15	$125,507			($8,367)	($8,367)	($8,367)	($8,367)	($8,367)	($8,367)	($8,367)	($8,367)
C	Engineering & consulting for new project (SRF reimburses 100% on new loan)	$90,000	2.0%	20	$90,000			($5,504)	($5,504)	($5,504)	($5,504)	($5,504)	($5,504)	($5,504)	($5,504)
	PROJECT #1:														
E	Total Construction Cost	$250,000				($250,000)									
F	Principal for payback after Town incentive (payments from sheet 2)	$225,000	2.50%	20	$225,000		$10,939	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939
G	SRF loan (45%) and repayment	$112,500	2.0%	20	$112,500	$112,500		($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)
H	STAG reimbursement (55%)	$187,000				$187,000									
I	Annual income/(deficit) with 1 project					$49,500	($25,546)	($46,297)	($46,297)	($46,297)	($46,297)	($46,297)	($46,297)	($46,297)	($46,297)
	PROJECT #2														
J	Total Project Cost	$250,000					($250,000)								
K	Principal for payback after Town incentive	$230,000	2.50%	20	$230,000			$14,754	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754
L	SRF loan (45%) and repayment	$112,500	2.0%	20	$114,750		$112,500		($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)
M	STAG reimbursement (55%)	$137,500					$137,500								
N	Annual income/(deficit) with 2 projects						($25,546)	($31,543)	($38,561)	($38,561)	($38,561)	($38,561)	($38,561)	($38,561)	($38,561)
	PROJECT #3														
O	Total Project Cost	$250,000						($250,000)							
P	Principal for payback after Town incentive	$240,000	2.50%	20	$240,000				$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395
Q	SRF loan (45%) and repayment	$112,500	2.0%	20	$114,750			$112,500		($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)
R	STAG reimbursement (55%)	$137,500						$137,500							
S	Annual income/(deficit) with 3 projects							($31,543)	($23,166)	($30,183)	($30,183)	($30,183)	($30,183)	($30,183)	($30,183)
	PROJECT #4														
O	Total Project Cost	$250,000							($250,000)						
P	Principal for payback after Town incentive	$240,000	2.50%	20	$240,000					$15,395	$15,395	$15,395	$15,395	$15,395	$15,395
Q	SRF loan (45%) and repayment	$112,500	2.0%	20	$114,750				$112,500		($7,018)	($7,018)	($7,018)	($7,018)	($7,018)
R	STAG reimbursement (55%)	$137,500							$137,500						
S	Annual income/(deficit) with 4 projects								($23,166)	($14,788)	($21,806)	($21,806)	($21,806)	($21,806)	($21,806)
	PROJECT #5														
T	Total Project Cost	$345,000								($345,000)					
U	Principal for payback after Town incentive	$240,000	2.50%	20	240000						$15,395	$15,395	$15,395	$15,395	$15,395
V	SRF loan (45%) and repayment	$155,250	2.0%	20	158355					$155,250		($9,684)	($9,684)	($9,684)	($9,684)
W	STAG reimbursement (55%)	$189,750								$189,750					
X	Annual income/(deficit) with 5 projects									($14,788)	($6,410)	($16,095)	($16,095)	($16,095)	($16,095)
	PROJECT #6														
Y	Total Project Cost	$300,000									($300,000)				
Z	Principal for payback after Town incentive	$240,000	2.50%	20	$240,000							$15,395	$15,395	$15,395	$15,395
AA	SRF loan (45%) and repayment	$135,000	2.0%	20	$137,700						$135,000		($8,421)	($8,421)	($8,421)
BB	STAG reimbursement (55%)	$165,000									$165,000				
CC	Annual income/(deficit) with 6 projects										($6,410)	($700)	($9,121)	($9,121)	($9,121)

Total project cost for scenario above	$1,645,000
Total cost to utilize all STAG funds	$1,647,273

2% interest is charged on SRF construction loan principal to cover VANR administrative costs

No interest is charged on SRF planning loans

Engineering is rolled into the SRF construction loan at 2% for 20 years. For this project, repayments may be prorated with latter project phases if there is progress; possible that payment for roughly 1/3 of these costs would start repayment in 2014, with additional 2/3 spread over later project phases

SRF loan payback begins 2 years after construction is complete, or 1 year after the end of the 1 year warranty period

STAG reimburses 55% of project cost, including construction and planning

Waitsfield Community Wastewater Loan Fund
Project Financial Worksheet

	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	
"Big Pipe" SRF Loan Repayment ($547,263)	($36,484)	($36,484)	($36,484)	($36,484)	($36,484)	($36,484)												
Deferred "Big Pipe" costs with new project	($8,367)	($8,367)	($8,367)	($8,367)	($8,367)	($8,367)	($8,367)											
Engineering & consulting for new project (SRF reimburses 100% on new loan)	($5,504)	($5,504)	($5,504)	($5,504)	($5,504)	($5,504)	($5,504)											
PROJECT #1:																		
Total Construction Cost																		
Principal for payback after Town incentive	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939	$10,939							
SRF loan (45%) and repayment	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)	($6,880)						
STAG reimbursement (55%)																		
Annual income/(deficit) with 1 project	($46,297)	($46,297)	($46,297)	($46,297)	($46,297)	($46,297)	($9,813)	$4,058	$4,058	$4,058	$4,058	($6,880)						($624,662)
PROJECT #2																		
Total Project Cost																		
Principal for payback after Town incentive	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754	$14,754						
SRF loan (45%) and repayment	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)					
STAG reimbursement (55%)																		
Annual income/(deficit) with 2 projects	($38,561)	($38,561)	($38,561)	($38,561)	($38,561)	($38,561)	($2,077)	$11,795	$11,795	$11,795	$11,795	$856	($7,018)					($469,940)
PROJECT #3																		
Total Project Cost																		
Principal for payback after Town incentive	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395					
SRF loan (45%) and repayment	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)				
STAG reimbursement (55%)																		
Annual income/(deficit) with 3 projects	($30,183)	($30,183)	($30,183)	($30,183)	($30,183)	($30,183)	$6,301	$20,172	$20,172	$20,172	$20,172	$9,234	$1,360	($7,018)				($302,389)
PROJECT #4																		
Total Project Cost																		
Principal for payback after Town incentive	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395				
SRF loan (45%) and repayment	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)	($7,018)			
STAG reimbursement (55%)																		
Annual income/(deficit) with 4 projects	($21,806)	($21,806)	($21,806)	($21,806)	($21,806)	($21,806)	$14,678	$28,550	$28,550	$28,550	$28,550	$17,611	$9,737	$1,360	**($5,658)**			($133,477)
PROJECT #5																		
Total Project Cost																		
Principal for payback after Town incentive	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395			
SRF loan (45%) and repayment	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)	($9,684)		
STAG reimbursement (55%)																		
Annual income/(deficit) with 5 projects	($16,095)	($16,095)	($16,095)	($16,095)	($16,095)	($16,095)	$20,389	$34,261	$34,261	$34,261	$34,261	$23,322	$15,448	$7,071	$53	($9,632)		($19,207)
PROJECT #6																		
Total Project Cost																		
Principal for payback after Town incentive	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395	$15,395		
SRF loan (45%) and repayment	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	($8,421)	
STAG reimbursement (55%)																		
Annual income/(deficit) with 6 projects	($9,121)	($9,121)	($9,121)	($9,121)	($9,121)	($9,121)	$27,363	$41,235	$41,235	$41,235	$41,235	$30,296	$22,422	$14,045	$7,027	($2,657)	($11,079)	$117,616

4.0 Regulatory Review and Permitting Requirements

Several permits are anticipated to be required both for overall approval of the Community Wastewater Loan Fund Program, and for approval to construct individual wastewater systems under the program. This Facilities Plan is focused on a set of dispersed on-site wastewater treatment systems, so the permitting requirements are expected to differ from those applicable to the 2004 *Wastewater Facilities Plan Report*. Due to the recognized uncertainty regarding the specific sites and configurations of the wastewater systems to be constructed, site- and project-specific analysis of permitting requirements will be necessary as the CWLFP is implemented. The analysis in this plan considers both the overall regulatory review and permitting process, and the permitting needs of individual wastewater systems constructed under the CWLFP.

The regulatory reviews and permits addressed in this section include:

1. Vermont Wastewater System and Potable Water Supply Rules
2. Indirect Discharge Rules
3. Act 250
4. Wetlands and Vermont Wetland Permit
5. National Environmental Policy Act
6. Archeological Resource Assessments
7. Stormwater Construction General Permit
8. Stream Alteration Permits
9. Vermont Department of Labor and Industry Permit
10. Town of Waitsfield Zoning Permits

As outlined in Section 3.0, the CWLFP consists exclusively of a series of replaced, upgraded, expanded, or new on-site or shared treatment and dispersal systems within the existing Waitsfield Village and Irasville areas. Compared with the wastewater system proposed in the 2004 *Wastewater Facilities Plan Report*, this Facilities Plan involves fewer permits and regulatory reviews. Since collection infrastructure will be very limited in scope and no treatment plant is proposed, no Vermont Department of Labor and Industry Permits are anticipated to be required. Wetlands, Stream Alteration, and local zoning permits are only anticipated to be necessary in limited, specific project situations, and will not apply universally to all projects under the CWLFP.

4.1 Indirect Discharge Rules

Individual projects proposed under the CWLFP that have design flows of 6,500 gpd or more will require an Indirect Discharge Permit (Chapter 14 of the Environmental Protection Rules) from the Vermont ANR Indirect Discharge Section.

In some cases, where little recent development has occurred and the system is intended to serve only existing development, the project may qualify as an “existing indirect discharges of sewage”, provided that the connecting properties were

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developed on or before May 17, 1986. Although the permitting criteria and process are somewhat less stringent for "existing" indirect discharges, systems permitted in this way are limited to existing wastewater flows—meaning that connected properties would not be able to add bedrooms or otherwise change their property's use if that meant increased wastewater flows. This approach might be useful on a limited basis to fix an urgent problem, but the outcome would be contradictory to a major goal of the CWLFP, which is to facilitate adaptive use of existing buildings and to encourage changes of use that may increase, to a reasonable extent, the wastewater flows generated.

A community wastewater treatment system constructed to support both existing and new development, or to facilitate changes of use that result in increased wastewater flows from existing structures, would be considered a "System with New Indirect Discharge to Class B Waters" under the IDRs. More-pre-discharge environmental monitoring is often required, but once construction is complete, connected properties have greater flexibility to change uses or add bedrooms, accessory housing, etc.

The CWLFP is likely to include systems permitted under the Vermont Indirect Discharge Rules both as existing discharges under Section 14-403, and as new discharges under Section 14-402. It is not anticipated that systems with design capacities greater than 30,000 gpd will be proposed, given the limitations on available land within Waitsfield Village and Irasville.

Under the Indirect Discharge Rules, systems are evaluated for compliance with the criteria that the systems:

- will not significantly alter the aquatic biota in the receiving waters,
- will not pose more than a negligible risk to the public health, and
- will be consistent with existing and potential beneficial uses of the waters.

Permits under the Indirect Discharge Program are issued for a term of five years, either as a general or individual permit. All Indirect Discharge Permits contain specific requirements for system monitoring, periodic inspection, and reporting that the permittee remains responsible for fulfilling for both the term of the permit and the life of the system.

Due to the relatively strong oversight of systems and management activities represented in the Indirect Discharge Permit process and resultant permits, it is recommended that this permit program be utilized for projects under the CWLFP whenever feasible.

4.2 Wastewater System and Potable Water Supply Rules

Wastewater systems proposed under the CWLFP with design flows of 6,499 gpd or less will require permits under the Wastewater System and Potable Water Supply Rules (WSPWSRs, Chapter 1 of the Environmental Protection Rules). Under these

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rules, wastewater systems and potable water supplies are required to obtain a permit for activities such as:

- new construction (including single family residences that need sewage dispersal and/or water);
- modification of a wastewater system and/or potable water supply;
- new connections to an existing wastewater system and/or potable water supply;
- subdivision of land; and
- repair or replacement of a failed wastewater system and/or potable water supply.

Unlike permits issued under the Indirect Discharge Rules, WSPWSR permits are "one-time" permits that are in force for the life of the system or until portions of the permit are amended. These permits can also contain project-specific monitoring, operating, inspection, and reporting requirements, though little post-permitting oversight or enforcement is performed by DEC.

Under the WSPWSRs, existing properties in Waitsfield Village and Irasville are already required to modify existing on-site wastewater systems if a change of building use is sought. With the physical constraints in the Village and Irasville described in Section 2, this has been especially challenging for property owners. It is thus a core purpose of this project to provide an option for funding new, renovated, or relocated wastewater systems meeting regulatory requirements, so that buildings in the Village and Irasville can be modified and adaptively re-used.

To ensure that the funds available through this program support as many property owners as possible, the Town intends to encourage property owners to work cooperatively to design systems that serve multiple users. As such, it is hoped that fewer systems will be permitted under the WSPWSRs, and more will be permitted through the Indirect Discharge program. The pilot project, for example, has a design flow of 9,000 gpd (Section 8.0).

4.2.1 Policy Intent for Drinking Water Systems in the Project Area

While the public water system now under construction will result in the elimination of many of the existing on-site drinking water wells in the project area (Figure 5), it is anticipated that some permitted wells will remain in place through the period of this project. In the event of a potential conflict between a planned wastewater dispersal field and a permitted on-site water supply, the project's proponents either will arrange for connection of the affected property to the public water supply or another potable water source, or if this is not possible, will amend the proposed wastewater system plans to avoid conflict with the on-site water supply. In no case is it the Town's intent to compel the owner of an existing on-site water supply to abandon his/her supply in order to facilitate a wastewater system.

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4.3 Act 250 (Vermont Land Use Permit)

Construction activities for municipal infrastructure projects that disturb more than 10 acres of land require an Act 250 permit. However, jurisdiction under Vermont's Land Use Permit system (Act 250) is not anticipated to attach to the CWLFP as a whole.

Act 250 requires persons who undertake certain land development activities on land they own or control to obtain a land use permit under 10 V.S.A. §6081. As the CWLFP is currently proposed and structured, the Town of Waitsfield will not initiate or pursue any land development activities regulated under Act 250. The Town's role will be that of a lender of funds for the construction of sewage disposal improvements by others on land which they own or control. For this reason the Town's program provides that it will act in substantially the same manner as a commercial bank.

Some individual projects that obtain funding from the Town may be (or currently are) subject to Act 250 jurisdiction. In such cases, the Town will require, as a condition of loan approval, that the borrower obtain any required Act 250 permit (or amendment) and thereafter comply with the permit.

4.4 Wetlands

Projects that disturb areas near wetlands may require state and/or federal wetland permits. The greatest potential for wetland impacts under the CWLFP is from new or renovated collection system infrastructure. Limited areas of wetlands are found within the project area, primarily in Irasville (Figure 10, Wetlands), where wetland delineation was completed in 1999 in conjunction with design and permitting studies for infill growth.

Construction, and thus the potential for wetland disturbance, will be limited to new or renovated treatment systems, dispersal areas, and collection infrastructure within Waitsfield Village and Irasville. This minimizes the potential for impacts on mapped wetland and wetland buffer areas. It is especially unlikely that there would be an acre of cumulative impact on regulated wetland and wetland buffer area, given that dispersal areas cannot be constructed within wetlands and wetland buffers.

The U.S. Army Corps of Engineers administers the federal wetland program and the Vermont ANR Water Quality Division administers the state program, which requires a Vermont Wetland Permitfor all impacts within and up to a 50-foot buffer zone inside of Class II wetland areas. This could also trigger the need for a 401/404 water quality certification. However prior studies, notably the 1998-2002 Irasville Master Plan, have evaluated and identified wetland and wetland buffer areas within the Project Area. In all likelihood, avoidance will be pursued when siting new or expanded wastewater systems funded through the CWLFP.

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4.5 National Environmental Policy Act

A National Environmental Policy Act (NEPA) environmental review process is required in order to provide the combination of federal loans and grants that will fund the CWLFP. Due to the relatively small areas of disturbance for the individual projects envisioned under this program, an Environmental Assessment (EA), which is a level of review required when environmental impacts are expected from a project and the State is charged with determining the level of impact, may not be needed.

This Facilities Plan is a critical part of the documentation that Vermont DEC representatives will use to determine the level of impact likely to result from the CWLFP and individual projects. Ultimately, the desired outcome is a "Finding of No Significant Impact (FONSI)" from the federal agency providing the funding. Once this approval is secured, individual projects proposed under the CWLFP will not be subject to project specific NEPA review.

4.6 Archaeological Resource Assessments

Since the CWLFP relies upon funding from a combination of federal loans and grants, a project Archeological Resource Assessment (ARA) is required to assess the likelihood of finding significant historic and archeological resources within the proposed disturbed areas.

Historic and archaeological resources within Irasville and Waitsfield Village have been studied extensively in the course of permitting the Town's municipal water system, and in conjunction with the prior centralized wastewater treatment proposal. During the preparation of this Facilities Plan and the pilot project, the existing assessments of historic and archaeological resources were revised to reflect current conditions in Waitsfield Village and Irasville, and are included as Appendix E.

The broad assessment described above does not need to be updated as individual projects are proposed and implemented. However, individual sites that are deemed potentially sensitive based on past studies and evaluations will receive supplemental review by the University of Vermont's Consulting Archaeology Program (UVM-CAP) prior to permitting, in a manner similar to the process outlined in the Scope of Services for the Pilot Project (Appendix F). At present, the site of the Pilot Project is being evaluated for archaeological resources, and implementation of the CWLFP will follow this procedure as new sites and areas of disturbance are identified for funding under the CWLFP:

(1) The areas of disturbance, based on preliminary design assessments, will be identified on a map and reviewed with the UVM-CAP to determine potential sensitivity.

(2) A Phase 1 site evaluation and reporting will be conducted on any areas deemed potentially sensitive, similar to the scope presented in Appendix F for the Pilot Project (see Section 8.0).

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(3) The Phase 1 report will be submitted to the Vermont Division for Historic Preservation for Section 106 sign-off.

Given the substantial extent of prior study, and implementation of the protocol outlined above for Section 106 sign-off, it is not anticipated that any unmitigated impacts to historic and archaeological resources will occur as a result of implementation of projects under the CWLFP.

4.7 Stormwater Construction General Permit

Vermont's Construction General Permit (CGP) for Stormwater (Permit 3-9020) requires applicants to obtain coverage for "…stormwater discharges from construction activities that result in a total land disturbance of equal to or greater than one acre, where those discharges enter waters of the State or a conveyance leading to waters of the State." It is not anticipated that wastewater systems constructed under the CWLFP will disturb more than an acre of land per project, but the limits of disturbance for each system cannot be established unless and until individual projects are designed. For any project that is anticipated to disturb more than one acre of land area, coverage under the CGP will be sought.

Based on a Risk Evaluation developed by ANR, a resulting project may be classified as either Low Risk or Moderate Risk. For Low Risk projects, a Notice of Intent must be filed, and applicable practices detailed in the Low Risk Site Handbook for Erosion Prevention and Sediment Control must be followed. For Moderate Risk projects, a site specific Erosion Prevention and Sediment Control (EPSC) Plan must be developed and implemented that meets the requirements of the general permit and conforms to the Vermont Standards and Specifications for Erosion Prevention and Sediment Control (2006). Moderate Risk projects require preparation by an individual familiar with the principles of erosion prevention and sediment control. It is anticipated that CWLFP projects requiring a CGP will likely fall in the Low Risk category.

4.8 Stream Alteration Permit

Potential projects in the vicinity of the Skatium and the Mad River Incubator may require a Stream Alternation Permit from the ANR Water Quality Division, due to the small, unnamed stream flowing between these properties and the Winter Park area to the northeast. Otherwise, Stream Alteration Permits are not currently anticipated to be required for construction of any of the renovated, expanded or new wastewater systems envisioned under the CWLFP. The three Mad River crossings needed to convey sewage to the Munn Site on Route 100 from the villages have been eliminated.

4.9 Vermont Department of Labor and Industry Permit

No treatment plant of a size requiring an independent, occupied structure is proposed as part of the Community Wastewater Loan Fund program. Therefore, it is not anticipated that a permit from the Vermont Department of Labor and Industry would be required.

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4.10 Town of Waitsfield Permits

Wastewater systems envisioned under the CWLFP are not anticipated to need any above-ground structures (treatment facilities, control buildings, etc.) that would require zoning permits from the Town of Waitsfield. Modifications of the existing structures connecting to a Town-funded wastewater system are not expected to be needed as part of the program. However, a zoning permit and/or conditional use review may be necessary in a few instances:

- the use of an existing structure is being expanded or adapted concurrently with wastewater system construction;
- the wastewater system constitutes a change to a previously approved site plan covering the overall development of a project; or,
- a portion of the collection, treatment, or dispersal system traverses or is located in the Flood Hazard Overlay District.

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5.0 Wastewater Collection Alternatives

It is the goal of the project to minimize the amount of collection system to minimize cost and disturbance. For systems where the treatment or dispersal components are shared among several properties, however, some form of collection infrastructure will be necessary. A range of different collection system technologies could potentially be utilized to convey wastewater from individual properties to further treatment and, ultimately, to dispersal sites in Waitsfield Village and Irasville. Table 5-1 lists these technologies, their advantages and disadvantages, and whether each technology is feasible in the Project Area.

Table 5-1 Wastewater Collection System Options.

Collection System Type	Advantages	Disadvantages	Suitable for Project Area?
Gravity Sewer	• Current standard of practice for most large municipal systems • Low maintenance • Once option in place, additional properties can connect by gravity or pumping	• Must collect downhill from connections; otherwise a private pump is required • For larger systems and long pipe runs, significant excavation depths required to maintain grade • Infiltration into collection system can be problematic for soil-based dispersal fields • Increased potential for odors	Yes, only where connection is at higher elevation than collection point
Septic Tank Effluent Pump (STEP)	• Often can utilize existing septic tanks • Collection system is small diameter pipe • Not required to be laid in straight segments or at a single slope	• Pumps and controls needed at individual properties • Smaller diameter force mains can limit the number of additional connections • May need to replace septic tanks or add pump vaults on some properties	Yes
Septic Tank Effluent Gravity (STEG)	• Often can utilize existing septic tanks • May reduce cost for pump stations and advanced treatment	• May need to replace tanks on some properties • Increased potential for odors	Yes, only where connection is at higher elevation than collection point
Low Pressure Sewer	• Collection system has small diameter pipes • Not required to be laid in straight segments or at a single slope	• Pumps and controls needed at individual properties • Grinder pumps at individual properties require relatively frequent maintenance • Smaller diameter force mains can limit the number of additional connections • May need to replace septic tanks or add pump vaults on some properties	No

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Collection System Type	Advantages	Disadvantages	Suitable for Project Area?
Vacuum Sewer	• Less intrusive than individual pump stations • Best suited to lakeshore settings or areas with little topographic relief	• High energy and maintenance costs • Loss of vacuum can quickly result in sewage backup	No

Given the advantages and disadvantages discussed above, projects constructed under the CWLFP are encouraged to utilize Septic Tank Effluent Pump, Septic Tank Effluent Gravity, and Gravity Sewer collection systems as appropriate to individual project sites and conditions.

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6.0 Wastewater Treatment Alternatives

Under the CWLFP, it is anticipated that roughly six to ten multi-property systems will be designed and permitted in accordance with the WSPWSRs or (more likely and encouraged) the IDRs. Depending on the individual project, treatment technologies ranging from conventional septic tanks, to pre-treatment for oil and grease, to secondary or advanced treatment for high-strength wastewater or high-capacity systems, to combined treatment and collection options, all may be feasible. This section briefly describes the wastewater treatment technologies that are currently available under Vermont regulations, and provides guidance as to which options may be most suitable for application in Waitsfield Village and Irasville.

6.1 Primary Treatment

Options for providing basic, primary wastewater treatment are described below, and advantages and disadvantages of each of these options are listed in Table 6-1. All of these technologies are generally approved in Vermont's wastewater regulations and their use is recommended for projects proposed under the CWLFP as appropriate to the individual project situations.

Septic tanks are watertight boxes, usually made from concrete or fiberglass, with inlet and outlet pipes. These tanks provide passive, primary treatment and settling of solids, and are an integral part of the existing wastewater systems serving properties in Waitsfield Village and Irasville. From the septic tank, effluent may be conveyed to a pump tank or distribution box, or to an advanced pre-treatment system, before being conveyed to a soil-based leachfield or other dispersal system (see Section 7.0).

Effluent filters can now be added to the outlets of septic tanks, and are required on new septic tanks. These filters screen solids from the effluent when it leaves the tank. If the tank is full of solids, the filters will plug and the system will slow or back up before solids leave the tank and enter the dispersal field. This helps to protect the leachfield from solids that can carry over from the septic tank into the dispersal system from the septic tank if that tank is not pumped at appropriate time intervals. The filters need to be hosed off usually twice a year.

Pump stations are added after the septic tank if the distribution box in the dispersal field is not low enough in elevation relative to the building outlet, or for mounds, at-grade systems, and advanced treatment systems. Pressurizing the dispersal field also allows for improved distribution of the effluent, making more effective use of the entire field and preventing overloading of a portion of the field.

Grease traps are designed to prevent greasy substances from entering plumbing systems, septic tanks, and waste water treatment facilities where they are difficult to process and may create a number of environmental problems. Grease traps are

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often specified for pot washing sinks, commercial dishwashers, or other food-service related uses that generate high concentrations of oil or grease. They may be installed either inside an establishment or outside, between the building sewer exit and the septic tank.

Table 6-1 Conventional/Primary Wastewater Treatment Options

Treatment Component	Advantages	Disadvantages	Suitable for Project Area?
Grease Trap	• Proven performance record • Simple, low-maintenance design • No moving parts or external energy input required • Storage volume reduces impacts of peak flows, high temperatures	• Excavation required for installation • Can be challenging to expand capacity • Passive, outdoor applications that perform best may be challenging to retrofit to existing buildings/plumbing	Yes, for food service establishments
Septic Tank	• Simple, low-maintenance design • No moving parts or external energy input required • Provides primary treatment and solids settling • Can be installed in series for system expansions or redundancy	• Additional treatment required to shrink leachfield footprint or use advanced dispersal technologies • Leak-prone unless properly assembled/sealed • Must be tested on site for water tightness	Yes
Effluent Filter	• Helps prevent solids from clogging leachfields or fouling advanced treatment components • Can be placed in existing or new septic tanks. • No moving parts • Units are inexpensive and usually easy to install or retrofit	• Regular clean-out required to maintain optimal suspended solids removal. • Requires access risers/ surface access for servicing	Yes
Pump Tank	• Allows use of sites up-slope from septic tanks • Effluent pumps have low energy requirements • Tank provides additional peak flow and emergency storage • Pumps can deliver effluent to leachfields or advanced treatment on a demand or timed dosing basis	• Additional treatment required to shrink leachfield footprint or use advanced dispersal technologies • Leak-prone unless properly assembled/sealed • Must be tested on site for water tightness • Requires access risers/ surface access for servicing • Pumps require periodic maintenance / replacement	Yes

6.2 Secondary or Advanced Treatment

Advanced pre-treatment components can be added after the septic tank to improve wastewater treatment prior to dispersal. The types of advanced treatment

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components that are currently allowed under Vermont's various regulations, along with advantages/disadvantages and potential applicability in the Project Area, are listed in Table 6-2. Pre-treatment components may also allow for increased capacity in dispersal components of nearly any construction, which maximizes available soil resources. Application of these technologies may partially off-set the cost of an avoided off-site system or a mound system, or depending on the site and system, may add to the construction cost. The ongoing costs of innovative/alternative systems are also often higher than those of a conventional septic system, because they need to be maintained regularly in order to operate properly.

A few advanced treatment systems, including constructed wetlands and sand filters, are included in the technical standards of the WSPWSRs and are generally allowed for use in systems with design flows of up to 6,499 gpd. Since August 2002, the WSPWSRs have contained a process through which proprietary "innovative/ alternative" technologies can be approved for use in the state. A range of technologies have been approved by DEC and are available for designers to consider (a list of all approvals can be found at http://www.anr.state.vt.us/dec/ww/innovative.htm).

Under the Indirect Discharge Rules, mechanical treatment facilities and sand or textile filters are included in the technical standards and are generally allowed for use in systems with design flows of 6,500 gpd or greater. The IDRs do not contain a separate approval process for proprietary innovative/alternative technologies, but treatment components with a proven track record of performing to the effluent quality limitations for the system design capacity (Tables 12 and 13 in the IDRs) can be proposed and approved on a case-by-case basis. While advanced treatment is not *required* under the IDRs for systems with design flows of less than 30,000 gpd, the use of advanced treatment components (producing secondary or secondary+ quality) may be *preferred* for some projects in Waitsfield Village and Irasville—for instance, to maximize effluent loading rate to a relatively small dispersal field.

Sand and other packed bed media filters contain beds of carefully graded media, the surface of which is intermittently dosed with effluent that percolates through the sand to the bottom of the filter. After being collected in the underdrain, the treated effluent is transported to a line for further treatment or disposal. These filters may be designed either as single-pass (intermittent) or recirculating filters. Sand filters have a long track record of stable and reliable performance, are relatively low-maintenance, and use little energy—but at larger design flows, the treatment units can have a relatively large footprint. Sand filters have a general

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Table 6-2 Advanced (Secondary to Secondary+) Wastewater Treatment Options

Advanced Treatment Component	WSPWSR Approval	IDR Approval	Advantages	Disadvantages	Suitable for Project Area?
Sand Filter (intermittent or recirculating)	General	General	• Proven, reliable treatment • Leachfields can be smaller, shallower • Well known to regulators • Low energy use • Easy to monitor and maintain • Low maintenance requirements	• Large footprint relative to other fixed film filters (textile, peat) • Regular maintenance is required • Appropriate sand media may be hard to find/expensive	Yes
Constructed Wetland	General	None	• Passive, reliable treatment • Lower construction cost • Low to no energy use • Low maintenance cost • May provide indirect benefits (wildlife habitat, aesthetics)	• Regular maintenance is required • Treatment performance can fluctuate seasonally • Substantial land area required • Only approved for >6,499 gpd	No
Textile Filter	Innovative	General	• High quality effluent • Leachfields can be smaller, shallower • Well known to regulators • Low energy use • Modular design, easy phasing • Very small footprint • Ease in construction • Manufacturer offers web-based monitoring	• Regular maintenance is required • Higher construction cost • Filter media may need periodic replacement	Yes
Peat Filter	Innovative	None	• High quality effluent • Leachfields can be smaller, shallower • Low energy use • Modular design, easy to expand capacity in phases • Very small footprint • Ease in construction	• Regular maintenance is required • Higher construction cost • Peat media requires periodic replacement • Only approved for >6,499 gpd • VT approvals are expired or about to expire, may not be renewed	Yes*

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Advanced Treatment Component	WSPWSR Approval	IDR Approval	Advantages	Disadvantages	Suitable for Project Area?
Recirculating Fixed Film (Trickling) Filters	Innovative	None**	• Simple, reliable biological process. • Leachfields can be smaller, shallower • Relatively small footprint • Low to moderate energy use • Modular design, easy to expand capacity in phases • Ease in construction	• Regular maintenance is required • Higher construction cost • More frequent maintenance visits compared to sand, textile, peat filters • Requires careful design for high-strength wastewater applications	Yes
Aerobic Treatment Units (Suspended Growth, Fixed Film Reactor, Sequencing Batch Reactor, etc.)	Innovative	None**	• Simple treatment process, few or no moving parts • Leachfields can be smaller, shallower • Very small footprint • Lower construction cost compared to other advanced technologies.	• Less reliable treatment quality, especially for smaller or variable wastewater flows • Highest operational cost and energy use • Noise from blower motors may be an issue • Limited ability to incorporate time dosing and peak surge flows • Inherently higher risk of treatment failure and drainfield clogging or overloading	No

* Consistent with the status of I/A approvals at the State level, peat filters may be an option for some properties. In cases where a maintenance provider with a strong track record is involved, and the State is supportive of the use of a peat system to deal with site, treatment, or economic constraints, peat filters may be an effective solution.
** These treatment processes may be described as "mechanical treatment facilities" and thus are approved for general use under the IDRs, provided that they meet the relevant effluent quality standards. However, specific proprietary products are not approved on a general basis by the Indirect Discharge section.

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approval in both the WSPWSRs and the IDRs, and in both cases, designers may utilize higher loading rates, and thus may construct smaller leachfields or may maximize the capacity of a small dispersal area.

In recent years, the packed bed filter concept has been applied using other media (such as textile, peat, or foam cubes) that have a larger surface area to volume ratio, allowing for the design of treatment units that provide equal or better performance within a smaller footprint. Textile filters, like sand filters, have a general approval under the IDRs; a proprietary textile filter for smaller design flows is approved through an innovative/alternative approval under the WSPWSRs. Peat filters have only an innovative/alternative approval under the WSPWSRs, and are not specifically approved for higher design flows under the IDRs.

Recirculating fixed film (trickling) filters, like packed bed media filters, are used to remove organic matter from wastewater. In contrast to packed bed filters, however, trickling filters recirculate effluent frequently through the filter media, and rely primarily on microorganisms attached to a medium rather than a combination of microbial activity and physical filtering. Trickling filters are designed to occasionally slough layers of microorganisms from the filter media; the sloughed solids are picked up by an underdrain system and transported to a clarifier for settling. Trickling filters may be considered a "mechanical treatment facility" and thus be generally approved under the IDRs; at least two proprietary trickling filters are approved for smaller design flows through an innovative/alternative approval under the WSPWSRs.

Constructed wetlands are treatment systems that use natural processes involving wetland vegetation, soils, and their associated microbial communities to improve water quality. If planned and maintained properly, treatment wetlands use little or no energy, have few maintenance needs, and can provide wastewater treatment and aesthetic value, wildlife habitat, and public use benefits. However, the treatment performance of constructed wetland systems can vary on a seasonal basis, and a constructed wetland generally will have a larger footprint than the other advanced treatment technologies described here. Constructed wetlands have a general approval in the WSPWSRs, but are not mentioned in the IDRs. Under the WSPWSRs, designers may utilize higher loading rates, and thus may construct smaller leachfields or may maximize the capacity of a small dispersal area.

Aerobic treatment units (ATUs) rely on air injection systems and blowers to create an oxygenated (aerobic) environment, which aids bacteria as they break down organic material. The injection of air into the ATU agitates the wastewater, so solids are mixed with the bacteria that digest organic material. Usually there is a step in the process where settled solids and bacteria are returned back to the aerobic portion of the tank for mixing and additional treatment, and it is common for there to be at least one additional stage in the treatment process that allows solids and bacteria to settle out of the wastewater so that cleaner wastewater is distributed to the drainfield. ATUs can have very small footprints and often have the

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lowest construction/installation costs of any of the advanced treatment processes described here. However, they also require frequent maintenance, use substantial amounts of energy to operate blowers, have little capacity to handle or manage peak surge flows from a building, and pose an inherently higher risk of treatment failure and drainfield clogging or overloading. ATUs are considered a "mechanical treatment facility" and thus may be generally approved under the IDRs; several proprietary ATUs are approved for smaller design flows through an innovative/alternative approval under the WSPWSRs.

The recommendation for projects proposed under the CWLFP that require the use of advanced treatment is to utilize packed bed filters (ideally textile, then sand) or recirculating trickling filters preferentially. Aerobic treatment units are recommended to be avoided due to their relative treatment instability and high operating costs. Constructed wetlands may be suitable in specific situations where available land area is not of concern and interest in indirect benefits is high; however, since they have a general approval only under the WSPWSRs, applicability in the CWLFP is probably limited.

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7.0 Wastewater Dispersal (Disposal) Alternatives

There is a rich literature of previous evaluations of potential wastewater dispersal sites in the Mad River Valley and Waitsfield—most recently in the 2004 *Wastewater Facilities Plan Report* prepared for the Town of Waitsfield. The CWLFP acknowledges this work, and the knowledge gained through it regarding the potential for large-scale wastewater dispersal within and near Waitsfield Village and Irasville. The focus of this section, instead, is to generally discuss the soil-based dispersal technologies that are currently approved under Vermont's wastewater regulations, and to offer guidance on the suite of dispersal options that are most suitable for potential projects implemented under the CWLFP.

Of the dispersal options discussed below, in-ground leachfields (using trenches), mound systems, and filtrate systems (or otherwise permitted leachfield designs utilizing advanced treatment) are recommended for wastewater systems of any design flow considered for implementation under the CWLFP (Table 7-1). At-grade systems and subsurface drip irrigation systems are recommended for wastewater systems with design flows under 6,500 gpd, where site and soil conditions are appropriate. Spray dispersal systems, though generally allowed under Vermont's wastewater regulations, are not recommended for use in Waitsfield Village and Irasville.

In-ground leachfields utilize either trenches or beds that either contain distribution pipes and crushed-stone or prefabricated leaching chambers. These dispersal options both provide treatment in the vicinity of the interface between the trenches (or bed) and the soil, and in the unsaturated soil beneath the trenches (or beds). In-ground leachfields are generally permitted under both the WSPWSRs and IDRs. Trenches or beds permitted under the WSPWSRs are often dosed by gravity, where effluent flows from the septic tank to the leachfield based on how much water flows into the septic tank from the structure. In-ground leachfields permitted under the IDRs must consist only of trenches and be pressure-dosed, by using a pump, siphon, or other means to equally distribute effluent through the dispersal system. In-ground leachfields require well-drained soils—at least 36 inches of unsaturated soil between the bottom of the leachfield and groundwater, and 48 inches to bedrock. Since trenches can be installed up to 36 inches deep, this means at least 3.5-7 feet of suitable soil are needed for an in-ground leachfield to work properly.

Mound systems are commonly used where soil conditions are more limited. Unlike in-ground leachfields, they are always dosed using pressure, usually from a pump tank or siphon placed between the septic tank and the dispersal field. The "mound" is built out of specified sand fill material that meets certain technical requirements,

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Table 7-1 Soil-Based Wastewater Dispersal Options

Dispersal Component	WSPWSR Approval	IDR Approval	Advantages	Disadvantages	Suitable for Project Area?
In-Ground Leachfield	General	General	• Well known to regulators, designers, and installers • Passive, reliable treatment • Low construction costs • Low to no energy use • Low maintenance requirements	• Absorption beds prone to early clogging • Can only be used on deep, well-drained soils	Yes, trenches only
Mound System	General	General	• Well known to regulators, designers, and installers • Passive, reliable treatment • Can be used on sites that are not suitable for in-ground or at-grade systems • Utilizes uppermost soil horizons—typically the most permeable and biologically active • Minimal construction disturbance, little excavation required • Low energy use and maintenance requirements	• Higher construction cost • Larger land area required • Mound location may affect drainage patterns and limit land use options • Dosing pump or siphon required • May not be aesthetically pleasing unless properly landscaped	Yes
Spray Dispersal	General	General	• Can be used on some otherwise unsuitable sites • Can be used on wooded sites without clearing • Minimal construction disturbance, little excavation required for spray system	• Not frequently utilized in Vermont; familiar to regulators but not to designers/installers • Disinfection and storage lagoon required • Very large land areas required for dispersal system and buffers • Requires substantial monitoring and maintenance	No

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Dispersal Component	WSPWSR Approval	IDR Approval	Advantages	Disadvantages	Suitable for Project Area?
At-Grade Leachfield	General	Experimental	• Well known to regulators, designers, and installers • Passive, reliable treatment • Utilizes uppermost soil horizons • Less excavation required • Low energy use and maintenance requirements	• Can only be used on relatively well-drained soils • Dosing pump or siphon required • Only approved for >6,499 gpd	Yes, for systems >6,499 gpd
Subsurface Drip Irrigation	General	Experimental	• Low energy use • Easy to expand capacity in phases • Lowest construction site disturbance • Maximum flexibility in designing dispersal field configuration (existing trees can be preserved) • Utilizes uppermost soil horizons • Best option for integrating into site landscaping, allows plants to take up nutrients in effluent	• Less well-known to regulators, designers, and installers • Advanced treatment required prior to dispersal • Dosing pump or siphon required • System must be back flushed routinely to avoid emitter clogging • The root-intrusion herbicides in drip lines have a lifespan of 12-15 years • Only approved for >6,499 gpd	Yes, for systems >6,499 gpd
Filtrate System	General	General*	• Any approved dispersal option can be used • Higher loading rates allow smaller dispersal footprints, reduced separations to limiting factors • Use of advanced treatment reduces or eliminates biomat formation, extends dispersal system life	• Advanced treatment required prior to dispersal	Yes

* This dispersal option is not explicitly named in the IDRs, but the concept of increasing effluent loading rates in the leachfield where advanced treatment is provided is specifically allowed.

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and which provides additional unsaturated soil for wastewater treatment between the bed or trench and the limiting condition (groundwater or bedrock). Mound systems are generally permitted under both the WSPWSRs and IDRs. To be used without any additional pretreatment under the WSPWSRs, a mound system needs at least 18 inches of undisturbed, unsaturated soil between the ground surface and the groundwater or bedrock. Vertical separation distances to seasonal high groundwater and bedrock are more stringent for mound systems permitted under the IDRs.

Spray dispersal (disposing of treated wastewater into native soil by surface application, using sprinklers) is generally allowed under both the WSPWSRs and the IDRs. A continuous impeding layer beneath more permeable soils must underlie a spray dispersal site, and increased isolation distances to surface waters and drinking water sources are required. Under both sets of rules, the wastewater must be highly treated and disinfected before dispersal, and there are significant requirements for restricting access and for seasonal storage of wastewater that may be difficult to meet.

At-grade systems are dosed using pressure, like a mound system, but the crushed stone infiltration areas are built on the existing soil surface and then covered with non-specified fill material and topsoil. This material can either be moved from another part of the site or brought in from off-site. Since the trenches are built on top of the existing ground surface, they need 3 feet of unsaturated soil (less than is needed for an in-ground system).

Subsurface drip irrigation was approved for general use under the WSPWSRs in Vermont in 2007, and uses small-diameter, flexible tubing with widely spaced "emitters" to distribute treated wastewater effluent. Because of the small diameter of the emitters, wastewater must be pre-treated using an advanced treatment technology if subsurface drip dispersal is to be used. However, this technology can be installed without the use of crushed stone aggregate, making it a viable option in small spaces where earth-moving equipment cannot gain access. Since pre-treatment is required, subsurface drip irrigation can be used as a filtrate system (see below). Subsurface drip irrigation is not explicitly allowed under the IDRs, but may be permitted as an Experimental Disposal System on a case-by-case basis. However, the IDRs provide a substantial dis-incentive for utilizing experimental dispersal systems: the applicant must demonstrate that a fully complying dispersal system can be constructed if the experimental system fails, and if the experimental system does not meet its performance objectives, the permittee may be required to construct the previously specified fully complying system.

Filtrate systems are permitted only in the WSPWSRs. If advanced pre-treatment technology is used on a septic system, Vermont's Rules acknowledge that the pre-treatment component has already done much of the work that the soil would normally do in a traditional septic system, and so less treatment is required of the

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soil. Filtrate systems may consist of any approved wastewater dispersal technology, but smaller sizes are allowed (up to ½ the area of traditional in-ground leachfield, at-grade system, or mound system), which can be important on small lots. Pre-treatment may also eliminate the need for a mound system in situations with shallow groundwater or bedrock limitations, since reductions in the vertical separations to limiting soils are also gained when pre-treatment is used. While filtrate systems are not explicitly allowed in the IDRs, increases in leachfield loading rates (up to three times the loading rate otherwise allowed based on soil texture and depositional environment) are allowed when sand filters, textile filters, or mechanical treatment systems meeting secondary to secondary-plus effluent quality standards precede the leachfield (Section 6.0).

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8.0 Pilot Project Description

This section describes the Pilot Project that is intended to be the first system constructed under the CWLFP. This system presently is in the preliminary engineering design phase. Its flows and governance also are being developed through a collaborative effort between the involved property owners, the Town's Wastewater Committee, Attorney and Select Board, and the Town's consultants. The approach to engineering, governance, financing, system design, and permitting (including archaeology) that is being applied to this Project is intended to be the model process for subsequent systems constructed under the CWLFP (roughly 6-10 in total) in the Project Area using Vermont and EPA STAG funds.

8.1 System Design

The pilot project design is based on providing a replacement dispersal field for the Winter Park Commercial Complex (Figure 7), and also providing increased capacity for other neighboring properties, including the Iraville Business Park. The design will utilize the existing Winter Park collection system as much as feasible. Currently there is a gravity sewer that collects septic tank effluent from several commercial businesses located along Carroll Road. The collection system discharges to a pump station which pumps across Route 100 to a dispersal field located in an open field.

The proposed new dispersal leachfield will be located in the same open field to the southeast of the existing system (Figure 8). Preliminary soils testing has been done on the area and the soils are generally a fine sandy loam to depths ranging from 12 to 32 inches overlaying gravely coarse to medium sands to depths of at least 7 feet below grade. This area also has been evaluated for archaeological sensitivity by the UVM-CAP.

Advanced treatment will be used for the pilot project to maximize the available area of the dispersal field by increasing effluent loading rates. The use of advanced treatment also will provide additional treatment of the relatively high strength wastewater expected to be generated by restaurant and food processing facilities using the system. It is expected that the advanced treatment units will be located on the eastern side of Route 100. It is further expected that the existing pump station on the west side of Route 100 will be utilized to pump effluent across Route 100 for advanced treatment and then discharge to an in-ground leachfield.

With respect to capacity, preliminary estimates are for a capacity of 9,000 gpd; however, additional soils testing and hydrogeologic studies need to be completed to determine the site capacity. Wastewater testing for BOD, TSS and FOG are being conducted for existing flows to help in the selection and sizing of the advanced treatment. In addition, a full evaluation of any existing infrastructure to be utilized will be completed during the final design phase.

Surrounding properties whose owners wish to connect to the system will provide gravity connections or pump stations/STEP systems that discharge into the existing Winter Park

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collection system or the tankage associated with the advanced treatment units on the eastern side of Route 100.

The Waitsfield Wastewater Committee and the Town's consultants are working with surrounding landowners to determine the desired design flows of potential pilot system users. Those who wish to use the system, and who will share the responsibility of loan repayment, will form a legally binding association under the Vermont Common Interest Ownership Act (CIOA) to own and operate the pilot system, as described in Section 3.0 of this Facilities Plan. The final allocation of capacity among members of the association will reflect the amount of capacity each member owns under the declaration of association that governs operation, use, and financial responsibility for the pilot system.

8.2 Permitting Requirements

8.2.1 Indirect Discharge Permit

The pilot project has a design flow of 9,000 gpd, and includes both existing and new flows. As such, this system will require a *Permit Application for New Discharge of Sewage*. Depending on the timing of the overall design process, it may become expedient to submit a *Capacity Application* (a partial application, including necessary hydrogeologic and other work demonstrating site capacity, but including only preliminary engineering plans and specifications). Necessary evaluations are underway for the application, and advanced treatment prior to discharge into the dispersal field is planned as part of the system's design.

8.2.2 Wastewater System and Potable Water Supply Permits

Individual connections to the proposed Indirect Discharge system may also require amendments to existing WSPWSR permits, since these permits already exist for connections to the existing Winter Park shared wastewater system. As part of the project design and permitting process, we will ascertain whether these permits will be necessary, and will prepare and submit applications if and as necessary.

8.2.3 Act 250 (Vermont Land Use Permit)

Most of the properties involved in the pilot project are already subject to an existing Act 250 permit, including:

- Winter Park (permit no. 5W0721, as amended)
- Irasville Incubator (permit no. 5W0377, as amended)

As part of the permitting process, minor applications for Act 250 permit amendments will be prepared and submitted as necessary.

8.2.4 Wetlands Permit

The pilot project may involve extension of collection infrastructure in the vicinity of wetlands and wetland buffers. Directional drilling may be utilized to avoid wetland impacts. In the event that wetland impacts cannot be avoided, a Vermont Wetland Permit will be obtained.

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8.2.5 Phase 1 Archaeological Resource Assessment

As part of the design plans for the Pilot Project, the University of Vermont Consulting Archaeology Program provided an initial review of the proposed dispersal field site for potential sensitivity and determined that the site is sufficiently sensitive to warrant a Phase 1 study. The Phase 1 study was conducted pursuant to the detailed scope in Appendix F. No archaeological sites or artifacts were discovered during the Phase 1 evaluation (Appendix G).

8.2.6 Stream Alteration Permit

It is not yet clear whether the final design of the pilot project will include a stream crossing or other activities near the small, unnamed stream flowing between Winter Park and the Skatium (Figure 8). If a stream crossing is necessary and a permit is required, then a Stream Alteration Permit will be obtained from the ANR Water Quality Division.

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9.0 Summary of Recommendations

Based on the analysis conducted in the Needs Assessment and this Facilities Plan Update, the recommended action for the Town of Waitsfield is:

(1) Move forward with the pilot project upon approval of the Facilities Plan and securing additional required approvals
(2) Develop additional projects as property owners come forward
(3) Continue to develop the administrative and financial management structure at the Town level needed to support ongoing program management.
(4) Continue to proactively secure additional bond votes for future projects, so that funds are available as property owners or groups of property owners come together to develop projects.

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0 0.25 0.5 1 Miles

FIGURE 1: LOCATION MAP

Waitsfield Wastewater Facilities Plan Update, Community Wastewater Loan Fund Program

Town of Waitsfield, Vermont

Sources: Hydrography, VCGI, 2009; Roads, VCGI, 2009;
Imagery, Bing Maps, Accessed 2012; Town Boundaries, VCGI, 2001; Water Service Area, Town of Waitsfield, 2010.

Figure 2
Waitsfield Village/Irasville Project Area

Wastewater Facilities Plan Update, Community Wastewater Loan Fund Program

Town of Waitsfield, Vermont

Building

Parcel Boundary

Project Area

Sources: VCGI: Streams, Water Bodies, Imagery; Town of Waitsfield: Parcel Boundaries, Project Area; Phelps and Stone: Buildings

Feet

0 250 500 1,000

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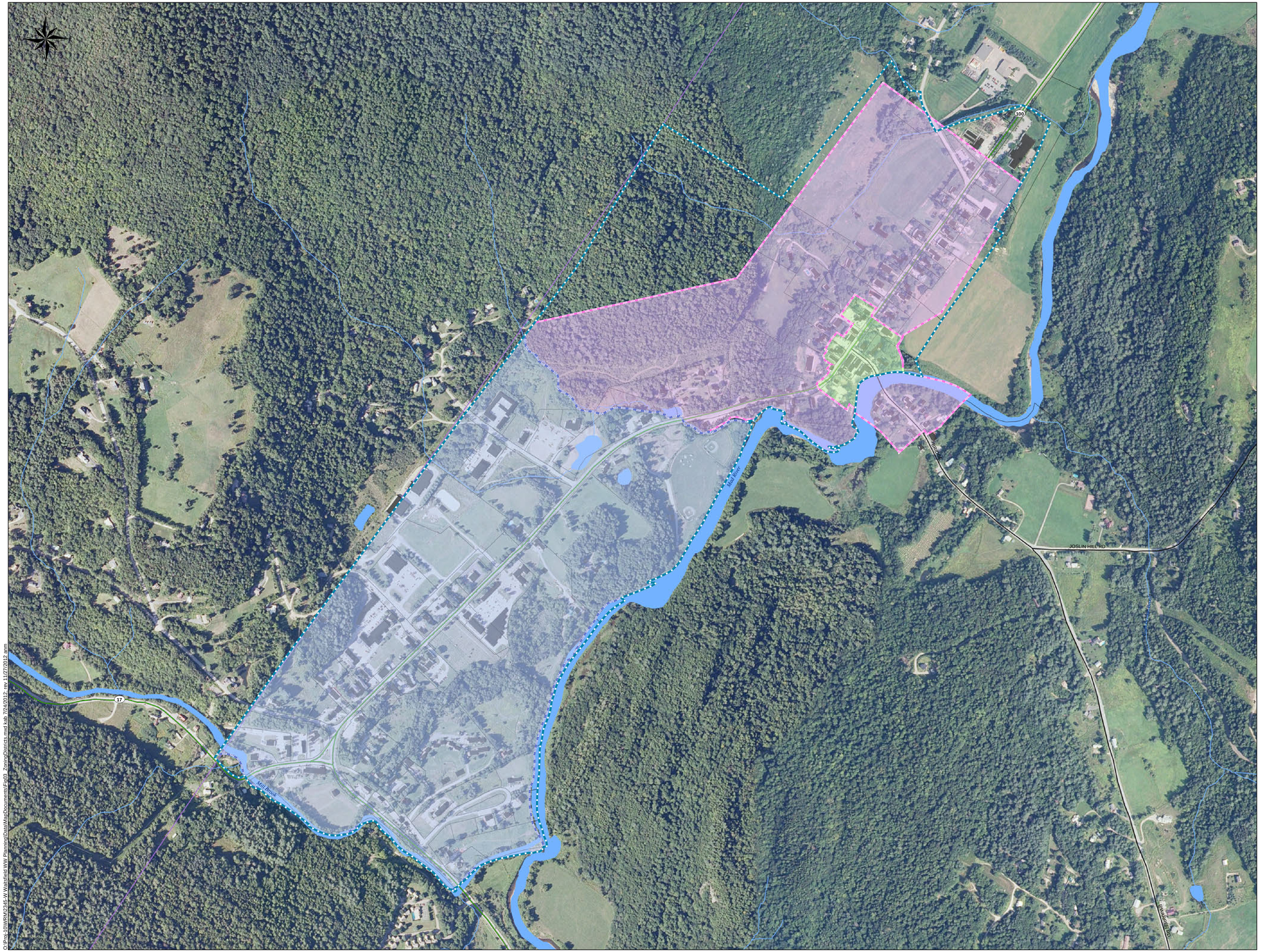

Figure 3
Waitsfield Village/Irasville Zoning Districts

Wastewater Facilities Plan Update, Community Wastewater Loan Fund Program

Town of Waitsfield, Vermont

Building

Parcel Boundary

Project Area

Zoning Districts (2010)

Waitsfield Village Business District

Waitsfield Village Residential District

Irasville Commercial District

Sources: VCGI: Streams, Water Bodies, Imagery; Town of Waitsfield: Parcel Boundaries, Project Area, Zoning Districts; Phelps and Stone: Buildings

Feet

0 250 500 1,000

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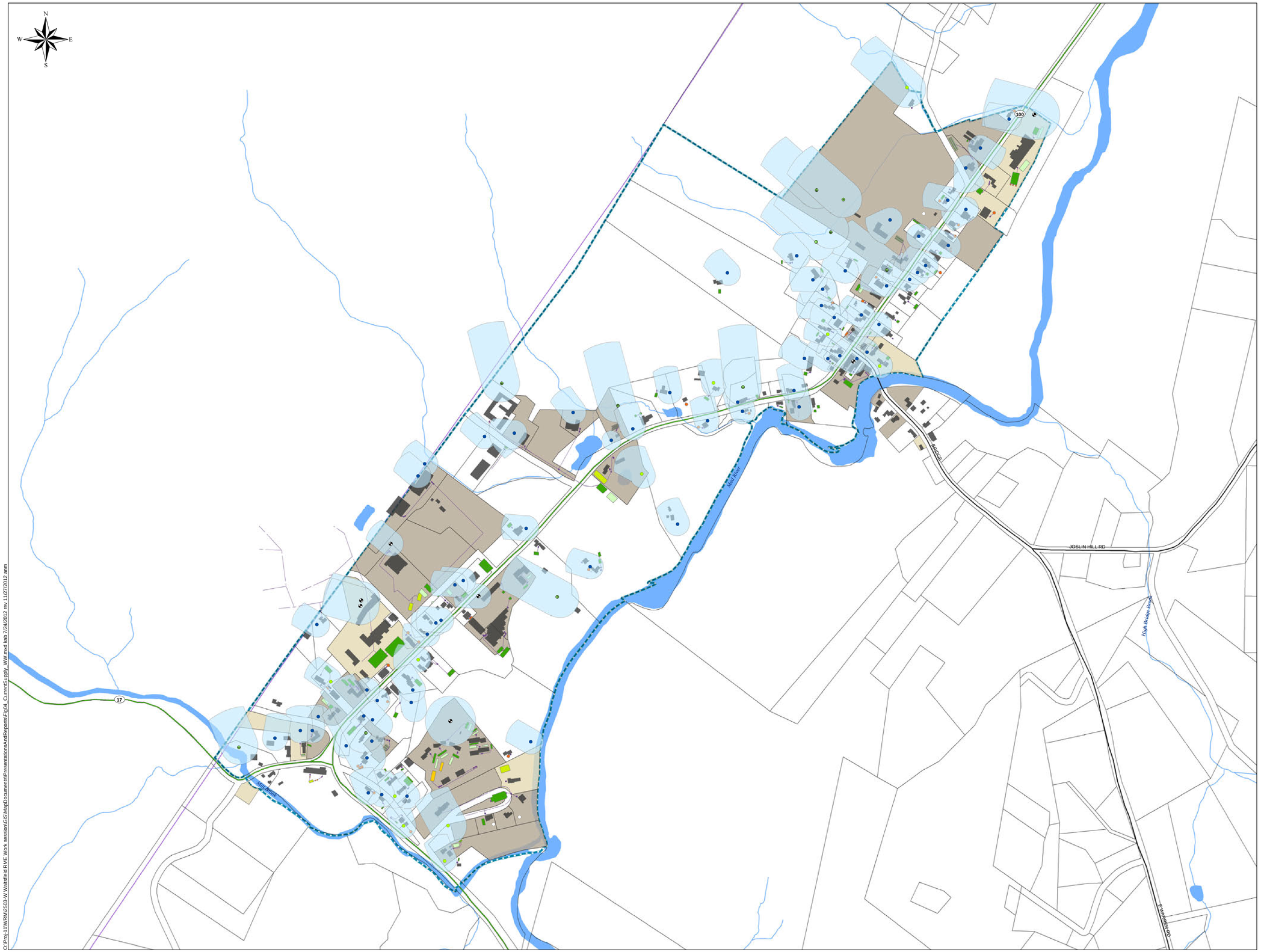

Figure 4
Water Supply / Wastewater Infrastructure (Before Municipal Water Project)

Wastewater Facilities Plan Update, Community Wastewater Loan Fund Program

Waitsfield Village and Irasville, Vermont

- Building
- Parcel Boundary
- Study Area
- Wastewater Tanks
- Wastewater Conveyance

Wastewater Dispersal

- In-ground (trench or bed)
- At-Grade
- Mound
- Mound-Filtrate
- Drywell
- Replacement Area

DEC Permit Status

- Permit Issued Since 2000
- Pre-2000 Permit On File

Water Supply Wells

- Public Water Supply Well
- Dug Well or Spring
- Drilled - non potable
- Drilled shared
- Drilled

- Well Shields and Zone 1 WHPAs

Sources: VCGI: Streams, Water Bodies; Town of Waitsfield: Parcel Boundaries; Phelps and Stone: Water Supply and Wastewater Infrastructure, Well Shields, Buildings; Stone: DEC Permit Status.

Note: The well shields on this figure represent what is currently known about water supply infrastructure, prior to the construction of and connections to the community water system (anticipated in December 2012).

Feet
0 250 500 1,000

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Figure 5
Water Supply / Wastewater Infrastructure (Including Municipal Water Project)

Wastewater Facilities Plan Update, Community Wastewater Loan Fund Program

Waitsfield Village and Irasville, Vermont

- Building
- Parcel Boundary
- Study Area
- Wastewater Tanks
- Wastewater Conveyance

Wastewater Dispersal

- In-ground (trench or bed)
- At-Grade
- Mound
- Mound-Filtrate
- Drywell
- Replacement Area

DEC Permit Status

- Permit Issued Since 2000
- Pre-2000 Permit On File

Water Supply Wells

- Public Water Supply Well
- Dug Well or Spring
- Drilled - non potable
- Drilled shared
- Drilled

- Well Shields and Zone 1 WHPAs

Sources: VCGI: Streams, Water Bodies; Town of Waitsfield: Parcel Boundaries; Phelps and Stone: Water Supply and Wastewater Infrastructure, Well Shields, Buildings; Stone: DEC Permit Status.

Note: The well shields on this figure represent what is currently known about water supply infrastructure, assuming that connections to the community water system (as of June 2012) are completed.

Feet
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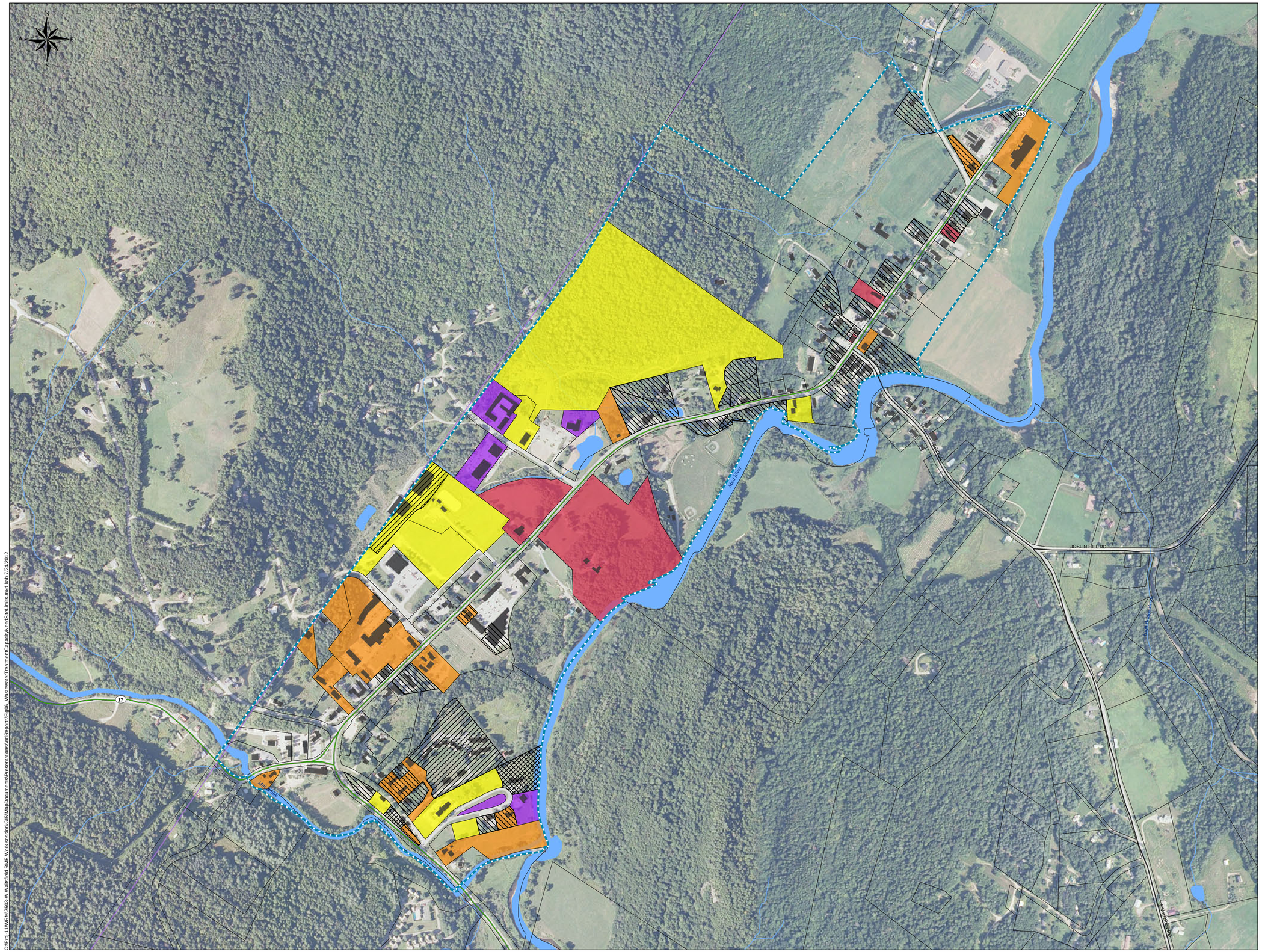

Figure 6
Wastewater Treatment and Capacity Needs and Site Limitations

Wastewater Facilities Plan Update, Community Wastewater Loan Fund Program

Waitsfield Village and Irasville, Vermont

Building

Parcel Boundary

Study Area

Onsite Disposal Restriction (GIS)

Area Restriction Only (38)

Groundwater Restriction Only (2)

Groundwater and Area Restriction (2)

Future Plans and Capacity Needs

Plan to change property use

Would change use if WW capacity available

Current plan and ww capacity need

Other known issue

Sources: VCGI: Streams, Water Bodies, Town of Waitsfield: Parcel Boundaries, Zoning Districts; Stone: Onsite Disposal Restriction (GIS); Phelps: Buildings

0 250 500 1,000 Feet

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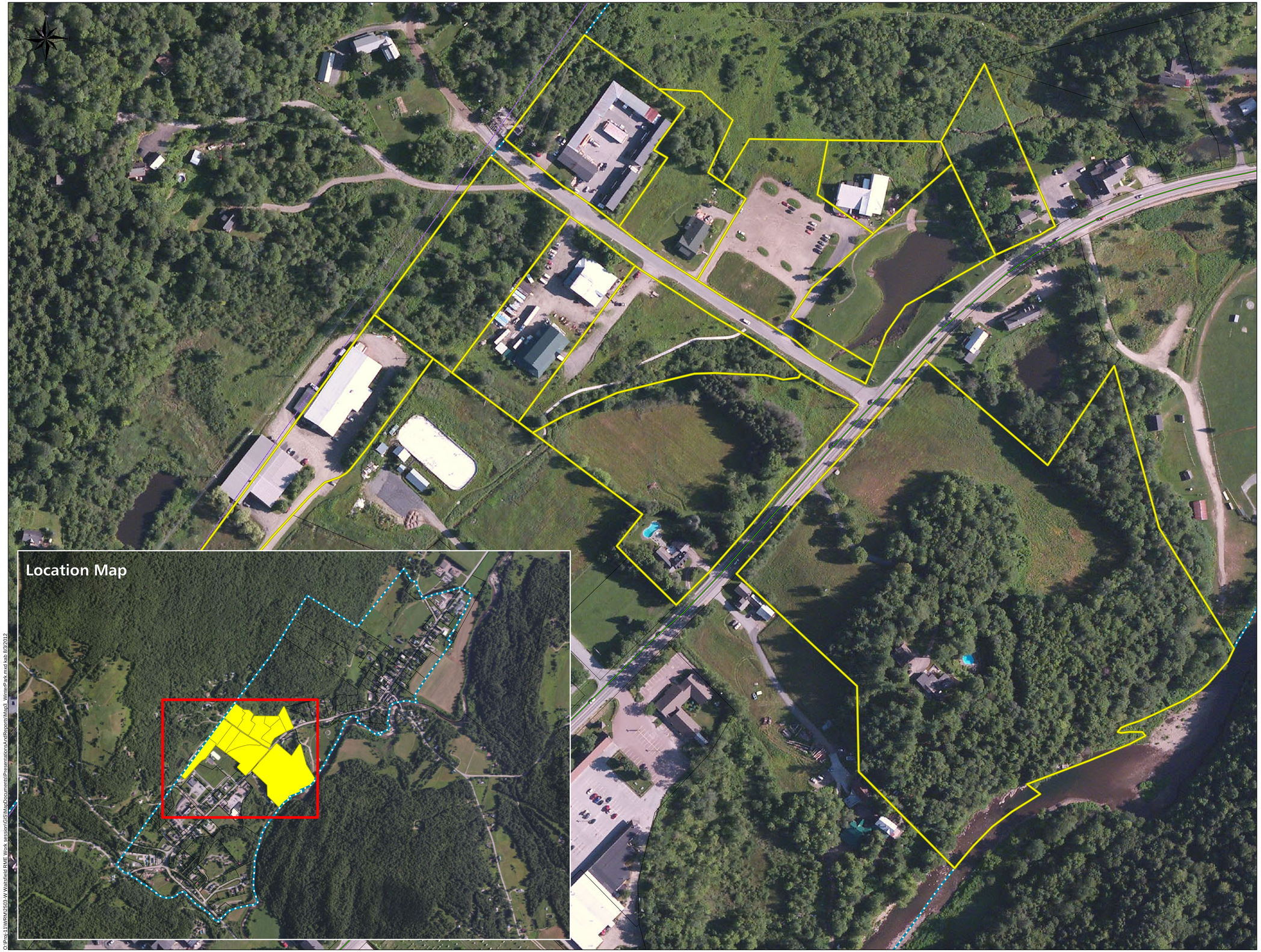

Figure 7
Pilot Project Location
Wastewater Facilities Plan Update, Community Wastewater Loan Fund Program

Waitsfield Village and Irasville, Vermont

Pilot Project Parcel

Parcel Boundary

Project Area

Sources: Town of Waitsfield: Parcel Boundaries, Water Service Area / Initial Wastewater Project; Phelps and Stone: Buildings; Bing Maps: Imagery

Feet
0 50 100 200

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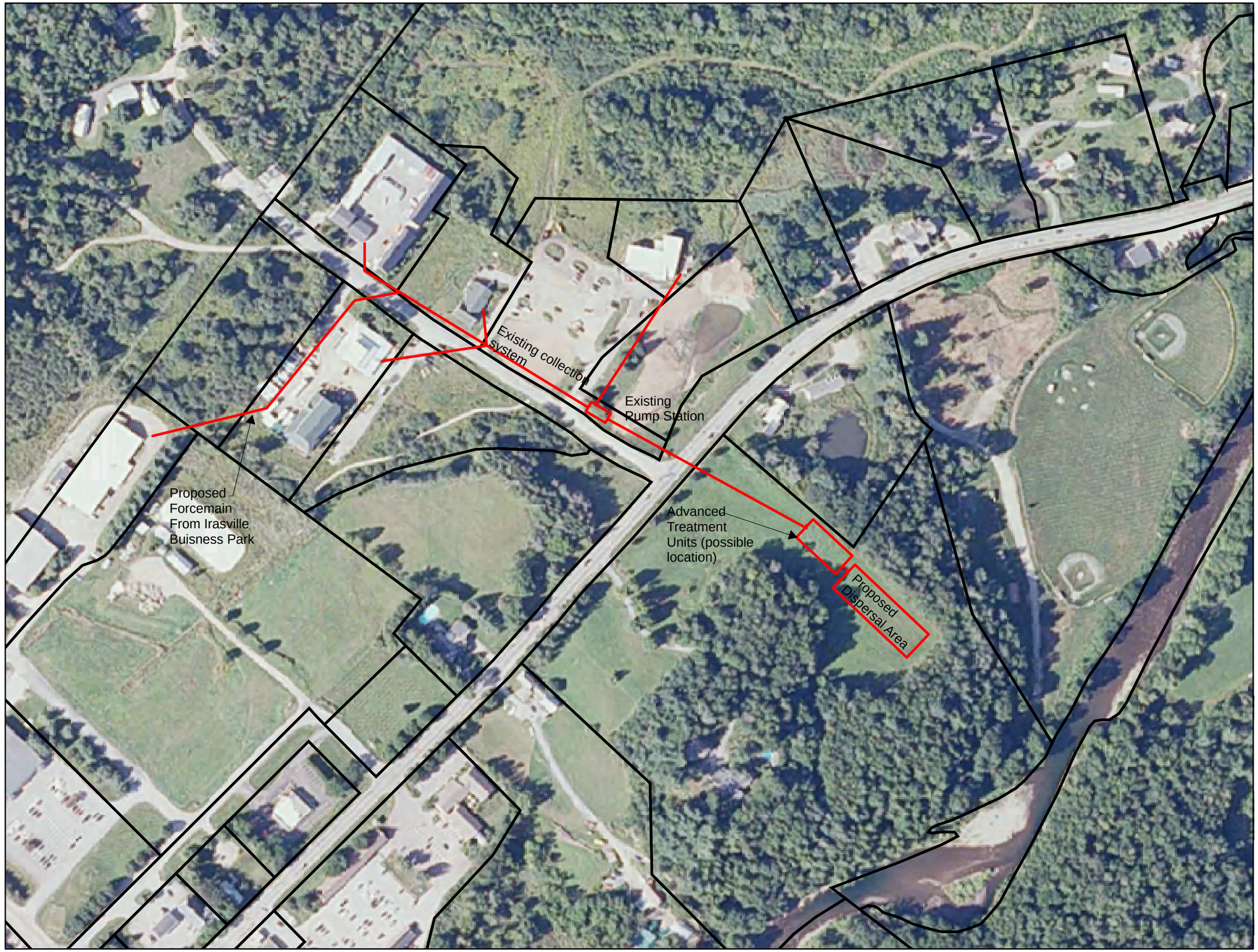

Figure 8
Pilot System Preliminary Layout
Wastewater Facilities Plan Update, Community Wastewater Loan Fund Program

Waitsfield Village and Irasville, Vermont

0 50 100 200 300
Feet

Appendix A: Agreement between Vermont DEC Facilities Engineering and Town of Waitsfield - to be developed if required by Vermont ANR or the Town of Waitsfield

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Appendix B: Town-Association Security and Loan Agreement for Construction of Sanitary Sewage Disposal Improvements

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TOWN OF WAITSFIELD, VERMONT

SECURITY AND LOAN AGREEMENT
FOR
CONSTRUCTION OF SANITARY SEWAGE DISPOSAL IMPROVEMENTS

NOW COME the Town of Waitsfield, a Vermont municipality located in Washington County, Vermont ("Town") and Waitsfield Commercial Park Sewer System Association, Inc., a Vermont non-profit corporation with a principal place of business in Waitsfield, Vermont ("Borrower") who state and agree as follows:

WHEREAS, the Town has authority to provide for the health, safety and welfare of the Town's inhabitants and property; and

WHEREAS, the Town has established a Sewer and Water Service Area, as shown on a plan dated _____ ("Service Area"); and

WHEREAS, the Town has determined that the currently constructed capacity for sanitary sewage disposal within the Service Area is inadequate both in volume and treatment quality to meet the needs of existing and reasonably anticipated future land development in accordance with contemporary standards; and

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WHEREAS, the Town, acting through its Selectboard, has established a program by which the Town will be able to loan money to property owners in the Service Area to fund the construction of eligible privately-owned sanitary sewage disposal improvements ("Sewer Program"); and

WHEREAS, the Town has entered into an agreement with the State of Vermont, acting through its Agency of Natural Resources ("VANR"), to obtain funds to assist in financing costs associated with implementation of the Sewer Program; and

WHEREAS, funds provided the Town by VANR will be loaned to the Town from and in accordance with the requirements of the Special Environmental Revolving Fund set forth in 24 V.S.A. Chapter 120 ("SRF Fund") pursuant to a loan agreement between the Town and VANR ("VANR Loan Agreement"); and

WHEREAS, Borrower is the governing entity of the Waitsfield Commercial Park Common Interest Community established pursuant to Declaration of Covenants, Easements, Restrictions and Liens, dated _____ and recorded in volume ____ at page _____ of the Town of Waitsfield Land Records ("Declaration"); and

WHEREAS, the Declaration establishes rights and obligations

concerning lands and premises described in Exhibit A of the Declaration (“Property”); and

WHEREAS, the Property is located entirely or substantially **(how define)** within the Service Area and contains existing land development that requires sewage disposal capacity of ____gallons per day; and

WHEREAS, Borrower contracted with [Engineer], a qualified P.E. (“Engineer”), to design sewage disposal improvements with a disposal capacity of ____ gallons per day on the Property; and

WHEREAS, based on work performed by Engineer, Borrower has obtained Indirect Discharge Permit No. (“Permit”) issued by VANR pursuant to the Indirect Discharge Rules, Chapter 14 of the Environmental Protection Rules adopted by VANR (“ID Rules”) to construct sewage disposal improvements with a disposal capacity of _____ gallons per day (“Disposal System”); and

WHEREAS, the Disposal System when constructed will provide sewage disposal capacity for the land development described below (“Associated Development”):

1. Existing development on the Property;

2. New development on the Property as authorized by the following permits:

(Note: If additional properties within the Service Area will be served by the Disposal System, such properties will be identified here, along with any related permits)

; and

WHEREAS, Borrower desires to construct the Disposal System to serve the Associated Development (“Project”); and

WHEREAS, the Disposal System qualifies as an eligible privately-owned sewage disposal system under the Sewer Program; and

WHEREAS, Borrower has made application to the Town in accordance with the requirements of the Sewer Program to borrow money to cover the cost of designing, permitting and constructing the Disposal System;

NOW THEREFORE, in accordance with these mutual premises and other good and valuable consideration, Town and Borrower enter

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into this Security and Loan Agreement (“Loan Agreement”) which provides as follows:

1. Loan, Note and Rate: Subject to the terms and conditions of this Loan Agreement, Town hereby agrees to lend and loan to Borrower, and the Borrower hereby agrees to borrow from Town, a sum not to exceed _____, ("Loan"). The obligation of the Borrower to repay the Loan shall be evidenced by a promissory note ("Note") of the Borrower in a form satisfactory to Town dated the date on which the Town pays to Borrower its initial disbursement under this Loan Agreement (“Closing Date") payable to the order of Town in the principal amount of the reimbursable costs loaned to Borrower, with interest thereon at the rate of _____ per annum ("Rate").

2. Loan Term and Repayment: The term of the Loan shall be twenty (20) years. The Note shall be repaid in two hundred forty (240) monthly installments of principal and interest calculated daily by reference to a repayment term or amortization period of twenty (20) years. All payments shall be applied first to interest and then to principal. All payments shall be timely made to Town, or its order, at _____, or at such other address as the holder thereof may designate in writing. The first payment on the Loan shall be due and payable on the first day of the month occurring six (6) months after the date of the Town’s final disbursement to Borrower, as provided herein.

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3. Purpose of Loan: The purpose of the Loan is to finance a portion of the costs incurred by Borrower to design, obtain permits for and construct the Disposal System.

4. Security: The Note and the Loan shall be secured by Borrower’s assignment of assessments which it collects pursuant to the Declaration (“Assignment of Assessments”), a mortgage on the Common Elements as described in the Declaration (“Mortgage”) and an Irrevocable Offer of Dedication of an easement adequate to enable the Town to access, maintain, and allow use of the Disposal System by the Associated Development for the term of the Loan and Note (“Irrevocable Offer of Dedication”).

5. Disbursement of Loan Proceeds:

a. Disbursements during construction of the Disposal System will be made as work is completed, subject to Sections 5.b. through 5.e., below, and provided that the Borrower is in full compliance with the terms of this Loan Agreement, all other

loan documents executed in connection therewith, the Declaration, the terms and conditions of the Permit and the requirements of the SRF Fund. Town reserves the right to withhold disbursements if during the course of construction of the Disposal System Town's mortgage as a first mortgage lien is jeopardized in any way, including the financial ability of Borrower to complete construction of the Disposal System.

b. Town shall disburse funds to Borrower only upon submission to and approval by Town of a requisition ("Requisition") for payment supported by invoices and such other evidence as may be reasonably required by Town. Within ten (10) days of receipt of the Requisition, Town shall issue a check or checks in payment of the Requisition directly to such contractor or subcontractor as more particularly identified in the Requisition, or Town shall inform the Borrower it does not approve of the Requisition.

c. Initial Disbursement. Prior to the Town making its initial disbursement, Borrower shall furnish Town, subject to approval by the Town’s attorney, which approval will not be unreasonably withheld or delayed, the following:

i. Copies of all contracts executed by Borrower for construction of or related to construction of the Disposal System;

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ii. The Note executed by Borrower;

iii. The Declaration executed by Borrower;

iv. The Assignment of Assessments executed by Borrower;

v. The Mortgage executed by Borrower;

vi. The Irrevocable Offer of Dedication executed by Borrower; and

vii. Such certifications of Borrower’s attorney as the Town’s attorney may deem appropriate, including, but not limited to, any certifications required by or under the SRF FUND.

d. If during construction, the cost of completing the Disposal System exceeds the cost of contracts submitted prior to the Closing Date, Borrower will provide evidence that additional financing subordinate to Town, or equity, will be made available

to complete the Project, the terms and conditions of which will be acceptable to Town.

e. Final Disbursement. Upon completion of the Project, and duly to all the terms and conditions hereafter set forth; Town may make a final disbursement, in an amount up to the remaining balance of the SRF loan made by VANR for the Project, to Borrower upon receipt of a Requisition for final payment. Before Town is obligated to make such final disbursement:

i. Town must approve of the Project in accordance with the Permit, which approval will not be unreasonably withheld or delayed;

ii. Borrower shall furnish Town a certificate or affidavit of the contractor certifying or evidencing: completion of the contract terms, payment for all labor and materials and payment in full of the contract price, exclusive of funds withheld by Borrower for final payment. Borrower shall also provide any additional lien waivers from subcontractors and suppliers of material for the Project as may be reasonably requested by Town;

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iii. Borrower shall furnish Town its certificate that it has unconditionally accepted the construction subject to punch lists and reservation rights, and is satisfied with same;

iv. Town may require Borrower's attorney to issue an attorney's title certificate which certifies that there are no changes in the condition of the title of the property as set forth in the original and supplemental certificate of title;

v. Borrower shall provide such certificates as are required by the Town of Waitsfield or the State of Vermont authorizing use of the Disposal System and shall furnish such other evidence as may be reasonably required by Town that Borrower has complied with all state and local permits and rules and regulations applicable to the Project. Upon receipt of the above, Town may issue a check or checks in payment of the final Requisition as provided herein; and

vi. Borrow shall provide an executed Note and

Mortgage to reflect any increase or decrease in the Loan since the Closing Date, together with any certifications of Borrower's attorney as the Town's attorney may deem appropriate.

6. Borrower's Representations and Warranties:

The Borrower represents and warrants the following:

a. Duly Organized: Borrower is a nonprofit corporation duly organized, validly existing and in good standing under the laws of the State of Vermont and has the authority to enter into this Agreement and take such action as is required hereunder.

b. Duly Authorized: Borrower is duly authorized, qualified and licensed under all applicable laws, regulations, ordinances and orders of any public authority to carry on its business and holds each and every license, permit and other regulatory approval necessary to operate the Associated Development in the Service Area.

c. Legally Binding Instruments: When this Loan Agreement, and all other loan documents in connection herewith, are executed by the Borrower and Town, they shall constitute the legal, valid and binding obligation of the Borrower in accordance with the terms therein.

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d. No Legal Suits: There are no claims, actions, suits or proceedings instituted or filed and, to the best of the Borrower's knowledge, there are no claims, actions, suits or proceedings threatened at law or in equity or by any federal, state, municipal or other governmental department, commission, board, bureau, agency or instrumentality that would have a materially adverse effect on construction of the Disposal System or the Borrower's performance of this Agreement.

e. Legal Authorizations: Any authorization, consent or approval, or any formal exemption of any governmental body, regulatory authority (federal, state or local) or mortgagee, creditor or third party necessary to the valid execution and delivery by the Borrower of this Loan Agreement, or execution of the Note, Mortgage, Assignment of Assessments, Irrevocable Offer of Dedication or any other document as herein required has been obtained.

f. Not in Default: Borrower is not in default of any obligation, covenant or condition contained in any bond, debenture, note or other evidence of indebtedness or any

mortgage, security agreement or collateral instrument securing the Property.

7. Preconditions to Loan:

The obligation of the Town to make the Loan shall be subject to the fulfillment, at the time of the initial and final disbursements, of each of the following conditions:

a. Execution of Authorization: The Borrower shall have executed and delivered, in a form satisfactory to Town and Town's attorney, this Loan Agreement, the Note, the Declaration, the Assignment of Assessments, the Mortgage, the Irrevocable Offer of Dedication and such other contracts, security instruments, certificates, documents and assurances as Town or Town's attorney may require. Said Declaration shall create a valid and enforceable lien upon the Property for the payment of assessments, free and clear of all liens and encumbrances upon the Property, except as otherwise expressly provided for therein or otherwise in writing by Town. Said Mortgage shall create a valid and enforceable lien upon the Common Elements for the payment of the Note, free and clear of all liens and encumbrances upon the Common Elements, except as otherwise expressly provided for therein or otherwise in writing by Town.

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b. Additional Security: The Borrower shall have complied with, delivered or caused to be delivered such other or additional security as Town or its legal counsel may require, including but not limited to, for example, subordination agreements.

c. Representations and Warranties: All representations and warranties of Borrower set forth herein shall be accurate as of the Closing date.

d. Opinion of Legal Counsel to Borrower: The Borrower shall have delivered, or cause to be delivered to Town, in a form acceptable to Town's attorney, an opinion of legal counsel to Borrower, which addresses, among other issues:

i. The capacity and authority of the Borrower to perform under the terms of this Loan Agreement and the documents referred to herein;

ii. The compliance of Borrower's Project plans with all local, State of Vermont and federal environmental, zoning, planning, sanitary, land use and related statutes, rules and regulations

and that all permits necessary or incidental to the Project have issued or been obtained by Borrower;

iii. The status of title to the Property and the marketability thereof; and

iv. The enforceability of the security documents executed and delivered hereunder. Legal counsel to Town shall be entitled to require such opinion to address any issues deemed pertinent by counsel and to require such supporting documentation as may also be deemed material to the opinion.

e. Compliance with This Loan Agreement: The Borrower shall have complied with each term, provision and condition of this Loan Agreement required to be complied with before the initial and final disbursements.

f. Approval of Town's Counsel: All actions, undertakings, instruments and documents required to carry out this Loan Agreement or incidentally related thereto, including related legal matters, have been approved by counsel to Town, which approval shall not be unreasonably withheld or delayed.

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g. Borrower's Certificate Regarding Hazardous Materials and Hazardous Solid Wastes: Borrower shall have provided Town with a sworn statement as to whether any hazardous materials or hazardous solid wastes have been disposed or generated on, upon or within the Property, or will be generated on the Property, and if so, the nature and extent of same, the location where the hazardous materials or solid wastes have been disposed of or will be stored or deposited and, if located upon the Property, the nature and extent of same and how the hazardous materials and solid wastes have been or will be disposed of, stored or deposited and whether such disposal, storage and deposit has been or will be pursuant to a federal or state permit. A true copy of any such permit shall be attached to Borrower's certificate.

h. Contribution of Capital: The Borrower shall have contributed a sum not less than _____, which sum shall be available as equity to fund costs and expenses of the Project.

i. Construction Contracts: Borrower shall, prior to commencing any construction, provide construction contracts to complete the proposed Project, acceptable to Town, the Town's

attorney and VANR. Such contracts shall be subject to approval by the Town and Town's attorney, which approval will not be unreasonably withheld or delayed.

8. Borrower's Covenants:

The Borrower agrees to comply with the following covenants from the date hereof until Town has been fully repaid with interest, unless Town, its successors or assigns, shall otherwise consent in writing:

a. Payment of Loan:

i. The Borrower agrees to immediately pay when due the principal and interest on the Note according to its terms and conditions and to immediately pay when due any other amounts that may become due and payable to Town under or pursuant to the terms of this Loan Agreement or the documents executed and delivered in connection herewith;

ii. The Borrower agrees to suspend the use of the Disposal System by any Unit Owner who fails to pay assessments when due; and

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iii. The Borrower agrees to commence an appropriate action, in accordance with 27A V.S.A. § 3-116(c), to collect any delinquent assessments within five (5) months of the date an assessment becomes delinquent.

b. Compliance with Closing Documents: The Borrower agrees to comply with each term, condition and provision of all documents and instruments required under the terms of this Loan Agreement including, but not limited to, the Loan Agreement itself, the Note, Declaration, Assignment of Assessments, Mortgage, Irrevocable Offer of Dedication and any other documents granting security for the Loan to be made hereunder.

c. Maintain and Insure Property:

i. During construction of the Disposal System, Borrower agrees to maintain adequate hazard insurance relative to said Project and that such coverage will mirror, on an on-going basis, the increasing property value as the improvements are made and the Project moves towards completion. In

addition, Borrower shall maintain and provide adequate general liability insurance in amounts and forms acceptable to Town; and

ii. Following completion of the Disposal System and for the remaining term of the Note, the Borrower agrees to maintain the Property in such condition and repair that Town's security will be adequately protected. The Borrower also agrees to maintain during the term of the Loan adequate hazard insurance policies covering fire and such other hazards, including but not limited to, windstorm, lightning, hail, business interruption, explosion, riot, civil commotion, aircraft, vehicle, marine, smoke, builder's risk, public liability, property damage, flood or mudslide, or any other hazard insurance that may be required to protect the security, in an amount that is at least the amount of the Loan or sufficient to prevent the Borrower from becoming a co-insurer and issued by companies satisfactory to Town with acceptable loss payee clauses in favor of Town under a standard insurance clause which shall provide a minimum of (10) days' written notice to Town prior to cancellation. Borrower agrees Town may advance and pay any unpaid premiums necessary to maintain adequate hazard insurance coverage upon the secured property and that any sums so paid shall, at the sole discretion of Town, be immediately due and payable or be added to the principal indebtedness of the Note and bear interest at the Rate provided for therein.

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d. Maintain and Submit Financial Statements: The Borrower agrees to submit professionally prepared annual income statements and balance sheets in compliance with Generally Acceptable Accounting Principles and to provide said annual income statements and balance sheets to Town by April 30th each year.

e. Pay all Taxes: The Borrower agrees to pay and discharge all taxes, assessments and governmental charges upon it or against the Property prior to the date upon which penalties attach thereto, except that the Borrower shall not be required to pay any such tax, assessment or governmental charge which is being contested by it in good faith by or through appropriate proceedings. Borrower agrees Town may advance and pay any taxes or assessments made against or upon the Property and that any

sums so paid shall, at the sole discretion of Town, be immediately due and payable or be added to the principal indebtedness of the Note and bear interest at the Rate provided for therein.

f. Maintain Existence: The Borrower agrees to maintain its existence under Vermont law, and its rights, privileges and franchises within the State of Vermont and to qualify and remain qualified as a Vermont non-corporation ~~and~~ in good standing under the laws of the State of Vermont.

g. Right to Inspection: The Borrower covenants and agrees that until the Note has been fully repaid with interest, the Town shall have the right at reasonable times, and from time to time, to inspect the Common Elements and the Property to determine the condition of the Common Elements and such real and personal property.

h. Null and Void Covenants: The Borrower agrees that in the event any provision of this Loan Agreement, any other instrument executed at Closing or the application thereof to any person or circumstance shall be declared null and void, invalid, or held for any reason to be unenforceable by a court or administrative agency of competent jurisdiction, the remainder of such agreement shall nevertheless remain in full force and effect, and to this end, the provisions of all covenants, conditions and agreements described herein are deemed separate.

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i. Expenses and Closing Costs: The Borrower agrees to pay all fees, expenses and charges in respect to the Loan, or its making, or the transfer of security to Town or in any way connected therewith, including but not limited to applicable title insurance and survey costs, recording and filing fees, property transfer taxes, if any, and any other taxes, fees and expenses in connection with this transaction or with the enforcement of this Loan Agreement, Note, Declaration, Assignment of Assessments, or Mortgage and Irrevocable Offer of Dedication.

j. Indemnification: The Borrower agrees to indemnify and save Town or its successors and assigns harmless against any and all liability with respect to the Project, or resulting from Borrower’s delay in discharging any of its obligations.

k. Hazardous Material and Solid Waste Indemnification: The Borrower hereby agrees to indemnify and save Town and its successors and assigns harmless from any and all liability resulting from any storage or disposal of hazardous materials or

solid wastes upon the Property, which such indemnification shall include, but not be limited to, the cost and expense of clean-up and response to such storage or disposal.

l. Compliance with Environmental Regulations: The Borrower agrees to comply with all applicable federal and state environmental regulations concerning the storage and disposal of hazardous materials and solid wastes during the term of the Note, including any extensions thereof.

m. Compliance with Conditions of Permit: Borrower agrees to comply with all terms and conditions imposed by the VANR in connection with the Permit. All terms and conditions of said Permit are hereby incorporated by reference as affirmative covenants of the Borrower in this Loan Agreement. Borrower further agrees to provide to Town copies of all correspondence received from or sent to VANR, as well as any reports provided to VANR promptly upon submission to or receipt from VANR. **(NOTE: Expand to provide authority to repair and recover cost)**.

n. Compliance with the Declaration and Bylaws: Borrower agrees to comply with all terms and conditions imposed by the Declaration and Bylaws. All terms and conditions of said Declaration and Bylaws are hereby incorporated by reference as affirmative covenants of the Borrower in this Loan Agreement.

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o. Expenses of Collection of Enforcement: The Borrower agrees, if at any time the Borrower defaults on any provision of this Loan Agreement, to pay Town or its successors and assigns, in addition to any other amounts that may be due from the Borrower, an amount equal to the reasonable costs and expenses of collection, enforcement or correction of default incurred by Town or its assigns in such collection, enforcement or correction of default, including, but not limited to, the fees, costs and expenses of legal representation of Town.

9. Borrower’s Further Covenants and Agreements:

The Borrower covenants and agrees that, from the date hereof until payment in full of the Note, unless Town, its successors or assigns, shall otherwise consent in writing, it will not enter into any agreement or other commitment the performance of which would constitute a breach of any of the covenants contained in this Loan Agreement including, but not limited to, the following:

a. Encumber the Common Elements: The Borrower will

neither create nor suffer to exist any mortgage, pledge, lien, charge or encumbrance, including liens arising from judgments, on the Common Elements, exclusive of ~~that~~ those arising under this Loan Agreement, the Note, Mortgage, Assignment of Assessments, or the Irrevocable Offer of Dedication executed and delivered to Town hereunder, or except as otherwise agreed to in writing, in advance, by Town.

b. Convey the Common Elements: The Borrower will not sell, convey, or suffer to be conveyed, lease, assign, transfer, hypothecate or otherwise dispose of the Common Elements without the express prior written approval of Town.

c. Change of Ownership: The Borrower will not, without the express prior written approval of Town, which approval shall not be unreasonably withheld, permit or cause to occur any material change in the ownership, structure, control or operation of Borrower.

d. Change of Project: The Borrower will neither permit nor suffer to exist, without the prior written consent of Town, any material change in the Project's plans and/or specifications as same are represented by the existing plans and specifications heretofore submitted to Town by Borrower in connection with the Loan. A material change will include any significant variance in the accepted plans and specifications and increases in contract prices, and/or additional financial obligation with respect to the Project.

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e. Restriction on Financial Activities: If, in the sole discretion of Town the financial operations of the Borrower justify approval, the Borrower shall not, absent the prior written approval of Town, which approval shall not be unreasonably withheld, conduct, perform, commit nor suffer any of the following:

i. Purchase or lease capital assets having a fair market value in the aggregate in excess of $100,000 in any fiscal year; or

ii. Pay salaries and bonuses to any officer or director of the Borrower in the aggregate in excess of $100,000 in any fiscal year.

10. Events of Default:

Each of the following events shall constitute, individually or in any combination, "Events of Default"

whether occurring voluntarily or involuntarily, and without limitation:

a. Non-Payment of Loan: If the Borrower shall fail to make payment when due of any installment of principal on the Note, or interest accrued thereon, and if the default shall remain unremedied for twenty (20) days after the due date thereof.

b. Non-Payment of Other Indebtedness: If default shall be made in the payment when due of any installment of principal or of interest on any of Borrower's other indebtedness, and if such default shall remain unremedied for twenty (20) days after the mailing of notice of such default to Borrower.

c. Incorrect Representation or Warranty: If any representation or warranty contained in, or made in connection with, the execution and delivery of this Loan Agreement, or in any certificate furnished pursuant hereto, shall prove to have been incorrect when made in any material respect.

d. Default in Covenants: If the Borrower shall default in the performance of any other term, covenant or agreement contained in this Loan Agreement, and such default shall continue unremedied for twenty (20) days after the mailing of notice of such default to Borrower.

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e. Voluntary Insolvency: If the Borrower shall become insolvent or shall cease to pay its debts as they mature or shall voluntarily file a petition seeking reorganization of, or the appointment of, a receiver, trustee or the pursuit of liquidation of the Borrower or a substantial portion of its assets, or to effect a plan or other arrangements with creditors, or shall be adjudicated bankrupt, or shall make a voluntary assignment for the benefit of creditors.

f. Involuntary Insolvency: If an involuntary petition shall be filed against the Borrower under any bankruptcy, insolvency or similar law seeking the reorganization of or the appointment of any receiver, trustee or liquidator for the Borrower, or of a substantial part of the property of the Borrower, or a writ or warrant of attachment or similar process shall be issued against a substantial part of the property of the Borrower, and such petition shall not be dismissed, or such writ or warrant of attachment or similar process shall not be released or bonded, within sixty (60) days after filing or levy thereof.

g. Violation of the Permit. If the Borrower shall

violate any term or condition of Indirect Discharge Permit No.____ _____.

g. Waiver of Notice: No failure or delay on the part of the Town in exercising any right, power or remedy shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof or the exercise of any other right, power or remedy hereunder. No modification or waiver of any provision of this Loan Agreement or of the Note, nor any event be effective unless the same shall be reduced to a writing, and then such waiver or consent shall be effective only in the specific instance and for the specific purpose for which given. No notice to or demand upon the Borrower in any case shall entitle the Borrower to any other or further notice or demand in similar or other circumstances.

h. Remedies on Default:

i. Acceleration. Upon default by the Borrower as defined herein, and if such default shall remain unremedied for twenty (20) days after notice of default is mailed to Borrower, then the Town may at its option declare all of the obligations of the Note immediately due and payable. In the event of default and in the event of acceleration, the Town shall have all the rights, remedies and privileges with respect to the Property as are provided in this Loan Agreement, the Note, Declaration, Mortgage, Assignment of Assessments or Irrevocable Offer of Dedication and as otherwise available under general law;

ii. Attorneys' Fees, etc. Upon any default, the Town may consult an attorney and Borrower agrees to reimburse Town for all reasonable attorneys' fees and expenses as provided in this Loan Agreement and the legal and other expenses for enforcing the Town’s rights under this Loan Agreement, the Note, Declaration, Mortgage, Assignment of Assessments or Irrevocable Offer of Dedication and general law;

iii. Deficiency. The Borrower shall remain liable for any deficiency resulting from a sale of

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the Common Elements and shall pay any such deficiency forthwith on demand; and

iv. Monies Advanced. If the Borrower shall default in the performance of any of the provisions of this Loan Agreement on the Borrower's part to be performed, the Town may perform same for the Borrower's account and any monies expended in so doing shall be chargeable with interest to the Borrower and added to the indebtedness secured hereby.

12. **Town's Disclaimer**: **The Town's execution of this Loan Agreement and taking those actions contemplated herein is solely in the capacity of a "Lender of money" to Borrower and any other type of commercial/business relationship between Town and Borrower is expressly disavowed. By making the Loan to Borrower for construction of the Disposal System, Town does not make any warranty, express or implied, regarding the Disposal System and assumes no responsibility for constructing it.**

13. Notices: All notices, consents, requests, demand and other communications hereunder shall be in writing and shall be deemed to have been duly given to a party hereto if mailed by certified mail, postage prepaid, to the Town and the Borrower at the following addresses:

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If to Town:

If to Borrower:

14. Survival of Representations and Warranties: All agreements, representations and warranties made by the Borrower herein or in any other document or certificate delivered to Town in connection with the transactions contemplated by this Loan Agreement shall survive the delivery of this Loan Agreement, the Note, the Mortgage, Assignment of Assessments and the Irrevocable Offer of Dedication, and shall continue in full force and effect so long as the Note is outstanding.

15. Successors and Assigns: This Loan Agreement shall be binding upon the Borrower, its successors and permitted assigns, provided however, that the Borrower may not assign or transfer any rights hereunder without the prior written consent of Town. This Agreement shall inure to the benefit of Town, its successors and assigns, and, except as otherwise expressly provided in particular provisions hereof, all subsequent holders of the Note.

16. Counterparts: This Loan Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

17. Governing Law: This Loan Agreement, the Note, the Mortgage, the Assignment of Assessments and the Irrevocable Offer of Dedication and each and every other document contemplated hereby or herein shall be deemed contracts made under the laws of the State of Vermont, and for all purposes shall be construed in accordance with the laws of the State of Vermont.

18. Section Headings: Section headings used in this Agreement are for convenience only and shall not affect the construction of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused their names to be subscribed and their seals affixed as of the date and the year first above written.

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wad12-006 Security Loan Agreement [revised].agr.wpd

Appendix C: Model Association Agreement: Declaration of Covenants, Easements, Restrictions, and Liens

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DECLARATION OF COVENANTS, EASEMENTS, RESTRICTIONS AND LIENS

PROPERTY OWNER 1, PROPERTY OWNER 2, PROPERTY OWNER 3, PROPERTY OWNER 4 AND PROPERTY OWNER 5, (hereinafter referred to collectively as "Declarant"), do hereby submit the real property in the Town of Waitsfield, Vermont described in Exhibit A to the provisions of 27A V.S.A. § 1-101 et seq., the Uniform Common Interest Ownership Act ("the Act").

ARTICLE I Definitions

The following definitions shall control over the definitions in the Act. The definitions in the Act shall apply to terms not defined herein. In the Documents, the following words and phrases shall have the following meanings:

Section 1.1 - Act. The Vermont Common Interest Ownership Act, Title 27 A of the Vermont Statutes Annotated, as the Act may be amended from time to time.

Section 1.2 - Allocated Interests. The interests in the Common Expense liability and votes in the Association allocated to each Unit in the Common Interest Community, as described in Article IX of this Declaration and shown on **Exhibit A**.

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Section 1.3 - Association. Waitsfield Commercial Park Sewer System Association, Inc., a nonprofit Vermont corporation, filed with the Vermont Secretary of State.

Section 1.4 - Bylaws. The Bylaws of the Association, as they may be amended from time to time.

Section 1.5 - Common Elements. The Disposal System referred to in the Permit, with all appurtenances, interests in land and easements. Portions of the Common Elements may be designated as Limited Common Elements.

Section 1.6 - Common Expenses. The expenses for the operation of the Common Interest Community as set forth in Section 15.1 of the Declaration.

Section 1.7 - Common Interest Community. The real property described in **Exhibit B** that is subject to this Declaration and named the Waitsfield Commercial Park.

Section 1.8 - Declaration. This Declaration of Covenants, Easements, Restrictions and Liens, including identified exhibits

and any amendments.

Section 1.9 - Director. A member of the Executive Board.

Section 1.10 - Disposal System. Sewage disposal improvements with a disposal capacity of _____ gallons per day as described in the Permit, together with appurtenant improvements for the collection and transmission of treated and untreated sewage.

Section 1.11 - Disposal System Easement. The easement held by the Association, as described in Section 3.1(a).

Section 1.12 - Documents. The Declaration and Plan recorded and filed pursuant to the provisions of the Act, and the Bylaws and the Ru1es as they may be amended from time to time. Any exhibit, schedule or certification accompanying a Document is a part of that Document.

Section 1.13 - Eligible Insurer. An insurer or guarantor of a first mortgage on a Unit which has notified the Association in writing of its name and address and that it has insured or guaranteed a first mortgage on a Unit. Such notice shall be deemed to include a request that the eligible insurer be given the notices and other rights described in Article XIII.

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Section 1.14 - Eligible Mortgagee. The holder of a first mortgage on a Unit which has notified the Association in writing of its name and address and that it holds a first mortgage on a Unit. Such notice shall be deemed to include a request that the eligible mortgagee be given the notices and other rights described in Article XIII.

Section 1.15 - Executive Board. The Board of Directors of the Association.

Section 1.16 - Limited Common Elements. A portion of the Common Elements allocated by the Declaration or by the operation of subsection (2) or (4) of 27A V.S.A. §2-102 for the exclusive use of one or more but fewer than all of the Units. The Limited Common Elements of this Common Interest Community are described in Article V of this Declaration

Section 1.17 - Mortgage. An interest in real property or personal property, created by contract or conveyance, which secures payment or performance of an obligation.

Section 1.18 - Notice and Comment. The right of a Unit Owner to receive notice of an action proposed to be taken by or on behalf

of the Association, and the right to comment thereon. The procedures for Notice and Comment are set forth in Section ~~22.1~~ 18.1 of the Declaration.

Section 1.19 - Notice and Hearing. The right of a Unit Owner to receive notice of an action proposed to be taken by the Association, and the right to be heard thereon. The procedure for Notice and Hearing are set forth in Section 18.2 of this Declaration.

Section 1.20 - Plan. The plan entitled "Plan of Lands of the Waitsfield Commercial Park, Waitsfield, Vermont, A Common Interest Ownership Community", dated _____, last revised _____, prepared by _____Consulting Engineers, Inc., and as shown on **Exhibit C**.

Section 1.21 - Permit. Indirect Discharge Permit No. _____ and amendments thereto, issued by VANR pursuant to the Indirect Discharge Rules, Chapter 14 of the Environmental Protection Rules adopted by VANR to construct sewage disposal improvements with a disposal capacity of _____ gallons per day. The specific terms and conditions applicable to the Permit are set forth in **Exhibit D**.

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Section 1.22 - Property. The physical components of the Disposal System.

Section 1.23 - Rules. Rules for the use of Units and Common Elements and for the conduct of persons within the Common Interest Community, adopted by the Executive Board pursuant to this Declaration.

Section 1.24 - Security and Loan Agreement. An agreement between the Town of Waitsfield and the Waitsfield Commercial Park Sewer System Association, Inc., dated _____, together with any amendments thereto (hereinafter referred to as the “Loan Agreement”). The Loan Agreement contains the terms and conditions of a loan from the Town to the Association to fund construction of the Disposal System.

Section 1.25 - Town. The Town of Waitsfield, Vermont.

Section 1.26 - Town Mortgage. The mortgage granted by the Association to secure the Association’s loan repayment obligations under the Security and Loan Agreement.

Section 1.27 - Unit. A parcel of land in the Common Interest

Community with any improvements thereon, excluding Common Elements, designated for separate ownership or occupancy, the boundaries of which are described in Section 4.2 of this Declaration and are shown on the Plan.

Section 1.28 - Unit Owner. The person, persons or entity who own or owns a Unit. Unit Owner does not include a person having an interest in the Unit solely as security for an obligation.

ARTICLE II Type of Common Interest Community and Land

Section 2.1 - Common Interest Community. The Waitsfield Commercial Park is a Nonresidential Common Interest Community subject to Title 27 A of the Vermont Statutes Annotated.

Section 2.2 - Land. The Common Interest Community is situated in the Town of Waitsfield, Vermont and is more specifically described in Exhibit A and shown on the Plan.

ARTICLE III Easement for Common Elements, Mortgage, Irrevocable Offer of Dedication and Assignment of Assessments

Section 3.1 - The execution and recording of this Declaration by Declarant and by the holders of encumbrances on the lands shown on the Plan, shall:

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(a) Convey to the Association an easement for construction, operation, maintenance and repair of the Disposal System, the boundaries of which are shown on the Plan. The specific terms and conditions applicable to the easement are set forth in **Exhibit E**;

(b) Grant the Executive Board full authority to convey to the Town a mortgage deed of the Common Elements;

(c) Grant the Executive Board full authority to convey to the Town an irrevocable offer of dedication authorizing the Town to accept ownership of the Common Elements, as further described in **Exhibit F**; and

(d) Grant the Executive Board full authority to assign to the Town all assessments provided for in Article XVII, including the right to collect delinquent assessments, as further described in **Exhibit G**.

ARTICLE IV Units and Boundaries

Section 4.1 - Number of Units. The Common Interest Community shall initially contain five (5) Units.

Section 4.2 - Boundaries.

(a) The Units created by the Declaration are five (5) parcels of land with boundaries as are shown on the Plan, and including an identifying number for each Unit thereon.

(b) Inclusions: Each Unit shall include the land and improvements lying within the boundaries described in Subsection 4.2(a) above, except for exclusions as described in 4.2(c) below.

(c) Exclusions: The following are excluded from each Unit: any Common Elements or Limited Common Elements lying within the boundaries described in Subsection 4.2(a) above.

ARTICLE V Limited Common Elements

Section 5.1 - Limited Common Elements. The following portions of the Common Elements are Limited Common Elements assigned to the Units as stated:

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List here sewer lines and related improvements that serve fewer than all the units and identify the units served by such lines and improvements. These may need to be specifically identified on a plan.

Section 5.2 - Expenses Allocated to Limited Common Elements. Common Expenses associated with the maintenance, repair or replacement of the Limited Common Elements will be assessed only against the Unit(s) to which the Limited Common Element is assigned in accordance with Allocated Interests in Exhibit B and Section 5.1 above.

ARTICLE VI Maintenance, Repair and Replacement

Section 6.1 - Common Elements. The Association shall maintain, repair and replace all of the Common Elements in full compliance with the Security and Loan Agreement. Each Unit Owner shall reimburse the Association for any damage to the Common Elements caused intentionally or negligently by the Owner or the Owner’s invitees and guests. The Association shall also maintain, repair and replace all of the Limited Common Elements to the extent such is required by the Security and Loan Agreement, upon the failure of the responsible Unit owner(s) to do so.

Section 6.2 - Units. Each Unit Owner shall be responsible for the maintenance, repair and upkeep of each individual Unit Owner's Unit, subject to Section 4.2, above. The Association shall be responsible for damage to Units caused by its failure to maintain, repair or make replacements to the Common Elements.

Section 6.3 - Access. The Town and any person authorized by the Executive Board shall have the right of access to all portions of the Common Interest Community for the purpose of correcting any condition threatening the Common Elements, and for the purpose of performing maintenance, repair and replacement, provided that requests for entry are made in advance and that any such entry is at a time reasonably convenient to the Unit Owner. In case of an emergency, no such request or notice is required and such right of entry shall be immediate, whether or not the Unit Owner is present at the time.

Section 6.4 - Permit Compliance. The Association shall comply with the terms and conditions of all state, federal and local permits affecting the Common Elements, including but not limited to the Permit.

Section 6.5 - The Association's Obligations Under the Permit.

Include here a brief outline of what is required by the Permit.

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Section 6.6 - Disposal System Service Agreements. The Association shall annually contract with:

(a) A qualified civil engineering firm to inspect and supervise operation and maintenance of the Disposal System;

(b) B qualified firm(s) to operate and maintain the Disposal System; and

(c) The owner of any Disposal System Proprietary Components, as defined in the Security and Loan Agreement, or an entity approved by such owner, to maintain the Proprietary Components.

ARTICLE VII Restrictions on Use, Alienation and Occupancy of Units

Section 7.1 - Restrictions on Use and Occupancy. The Executive Board shall have the power to regulate the use and occupancy of Units, including leasing, as described in Article 23.4.

Section 7.2 - Restrictions on Alienation. The following restriction on alienation applies to the Common Interest Community:

(INSERT ANY RESTRICTIONS HERE).

ARTICLE VIII Easements and Licenses

All easements, permits or licenses to which the Common Interest Community is presently subject are listed in Exhibit A to this Declaration.

ARTICLE IX Additions, Alterations and Improvements

Section 9.1 - Additions, Alterations and Improvements by Unit Owners.

(a) A Unit Owner with proper State and local permits and approvals may make any improvements or alterations to the Unit Owner's Unit that do not increase in quantity or alter in character the Unit's discharge to the Disposal System.

(b) A Unit Owner may submit a written request to the Executive Board for approval to do something that he, she or it is forbidden to do under Subsection 12.1 (a). The Executive Board shall answer any written request for such approval, after Notice and Hearing, within ninety (90) days after the receipt thereof. The Executive Board shall review requests in accordance with the provisions of its Rules. The Unit Owner shall be solely responsible for obtaining State and local permits when and where so required.

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Section 9.2 - Additions, Alterations and Improvements by Executive Board. Subject to any limitations of this Declaration, the Executive Board may make any additions, alterations or improvements to the Common Elements which, in its judgment, it deems necessary.

ARTICLE X Amendments to Declaration

Section 10.1 - General. All amendments shall be made in accordance with the Act.

Section 10.2 - Consent of Mortgage Holders and Town. Amendments are subject to the consent requirements of Section 13.4.

ARTICLE XI Amendment to Bylaws

The Bylaws may be amended only by vote of two-thirds (2/3) of the

members of the Executive Board, following Notice to all Unit Owners and opportunity for comment, at any meeting duly called for such purpose.

ARTICLE XII Termination

Termination of the Common Interest Community may be accomplished only in accordance with 27A V.S.A. § 2-118 and the Security and Loan Agreement.

ARTICLE XIII Mortgagee and Town Protection

Section 13.1 - Introduction. This Article contains provisions for the benefit of the holders, insurers and guarantors of certain mortgages. This Article is supplemental to, and not in substitution of, any other provisions of the Documents, but in the event of conflict, this Article shall control. Unless the Executive Board shall vote to suspend this provision, this Article shall be automatically amended from time to time to be consistent with commercial lending requirements generally applicable and customary in the State of Vermont.

Section 13.2 - Percentage of Eligible Mortgagees, Insurers or Guarantors. Wherever in this Declaration the approval or consent of a specified percentage of Eligible Mortgagees, Insurers or Guarantors is required, it shall mean the approval or consent of eligible Mortgagees holding first mortgages on Units, which Units in the aggregate have allocated to them such specified percentages of votes in the Association when compared to the total allocated to all Units then subject to first mortgages held by Eligible Mortgagees.

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Section 13.3 - Notice of Actions. The Association shall give prompt written notice to each Eligible Mortgagee, Eligible Insurer, Eligible Guarantor and the Town of:

(a) Any condemnation loss or any casualty loss which affects a material portion of the Common Elements;

(b) Any delinquency in the payment of Common Expense assessments owed by an Owner whose Unit is subject to a first mortgage held, insured, or guaranteed, by an Eligible Mortgagee or Eligible Insurer, which remains unpaid for a period of ninety (90) days;

(c) Any lapse, cancellation, or material modification of any insurance policy or fidelity bond maintained by the Association;

(d) Any proposed action which would require the consent of a specified percentage of Eligible Mortgagees as specified in Section 13.4; and

(e) Any judgment rendered against the Association.

Section 13.4 - Consent Required.

(a) Document Changes. The Declaration, including the Plan, may be amended only by vote or agreement of Owners of Units to which at least sixty-seven percent (67%) of the votes in the Association is allocated or any larger majority the Declaration specifies. The amendment must be approved in writing by at least fifty-one percent (51%) of the Eligible Mortgagees (or any greater Eligible Mortgagee approval required by this Declaration). Consent of an Eligible Mortgagee is deemed granted if no denial is received within thirty (30) days after the notice of the proposed changes. The amendment must be approved in writing by the Town's legislative body. Such changes include, but are not limited to, any provision affecting:

(i) Assessments, assessment liens, or subordination of assessment liens;

(ii) Voting rights;

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(iii) Reserves for maintenance, repair and replacement of Common Elements;

(iv) Responsibility for maintenance and repairs;

(v) Reallocation of interests in the Common Elements or Limited Common Elements except that when Limited Common Elements are reallocated by agreement between Unit Owners, only those Unit Owners and only the Eligible Mortgagees which hold mortgages on such Units must approve such action;

(vi) Rights to use Common Elements and Limited Common Elements;

(vii) Boundaries of Units except that when boundaries of only adjoining Units are involved, or a Unit is being subdivided, then only those Unit Owners and the Eligible Mortgagees holding mortgages on such Unit or Units must approve such action;

(viii) The addition or withdrawal of real property to or from the Common Interest Community;

(ix) Insurance or fidelity bonds relating to Common Elements and Limited Common Elements;

(x) Imposition of restrictions on a Unit Owner's right to sell or transfer or lease a Unit;

(xi) Establishment of self-management instead of professional management of the Common Elements;

(xii) Restoration or repair of the Common Elements after a hazard damage or partial condemnation in a manner other than that specified in the Documents;

(xiii) Termination of the Common Interest Community after occurrence of substantial destruction or condemnation; and

(xiv) Any provision that expressly benefits Eligible Mortgagees or the Town.

(b) Actions. Notwithstanding any lesser percentage of consents required by this Declaration or the Act, the Association may not take any of the following actions without approval of The Town and at least fifty-one percent (51%) of the Eligible Mortgagees or such higher percentage as set forth herein:

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(i) The conveyance or encumbrance of the Common Elements or any portion thereof. The granting of easements for public utilities or for other public purposes consistent with the intended use of the Common Elements for the benefit of the Common Interest Community shall not be deemed a conveyance or encumbrance within the meaning of this clause;

(ii) The restoration or repair of the Property after hazard damage or a partial condemnation in a manner other than that specified in the Documents;

(iii)The termination of the Common Interest Community.

(iv) The merger of this Common Interest Community with any other common interest community;

(vi) The assignment of the future income of the Association, including its right to receive Common Expense assessments; and

(vii) Any action taken not to repair or replace the Property.

(c) The Association may not change the period for collection of regularly budgeted Common Expense assessments to other than monthly without the consent of all Eligible Mortgagees and the Town.

Section 13.5 - Inspection of Books. The Association shall permit any Eligible Mortgagee, Eligible Insurer or the Town to inspect the books and records of the Association during normal business hours.

Section 13.6 - Financial Statements. The Association shall provide financial statements within ninety (90) days following the end of each fiscal year of the Association to any Eligible Mortgagee, Eligible Insurer or the Town who submits a written request. Such financial statement shall be audited by an independent certified public accountant if any Eligible Mortgagee or Eligible Insurer requests it, in which case the Eligible Mortgagee or Eligible Insurer shall bear the cost of the audit.

Section 13.7 - Enforcement. The provisions of this Article are for the benefit of Eligible Mortgagees, Eligible Insurers, the Town and their successors and assigns, and may be enforced by any of them by any available means, at law, or in equity.

Section 13.8 - Attendance at Meetings. Any representative of an Eligible Mortgagee, Eligible Insurer or the Town may attend any meeting which a Unit Owner may attend.

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ARTICLE XIV Assessment and Collection of Common Expenses

Section 14.1 - Definition of Common Expenses. Common Expenses shall include:

(a) Expenses of administration, maintenance, and repair or replacement of the Common Elements;

(b) Expenses declared to be Common Expenses by the Documents or by the Act;

(c) Expenses agreed upon as Common Expenses by the Association;

(d) Such reserves as may be established by the Association, whether held in trust or by the Association, for repair, replacement or addition to the Common Elements or any other real or personal property acquired or held by the Association; and

(e) Loan principal, interest and charges payable under the

Security and Loan Agreement and a reserve to make such payments.

Section 14.2 - Apportionment of Common Expenses. Except as provided in Section 14.3, all Common Expenses shall be assessed against all Units in accordance with their percentage interest in the Common Expenses as shown on Exhibit B to this Declaration.

Section 14.3 - Common Expenses Attributable to Fewer Than All Units.

(a) Common Expenses for Limited Common Elements shall be assessed against all Units served by such elements in accordance with their percentage interest in the Common Expenses as shown on Exhibit B to this Declaration

(b) Assessments to pay a judgment against the Association may be made only against the Units in the Common Interest Community at the time the judgment was rendered, in proportion to their Common Expense liabilities.

(c) If any Common Expense is negligently or intentionally caused by a Unit Owner, the Association may, after Notice and Hearing, assess that expense exclusively against the Unit Owner’s Unit.

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(d) Fees, charges, late charges, fines and interest charged against a Unit Owner pursuant to the Documents and the Act are enforceable as Common Expense assessments.

(e) Any expense incurred by the Executive Board and/or the Association on behalf of a Unit Owner or as a result of a Unit Owner's failure to perform any of the obligations under Section 6.2 hereof is a Common Expense.

Section 14.4 - Lien. The Association has a statutory lien on the Units in accordance with the Act and shall accept the benefits of the Act related thereto unless otherwise stated herein. The Executive Board shall commence an appropriate civil action within five (5) months of the date an assessment becomes delinquent if the assessment remains unpaid.

Section 14.5 - Budget Adoption and Ratification. Within thirty (30) days after the adoption of any proposed budget for the Common Interest Community, the Executive Board shall provide a summary of the budget to all Unit Owners. The Board shall set a date, not less than fourteen (14) or more than thirty (30) days after the date the budget summary is sent to the Unit Owners, for a meeting of the Unit Owners to ratify the budget. The budget

shall be ratified, unless a majority of the Unit Owners rejects the budget, whether or not a quorum is present. If the budget is rejected, the budget last ratified by the Unit Owners shall be in effect until the Unit Owners ratify a budget proposed by the Executive Board.

Section 14.6 - Notice and Comment By Unit Owners for Non-budgeted Common Expense and Assessments. If the Executive Board votes to levy a Common Expense assessment not included in the current budget, other than one enumerated in Section 14.3 of this Declaration, in an amount greater than fifteen percent (15%) of the current annual operating budget, the Executive Board shall submit such Common Expense to the Unit Owners for Notice and Comment in the same manner as a budget under Section 14.5.

Section 14.7 - Certificate of Payment of Common Expenses. The Association, on written request, shall furnish to a Unit Owner a statement in recordable form setting forth the amount of unpaid assessments against the Unit. The statement shall be furnished within ten (10) business days after receipt of the request and is binding on the Association, the Executive Board, and every Unit Owner.

Section 14.8 - Monthly Payment of Common Expenses. All Common Expenses assessed under Sections 14.2 and 14.3 shall be due and payable monthly. The Association shall promptly take those actions necessary, including commencement of court proceedings, to collect any amounts that become delinquent and failure to do so shall constitute a default of the Security and Loan Agreement.

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Section 14.9 - Personal Liability of Unit Owners. The Owner of a Unit at the time a Common Expense assessment or portion thereof is due and payable is personally liable for the assessment. Personal liability for the assessment shall not pass to a successor in title to the Unit unless the successor owner agrees to assume the obligation.

ARTICLE XV Persons and Units Subject to Documents

Section 15.1 - Compliance with Documents. All Unit Owners, tenants, mortgagees, and occupants of the Units shall comply with the Documents. The acceptance of a deed or the exercise of any incident of ownership or entering into of a lease or the entering into occupancy of a Unit constitutes agreement that the provisions of the Documents are accepted and ratified by such Unit Owner, tenant, mortgagee or occupant. All such provisions recorded in the Land Records of the Town of Waitsfield are

covenants running with the land and shall bind any persons having at any time any interest or estate in such Unit.

Section 15.2 - Adoption of Rules. The Executive Board may adopt Rules regarding the use and occupancy of Units, Common Elements and Limited Common Elements, if any, and the activities of occupants, subject to Notice and Comment.

ARTICLE XVI Insurance

Section 16.1 - Coverage. To the extent reasonably available, the Executive Board shall obtain and maintain insurance coverage as set forth in Sections 16.2, 16.3,16.4,16.5,16.6,16.7 and 16.8 of this Article. If such insurance is not reasonably available, and the Executive Board determines that any insurance described herein will not be maintained, the Executive Board shall cause notice of that fact to be hand-delivered or sent postage prepaid by the United States mail to all Unit Owners, Eligible Mortgagees and the Town at their respective last known addresses.

Section 16.2 - Property Insurance.

(a) Property to be Covered:

(i) All improvements that are included in the Common Elements, the Property; and

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(ii) All personal property owned by the Association, to the extent it is commonly insured by the Association.

(b) Amounts. The Property and personal property shall be insured for an amount equal to one hundred percent (100%) of its replacement cost at the time the insurance is purchased and at each renewal date, less reasonable deductibles. The Executive Board is authorized to obtain appraisals periodically for the purpose of establishing said replacement cost of the Property and the actual cash value of the personal property, and the cost of such appraisals shall be a Common Expense.

(c) Risks Insured Against. The insurance shall afford protection against "all risks" of physica1 loss commonly insured against.

(d) Other Provisions. Insurance policies required by this Section shall provide that:

(i) The insurer waives its right to subrogation under the policy against the Unit Owner and the Town.

(ii) No act or omission by any Unit Owner, unless acting within the scope of the Unit Owner’s authority on behalf of the Association, will void the policy or be a condition to recovery under the policy.

(iii) If, at the time of a loss under the policy, there is other insurance in the name of the Unit Owner or the Town covering the same risk covered by the policy, the Association's policy provides primary insurance.

(iv) Any loss shall be adjusted with the Association and, in the case of a loss to the Property, with the approval of the Town.

(v) Insurance proceeds shall be paid to any insurance trustee designated in the policy for that purpose, and, in the absence of such designation, to the Association, in either case to be held in trust for the Town, each Unit Owner, and such Unit Owner's mortgagee, to the extent that any Unit is affected by the loss and providing no other insurance is available for same.

(vi) The insurer may not cancel or refuse to renew the policy until thirty (30) days after notice of the proposed cancellation or non-renewal has been mailed to the Association, the Town, each Unit Owner and each holder of a security interest to whom a certificate or memorandum of insurance has been issued, at their respective last known address.

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(vii) The name of the insured shall be substantially as follows: Waitsfield Commercial Park Sewer System Association, Inc.

(viii) The Town shall be named as a co-insured person under the policy.

Section 16.3 - Liability Insurance. Liability insurance, including medical payments insurance, in an amount determined by the Executive Board, but in no event less than One Million Dollars ($1,000,000.00) covering all occurrences commonly insured against for death, bodily injury and property damage arising out of or in connection with the use, ownership or maintenance of the Common Elements.

(a) Other Provisions. Insurance policies carried pursuant to this Section shall provide that:

(i) The Town and each Unit Owner is an insured person under the policy to the extent of liability, if any, arising out

of the Town’s or Unit Owner’s interest in the Common Elements or membership in the Association.

(ii) The insurer waives its rights to subrogation under the policy against any Unit or the Town.

(iii) No act or omission by any Unit Owner, unless acting within the scope of the Unit Owner’s authority on behalf of the Association, will void the policy or be a condition to recovery under the policy.

(iv) If, at the time of a loss under the policy, there is other insurance in the name of a Unit Owner or the Town covering the same risk covered by the policy, the Association's policy provides primary insurance.

(v) The insurer may not cancel or refuse to renew the policy until thirty (30) days after notice of the proposed cancellation or non-renewal has been mailed to the Association, each Unit Owner and each holder of a security interest to whom a certificate or memorandum of insurance has been issued, at their respective last known address.

Section 16.4 - Fidelity Bonds. A blanket fidelity bond for anyone who either handles or is responsible for funds held or administered by the Association, whether or not they receive compensation for their services shall be procured. Any such bond shall name the Association as obligee and shall cover the maximum funds that will be in the custody of the Association at any time while the bond is in force, and in no event less than the sum of three (3) months assessments plus reserve funds. The bond shall include a provision that calls for thirty (30) days written notice to the Association and the Town before the bond can be canceled or substantially modified for any reason; except that if cancellation is for nonpayment of premiums, only ten (10) days notice shall be required.

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Section 16.5 - Workers Compensation Insurance. As determined appropriate by the Executive Board, it shall obtain and maintain Workers Compensation Insurance to meet the requirements of the laws of the State of Vermont.

Section 16.6 - Directors' and Officers' Liability Insurance. As determined appropriate by the Executive Board, it may obtain and maintain directors', officers' and managers' liability insurance, if available, covering all of the directors and officers of the Association in such limits as the Executive Board may from time to time determine.

Section 16.7 - Other Insurance. The Association may carry other insurance which the Executive Board considers appropriate by the Executive Board to protect the Association, the Town or the Unit Owners.

Section 16.8 - Premiums. Insurance premiums, deductibles and other payments under this Article shall be a Common Expense.

ARTICLE XVII Damage to or Destruction of the Property

Section 17.1 - Duty to Restore. Any portion of the Property for which insurance is required or for which insurance carried by the Association is in effect, whichever is more extensive, shall be repaired or replaced promptly by the Association unless:

(a) The Common Interest Community is terminated;

(b) Repair or replacement would be illegal under any State or local statute or ordinance governing health or safety;

(c) Eighty percent (80%) of the Unit Owners, including every Owner of a Unit or assigned Limited Common Element that will not be rebuilt, vote not to rebuild.

Section 17.2 - Cost. The cost of repair or replacement in excess of insurance proceeds shall be a Common Expense.

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Section 17.3 - Plan. The Property must be repaired and restored in accordance with either the original Plan and specifications or other plans and specifications which have been approved by the Executive Board, the Town, a majority of the Unit Owners and fifty-one percent (51%) of Eligible Mortgagees, and in accordance with proper State and local permits and approvals and any amendments thereto.

Section 17.4 - Replacement of Less Than Entire Property. The insurance proceeds attributable to the damaged Property shall be used to restore the damaged area to a condition compatible with the remainder of the Common Interest Community and the balance shall be distributed to the Association.

Section 17.5 - Insurance Proceeds. The insurance trustee, or if there is no insurance trustee, then the Association, shall hold any insurance proceeds in trust for the Association, the Town, Unit Owners and lien holders as their interests may appear. Subject to the provisions of Subsection 17.1 (a) through Subsection 17.1 (c), the proceeds shall be disbursed first for the repair or restoration of the damaged Property, and the

Association, Unit Owners and lien holders are not entitled to receive payment of any portion of the proceeds unless there is a surplus of proceeds after the Property has been completely repaired or restored, or the Common Interest Community is terminated.

Section 17.6 - Certificates by the Executive Board and Town. A trustee, if any, may rely on the following certifications in writing made by the Executive Board and the Town:

(a) Whether or not damaged or destroyed Property is to be repaired or restored; and

(b) The amount or amounts to be paid for repairs or restoration and the names and addresses of the parties to whom such amounts are to be paid.

Section 17.7 - Certificates by Attorneys. If payments are to be made to Unit Owners or mortgagees, the Executive Board, and the trustee, if any, shall obtain and may rely on an attorney's certificate of title based on a search of the Land Records of the Town of Waitsfield, from the date of the recording of the original Declaration stating the names and the Unit Owners and the mortgagees.

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ARTICLE XVIII Rights to Notice and Comment; Notice and Hearing

Section 18.1 - Right to Notice and Comment. Before the Executive Board amends the Bylaws or the Rules, whenever the Documents require that an action be taken after "Notice and Comment", and at any other time the Executive Board determines, the Unit Owners have the right to receive notice of the proposed action and to comment orally or in writing. Notice of the proposed action shall be given to each Unit Owner in writing and shall be delivered personally or by mail to all Unit Owners at such address as appears in the records of the Association, or published in a newsletter or similar publication which is routinely circulated to all Unit Owners. The notice shall be given not less than five (5) days before the proposed action is to be taken. The right to Notice and Comment does not entitle a Unit Owner to be heard at a formally constituted meeting.

Section 18.2 - Right to Notice and Hearing. Whenever the Documents require that an action be taken after "Notice and Hearing", the following procedure shall be observed. The party proposing to take the action (e.g. the Executive Board, a committee, an officer, the manager, etc.) shall give written

notice of the proposed action to all Unit Owners or occupants of Units whose interest would be significantly affected by the proposed action. The notice shall include a general statement of the proposed action and the date, time and place of the hearing. At the hearing, the affected person shall have the right, personally or by a representative, to give testimony orally, in writing or both (as specified in the notice), subject to reasonable rules of procedure established by the party conducting the meeting to assure a prompt and orderly resolution of the issues. Such evidence shall be considered in making the decision but shall not bind the decision makers. The affected person shall be notified of the decision in the same manner in which notice of the meeting was given

Section 18.3 - Appeals. Any person having a right to Notice and Hearing shall have the right to appeal to the Executive Board from a decision of persons other than the Executive Board by filing a written notice of appeal with the Executive Board within ten (10) days after being notified of the decision. The Executive Board shall conduct a hearing within thirty (30) days giving the same notice and observing the same procedures as were required for the original meeting.

ARTICLE XIX Executive Board

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Section 19.1 - Minutes of Executive Board Meeting. The Executive Board shall permit the Town and any Unit Owner to inspect the Minutes of Executive Board meetings during normal business hours. The Minutes shall be available for inspection within fifteen (15) days after any such meeting.

Section 19.2 - Powers and Duties. The Executive Board may act in all instances on behalf of the Association, except as provided in this Declaration, the Bylaws or the Act. The Executive Board shall have, subject to the limitations contained in this Declaration, the Bylaws and the Act, the powers and duties necessary for the administration of the affairs of the Association and of the Common Interest Community which shall include, but not be limited to, the following:

(a) Adopt and amend Bylaws and Rules;

(b) Adopt and amend budgets for revenues, expenditures and reserves;

(c) Collect assessments for Common Expenses from Unit Owners;

(d) Hire and discharge managing agents;

(e) Hire and discharge employees and agents, other than managing agents, and independent contractors;

(f) Institute, defend or intervene in litigation or administrative proceedings in the Association's name on behalf of the Association;

(g) Make contracts and incur liabilities;

(h) Regulate the use, maintenance, repair, replacement and modification of the Common Elements;

(i) Grant easements for any period of time including permanent easements, and leases, licenses and concessions for no more than one (1) year, through or over the Common Elements;

(j) Impose charges or interest or both for late payment of assessments and, after Notice and Hearing, levy reasonable fines for violations of this Declaration, and the Bylaws, Rules and Regulations of the Association;

(k) Impose reasonable charges for the preparation and recordation of amendments to this Declaration, resale certificates required by 27A V.S.A. §4-109(b) or statements of unpaid assessments;

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(l) Provide for the indemnification of the Association's officers and Executive Board and maintain directors' and officers' liability insurance;

(m) Exercise any other powers conferred by this Declaration or the Bylaws;

(n) Exercise all other powers that may be exercised in this State by legal entities of the same type as the Association;

(o) Exercise any other powers necessary and proper for the governance and operation of the Association.

Section 19.3 - Executive Board Limitations. The Executive Board may not act on behalf of the Association to amend this Declaration, to terminate the Common Interest Community or to elect members of the Executive Board or determine the qualifications, powers and duties, or terms of office of Executive Board members, but the Executive Board may fill vacancies in its term.

Section 19.4 - Authority of the Executive Board to Regulate Uses of Units. In addition to the powers granted to it by other sections of the Declaration, the Executive Board may:

(a) Restrict the use of each Unit to nonresidential use;

(b) Require that each Unit be occupied, maintained and used in full compliance with the Permit and the Security and Loan Agreement; and

(c) For any period during which any Common Expense assessment remains unpaid or, after Notice and Hearing, for any period not to exceed thirty (30) days, for any infraction of this Declaration or its published Rules, the Executive Board may suspend a Unit's right to use the Common Elements and take appropriate action to implement such suspension.

ARTICLE XX Condemnation

If part or all of the Common Interest Community is taken by any power having the authority of eminent domain, all compensation and damages for and on account of the taking shall be payable in accordance with 27A §2-118(a), and subject to each Unit Owner's respective interest.

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ARTICLE XXI Miscellaneous

Section 21. 1 - Captions. The captions contained in the Documents are inserted only as a matter of convenience and for reference, and in no way define, limit or describe the scope of the Documents or the intent of any provision thereof

Section 21.2 - Waiver. No provision contained in the Documents is abrogated or waived by reason of any failure to enforce the same, irrespective of the number of violations or breaches which may occur.

Section 21.3 - Invalidity. The invalidity of any provision of the Documents does not impair or affect in any manner the validity or enforceability or effect of the remainder, and in such event, all of the other provisions of the Documents shall continue in full force and effect.

Section 21.4 - Conflict. The Documents are intended to comply with the requirements of the Act.

In the event of any conflict between the Documents and the provisions of the Act, the provisions of the Act shall control.

In the event of any conflict between the Declaration and any other Documents, this Declaration shall control.

ARTICLE XXII Changes in Law

Section 22.1 - Changes in the Act. Many provisions of this Declaration and in the Bylaws repeat exactly or substantially the same rule or outcome in a particular instance as that required by the Act on the date this Declaration was recorded, or repeat the same rule which the Act would impose as a default rule if the Declaration or Bylaws were silent on that subject.

Recognizing this, this Section directs that, in the future and from time to time, in all instances where this Declaration or the Bylaws contain language that precisely or substantially tracks the Act on the date that the Waitsfield Commercial Park Common Interest Community is declared, this Declaration and the Bylaws shall be automatically amended in accordance with the amended cognate language of the Act which may be adopted by the General Assembly, unless the particular language of the Declaration or Bylaws, either as initially adopted or as amended at any subsequent time by the Association, is substantially at variance with the amended text of the Act.

IN WITNESS WHEREOF, the Declarant has caused this Declaration to be executed this __ day of 2012.

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EXHIBITS

Exhibit A - Interests Allocated to Units

Exhibit B - Property Descriptions

Exhibit C - Plan

Exhibit D - VANR Permit

Exhibit E - Easement to Association

Exhibit F - Irrevocable Offer of Dedication

Exhibit G - Assignment of Assessments

wad12-005 Wastewater Community Declaration [revised].rea.wpd

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EXHIBIT A

Each Unit, as defined in Section 1.26 of this Declaration, shall have the "Allocated Interests" set forth below:

Allocated Interests for Voting:

Voting rights allocated a Unit Owner for voting on matters to be decided by the unit owners under the Declaration (such as amending the declaration and bylaws and electing a governing board) shall be allocated on the same basis as the allocation of Operating Costs for Common Elements discussed below.

Voting rights allocated a member of the Executive Board, as defined in Section 1.14 of the Declaration, for matters to be decided by the Executive Board may be allocated on the same basis as voting rights for unit owners or on some other basis.

Allocation of Capital Expense for Common and Limited Common Elements:

See Section I of "Waitsfield Community Loan Fund Program, Property Owner Association Guidance Outline," Draft for Committee review 9-21-12. This provides for allocation of this cost on the basis of gallons of disposal capacity allocated to a Unit, expressed as a percentage of the total treatment capacity of the Common Elements. Capital cost for Limited Common Elements is allocated on a similar basis among the Units that use a specific Limited Common Element.

Allocation of Operating Costs for Common and Limited Common Element Expenses

See Section III of "Waitsfield Community Loan Fund Program, Property Owner Association Guidance Outline," Draft for Committee review 9-21-12. This provides for allocation of this cost on the basis of gallons of disposal capacity allocated to a Unit, expressed as a percentage of the total treatment capacity of the Common Elements. Operating cost for Limited Common Elements is allocated on a similar basis among the Units that use a specific Limited Common Element.

See also Article XVII of the Declaration.

Allocation of Capital Expense for Common and Limited Common Elements Associated with a future expansion of Treatment

Capacity:

See Section II of “Waitsfield Community Loan Fund Program, Property Owner Association Guidance Outline,” Draft for Committee review 9-21-12.

See also Article XII of the Declaration.

Appendix D: Guidance for Association Members Regarding Capacity Allocation, Governance, and Cost Sharing

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Waitsfield Community Wastewater Loan Fund Program
Property Owner Association Guidance Outline
DRAFT for Committee Review 9-21-12

The purpose of this document is to provide a written outline of options for the shared governance of wastewater systems that serve multiple property owners, and whose construction is funded, whether in whole or in part, by the Town of Waitsfield Community Wastewater Loan Fund. The principles outlined for allocation of capacity, allocation of cost, and allocation of maintenance responsibility have been developed to assist property owners in understanding the activities and considerations involved in shared on-site systems. The Town has supported preparation of this document to provide parties considering a shared system with a thorough overview of the issues that may arise in crafting a shared system management plan, and to provide parties with options and sample language that may (but in no way is required to) be used in developing a legal agreement among the parties. The terms used in this document are not based on legal terms or definitions, and are likewise intended to provide property owners with an example approach to defining roles, ownership, and responsibilities in the context of a shared system.

Terms Used:

- System
- Total System Capacity
- System Reserve Capacity
- Member
- Member Use Allocation
- Member Reserve Capacity
- Member Loan Repayment

Environmental Protection Rules shall mean Chapter 1 (Wastewater System and Potable Water Supply Rules) or Chapter 14 (Indirect Discharge Rules) of the Vermont Environmental Protection Rules, as applicable.

I. Allocation of Capacity – Initial Use

a. Establishing Capacity of System and Individual Members

i. A total system capacity shall be established as of the date of permit application

ii. The total system capacity shall be based on EPR design flows, unless another basis is specifically approved in writing in conjunction with the permit by all parties and DEC

b. Establishing Initial individual member capacity allocations

i. Member capacity allocations shall be based on EPR design flows for the use approved by the Town of Waitsfield, or deemed approved by virtue of being a prior non-conforming use, at the date of permit application,

unless specifically determined otherwise as set forth in (ii) below. This shall be known as the "member use allocation."

ii. Any unique conditions with respect to design flow, relationship between water use and wastewater flow, or waste strength shall be detailed in writing as attachments to this agreement.

iii. To the extent that a member's individual waste strength or other unique requirements result in a permit-based requirement for the addition of pre-treatment or other specific requirements that would not be needed but for the member's waste strength or unique requirements,, the affected member shall be solely responsible for the cost of that component of the system.

c. Reservation of Additional Capacity

i. At the time of permit application, any member may reserve additional capacity from the total capacity. This shall be known as the "member reserve allocation."

ii. Additional capacity reserved shall not exceed one hundred percent of the member's use allocation.

iii. Members' shares in the total cost of system construction and maintenance shall be based on the percentage of total system capacity represented by the member's use allocation plus the member's reserve allocation, in addition to any specific and unique requirements in (I)(b)(iii) above.

iv. Members may, by mutual agreement, establish a system reserve capacity for future expanded uses over and above members' use and reserve allocations, or for additional members, and a procedure can be defined for determining the circumstances under which the system reserve capacity can be allocated to additional members or expanded uses

d. Establishing the cost per gallon of capacity and responsibility for pre-treatment cost

i. A cost per gallon of user and reserve capacity (combined) shall be established based on the total project cost, defined as all costs for which reimbursement is provided by the Town of Waitsfield, less any uniquely-attributable costs per (I)(c)(4) above (.

1. This cost per gallon shall be uniform so long as the total system capacity and total system capital costs funded by the loan program remain the same.
2. This cost per gallon shall be the basis for future acquisition of future expanded use capacity from (I)(c)(4)(above, unless members mutually agree to a different formula reflecting inflation, increase, or re-valuation of capacity over time.

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ii. In the event a member or members is responsible for specific additional costs under (I)(c)(4) above, these costs shall be excluded from the cost per gallon. The member's loan repayment shall reflect any such unique and specific costs as a surcharge in addition to the cost per gallon.

II. FUTURE CHANGES in CAPACITY or MEMBER USE

a. Expansion of Capacity

i. If at any time additional land area becomes available for dispersal OR changes in technology or the Vermont Environmental Protection Rules, enable greater capacity from the existing dispersal field, the members may jointly amend this agreement to expand the capacity, and shall specify the terms of cost sharing for the expansion.

1. No expansion, modification, or alteration of the system, and no addition of a new member, may be made that limits or affects negatively a member's ability to utilize his use or reserve capacity,
2. No expansion, modification or alteration of the system and no addition of a new member may be made that diminishes the ability to allocate the future use capacity per the agreement, except upon written agreement of all members. This shall include any provisions related to waste strength.
3. No member may prevent the other member(s) or the owner of the dispersal field from expanding the system capacity, including but not limited to expansion of the dispersal field, except that no property owner shall be obligated to utilize a greater share of his/her land for any component of the wastewater system to create additional capacity for other member(s)
4. Members who do not gain any allocation are not obligated to participate in the cost of the expansion, but may in the future purchase additional capacity under the terms of this agreement at the per-gallon cost of the expansion. Any payback shall be made solely to the members who participated in the cost of the capacity expansion in proportion to the members' contributions to that cost (or as otherwise agreed by the participating members)
5. Cost sharing for any such expansion shall be based on capacity per sections (I)(d)(i) through (iii) above.

b. Transfer of Capacity Rights

i. Written Notice Required.

1. Upon sale, lease, or any other change in operation that affects the permitted capacity of a member under the EPRs, said member shall provide written notice to the Association and the Town at the time

of application for a zoning permit, execution of a Lease, or execution of a Purchase and Sale agreement for the property, whichever occurs first.

2. The written notice shall specify the design flow and waste strength characteristics of the new user
3. The written notice shall specify the proposed change to the member's use and reserve capacities, if any
4. The written notice shall specify any pretreatment (which shall be at the member's sole expense) that will be required to ensure consistency with the member's use capacity conditions.
5. The member transferring or changing capacity shall be solely responsible for the cost of updating all Town and DEC permit records, unless otherwise mutually agreed by the members.

ii. Abandonment and sale of capacity

1. Any member shall have the right, at any time, to abandon member use or member reserve capacity.
   a. Abandonment shall be done in writing to the association with a minimum of 30 days notice
   b. Abandonment shall be done in a manner consistent with the safe and compliant operation of the system so that no damage occurs to the components of the wastewater system.
2. Upon abandonment, the abandoning member's use and reserve capacity shall become part of the reserve capacity for the system as a whole.
   a. Members may purchase use or reserve capacity at the original price per gallon paid by the abandoning member. Members purchasing additional capacity shall be solely responsible for the cost of any associated permit amendments.
   b. No member shall be entitled to compensation therefor unless, until and as another member(s) voluntarily purchases the abandoned capacity. Payment shall be made to the abandoning member no later than the time of permit issuance; unless, however, the members mutually agree to establish a fund for this purpose.

c. Priority for additional capacity.

i. Members shall establish a written policy by which priority for the use of expanded or abandoned capacity shall be granted, which may include but are not limited to:

1. First come, first served based on written notice to the Association of a desire to increase capacity if, when and as available

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2. Priority based on existing capacity, for example:
   (a) Members with the smallest amount of reserve capacity receive priority
   (b) Members with the greatest total capacity receive priority
   (c) Any other similar agreement
   (d) Any other method as jointly agreed by the members.

ii. In the event capacity becomes available, the member with highest priority shall have sixty (60) days to provide the Association with a written notice of intent to purchase additional capacity. Payment shall be made per the provisions of (a)(i)(4) or (b)(ii)(2)(b) above as applicable.

III. SYSTEM COST ALLOCATION

A. Establishment of System Cost

1. The total cost of the system shall include the following costs:
   a. Engineering and permitting services over and above the DEC-funded Phase I and Phase II services contracted by the Town (i.e. final design)
   b. Test pits and other hydrology studies
   c. Reasonable and customary legal costs incurred by the members to establish an association and execute this agreement with the total for all such legal fees not to exceed $10,000 among all members
   d. Construction of the system, including but not limited to the dispersal field, collection system, pumping, conveyance, and tanks.
   e. Any pre-treatment, over-sizing, or other unique feature of the system required to meet the use needs of a particular member, with repayment of that cost allocated solely to the member benefiting from that component of the system

Note: the following provisions reflect the intent of the Winter Park Association as presently understood by the Committee.

2. The cost of the system shall be divided among members as follows:

   a. The total cost LESS any special provisions in (III)(a)(1)(f) shall be divided based on total use plus reserve capacity of all members to

determine the total common system cost per member. This will establish the total system cost per gallon.

b. The use plus reserve capacity allocated to the owner of the drainfield shall then be subtracted from the use plus reserve capacity of all members to determine the immediate user capacity.
c. The total cost LESS any special provisions in (III)(a)(1)(f)) shall be divided by the immediate user capacity. This will establish the cost payable per gallon at time of construction among the members other than the owner of the drainfield.
d. If, when, and as the owner of the drainfield secures permitting authority to use his use or reserve capacity, he shall pay the other members the difference between the system cost per gallon, and the cost payable per gallon at the time of construction, with those proceeds distributed among the members proportionate to their use plus reserve capacity. Payment shall be made at the time of permit issuance and shall be a condition of use of that capacity for wastewater dispersal.

B. Maintenance Cost Allocation

1. A plan for the allocation of system maintenance costs shall be established. This plan shall make provision for:
   a. Annual or more frequent inspection and reporting consistent with the permit requirements applicable to the system. The members shall determine the contractor or contractors to complete the required inspections, which contractors may include any combination of:
      i. A system vendor under the terms of a maintenance contract
      ii. A qualified septic system maintenance contractor
      iii. An engineering firm licensed in the State of Vermont
      iv. Another qualified consultant or management entity

   b. A written policy shall be established for payment for required inspections and maintenance, which may be based upon
      i. A pro-rata formula based on member use allocation or member total capacity
      ii. Any other method as the members jointly agree

2. A plan shall be established for securing services in the event of emergency maintenance and repair needs, with a procedure established for allocating cost responsibility.
   a. In the event of a condition on an individual property that is, in the judgment of the engineer or contractor performing the emergency maintenance or repair, the result of improper use of the system by the

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individual member, the individual member shall be solely responsible for the cost of the emergency maintenance or repair.

b. In the event of a condition common to the collection and treatment system or the drainfield that is, in the judgment of the engineer or contractor performing the emergency maintenance or repair, the result of a system-wide issue or condition not attributable to an individual member, the Association shall be responsible for the cost of the emergency maintenance or repair with individual member costs based on the formula in (3)(B)(1)(b) above.

Appendix E: Assessment of Historic and Archaeological Resources

DRAFT

The UNIVERSITY of VERMONT

CONSULTING ARCHAEOLOGY PROGRAM

November 20, 2002

RECEIVED
PHELPS ENGINEERING, INC
NOV 22 2002
FILE 99020 Arch.

Luther Tenny
Phelps Engineering
PO Box 367
Middlebury, VT 05753

Dear Luther,

Attached, please find an Archaeological Resources Assessment (ARA) for the proposed Waitsfield Village-Irasville Wastewater Collection and Treatment Facility Project, Waitsfield Village and Irasville, Washington County, Vermont. One potentially sensitive area was identified just south of the existing cemetery in Irasville, on a terraced wetland next to the Mad River, approximately located between the proposed manholes #11 and 14. The area is well defined and may be missed entirely by the proposed waste water line, but at the time of the inspection the proposed APE corridor was not staked, and therefore it is not known whether or not this area will be disturbed. We recommend that before any construction occurs between proposed manholes #11 and 14, that the actual APE be staked and inspected to determine whether or not a Phase I site identification survey is required in this area.

Several sensitive areas also were identified along Route 100 south of Irasville, just outside of the existing right-of-way, and thus outside of the proposed APE. If project plans change to include areas outside of the existing right-of-way of Route 100, then a Phase I site identification survey is recommended in those sensitive areas.

Finally, the parcel to the east of Route 100, which is currently being used by Waste Systems, Inc., has been heavily disturbed from historic activities and is not archaeologically sensitive. No further work is recommended for this parcel.

In sum, with the exception of the one sensitive area south of the cemetery in Irasville, the proposed project will have no effect on significant cultural resources.

Please feel free to contact me if you have any questions.

Sincerely,

Charles Knight, Ph.D.
Assistant Director

cc: Scott Dillon VDHP

112 University Heights, Burlington, VT 05405, Telephone (802) 656-4310, Fax (802) 656-8033

Equal Opportunity / Affirmative Action Employer

Archaeological Resources Assessment for the Proposed Waitsfield Village-Irasville Wastewater Collection and Treatment Facility Project, Waitsfield Village and Irasville, Washington County, Vermont.

Submitted to:

Luther Tenny
Phelps Engineering
PO Box 367
Middlebury, VT 05753

Submitted by:
Charles Knight, Ph.D.

University of Vermont
Consulting Archaeology Program
112 University Heights
Burlington, VT 05405

Report No. 360

November 20, 2002

Archaeological Resources Assessment for the Proposed Waitsfield Village-Irasville Wastewater Collection and Treatment Facility Project, Waitsfield Village and Irasville, Washington County, Vermont.

Project Description

The Towns of Waitsfield and Irasville propose the construction of a 10 mile long wastewater pipeline, pump stations, and treatment facilities within Waitsfield village, Irasville, and on two parcels south of Waitsfield village, in Washington County, Vermont (Figure 1). The wastewater pipeline will be laid within Waitsfield village and Irasville, mostly in the right-of-way of existing roadways. A portion of the wastewater pipeline will also cross a low-lying, wetland area bordering the Mad River in Irasville, before connecting with the right-of-way along Route 100, and heading south to the Munn parcel where the wastewater treatment facility will be located, and a parcel currently occupied by Waste Systems, Inc., that is east of Route 100 and where additional treatment facilities will be located.

The University of Vermont Consulting Archaeology Program (UVM CAP) conducted an Archaeological Resources Assessment (ARA) of the Area of Potential Effects (APE) for the proposed wastewater pipeline through the towns of Waitsfield and Irasville, and along Route 100, as part of the Section 106 review process. Several potentially sensitive areas were identified just outside of the proposed project's APE, and one was identified within the proposed APE as it currently exists. The area of the proposed wastewater treatment facility will impact prehistoric site VT-WA-106. In a separate study, Phase I and Phase II investigations were carried out by the UVM CAP at site VT-WA-106, and determined that the site is not significant and ineligible for inclusion on the National Register (Knight 2002; Thomas and Florentin 1995).

Study Goal

The goal of an ARA (or "review") is to identify portions of a specific project's APE that have the potential for containing prehistoric and/or historic sites. An ARA is to be accomplished through a "background search" and a "field inspection" of the project area. For this study, reference materials were reviewed following established guidelines. Resources examined included the National Register of Historic Places (NRHP) files; the Historic Sites and Structures Survey; and the USGS master archaeological maps that accompany the Vermont Archaeological Inventory. Relevant town histories and nineteenth-century maps also were consulted. Based on the background research, general contexts were derived for prehistoric and historic resources in the vicinity of the study area.

Prehistoric Archaeological Site Potential

Site VT-WA-106 is located within the "Munn parcel", a portion of the proposed project area that will be impacted by the waste water treatment facilities (see Figure 1). The UVM CAP carried out Phase I and Phase II surveys at this site and determined it ineligible for inclusion on the National Register. Although no other sites are known from the area, little archaeological work has been carried out in this region. The proximity of the proposed project corridor to the Mad River, crossing it at one spot and located on high terraces overlooking the Mad River drainage makes this area sensitive as it would have been an attractive location for at least semi-permanent settlement by prehistoric Native American groups. As a result, more sites most likely exist in the area.

Historic Archaeological Site Potential

A review of the National Register found no sites listed within the proposed project's APE. However, several sites within the proposed project's APE have been listed on the State Register (see Figure 1). South of Irasville, along Route 100, the Gaylord House, Stoddard-Austin House, McAllister-Becher House, and the Exxon Station, which used to be a carriage house, are examples of structures listed on the state register, appearing in the 1873 Beers' map (Figure 2). In addition, numerous structures within the towns of Irasville and Waitsfield proper have been listed on the state register. Based on this review of historic maps, town histories, and Vermont Division of Historic Places (VDHP) site files, however, historic archaeological sites are unlikely to exist within the proposed project's APE, and proposed project elements will have no effect on the known structures placed on the State Register.

Field Inspection

A field inspection of the project area was undertaken on October 23, 2002 by Dr. Charles Knight, Assistant Director of the UVM CAP. The overall project area received a sensitivity score of 4 based on the variables in the "Environmental Predictive Model for Locating Precontact Archaeological Sites," since the proposed project's APE goes through a wetland area, and is located near to the Mad River, crossing over it at one point. However, most of the proposed APE has been disturbed by the construction of Route 100 and other roads throughout Irasville and Waitsfield, and therefore will have no effect on significant sites. Nonetheless, certain isolated areas do have the potential for significant archaeological sites and should be further considered. One potentially sensitive area does exist, however, just south of the existing cemetery in Irasville, on a terraced wetland next to the Mad River, approximately located between the proposed manholes #11 and 14 (Figure 3). This sensitive area, when looked at in isolation, has a sensitivity score of 36 based on the variables in the "Environmental Predictive Model for Locating Precontact Archaeological Sites," since it is within 90 m of the Mad River, a wetland, and is located on a small terrace. This sensitive area is well defined and may be missed entirely by the proposed waste water line, but at the time of the inspection the proposed APE corridor was not staked, and therefore it is not known whether or not this area will be disturbed. We recommend that before any construction occurs between proposed manholes #11 and 14, that the actual APE be staked and inspected to determine whether or not a Phase I site identification survey is required in this area. If it will be impacted a Phase I site identification survey is recommended.

In addition to this one sensitive area within Irasville, several sensitive areas were identified along Route 100 south of Irasville, just outside of the existing right-of-way, and thus outside of the proposed APE. These sensitive areas constitute several terrace edges of an ancient channel of the Mad River, and are located just west and east of Route 100, opposite an auto mechanic shop (Figure 4). If project plans change to include areas outside of the existing right-of-way of Route 100, then a Phase I site identification survey is recommended in those sensitive areas.

The parcel to the east of Route 100, which is currently being used by Waste Systems, Inc., was also inspected. It has been heavily disturbed from historic activities and is not archaeologically sensitive. No further work is recommended for this parcel.

Conclusions

The Towns of Waitsfield and Irasville propose the construction of a 10 mile long wastewater pipeline, pump stations, and treatment facilities within Waitsfield village, Irasville, and on two parcels south of Waitsfield village, in Washington County, Vermont (Figure 1). The UVM CAP conducted an ARA of the proposed project area, as part of the Section 106 review process and identified on potentially sensitive area. The overall project area received a sensitivity score of 4 based on the variables in the "Environmental Predictive Model for Locating Precontact Archaeological Sites," since the proposed project's APE goes through a wetland area, and is located near to the Mad River, crossing over it at one point. However, most of the proposed APE has been disturbed by the construction of Route 100 and other roads throughout Irasville and Waitsfield, and therefore will have no effect on significant sites.

One potentially sensitive area does exist, however, just south of the existing cemetery in Irasville, on a terraced wetland next to the Mad River, approximately located between the proposed manholes #11 and 14. This sensitive area, when looked at in isolation, has a sensitivity score of 36 based on the variables in the "Environmental Predictive Model for Locating Precontact Archaeological Sites," since it is within 90 m of the Mad River, a wetland, and is located on a small terrace. This sensitive area is well defined and may be missed entirely by the proposed waste water line, but at the time of the inspection the proposed APE corridor was not staked, and therefore it is not known whether or not this area will be disturbed. We recommend that before any construction occurs between proposed manholes #11 and 14, that the actual APE be staked and inspected to determine whether or not a Phase I site identification survey is required in this area. If it will be impacted a Phase I site identification survey is recommended.

Several sensitive areas also were identified along Route 100 south of Irasville, just outside of the existing right-of-way, and thus outside of the proposed APE. If project plans change to include areas outside of the existing right-of-way of Route 100, then a Phase I site identification survey is recommended in those sensitive areas.

Finally, the parcel to the east of Route 100, which is currently being used by Waste Systems, Inc., has been heavily disturbed from historic activities and is not archaeologically sensitive. No further work is recommended for this parcel.

Charles Knight, Ph.D.
Assistant Director

November 20, 2002

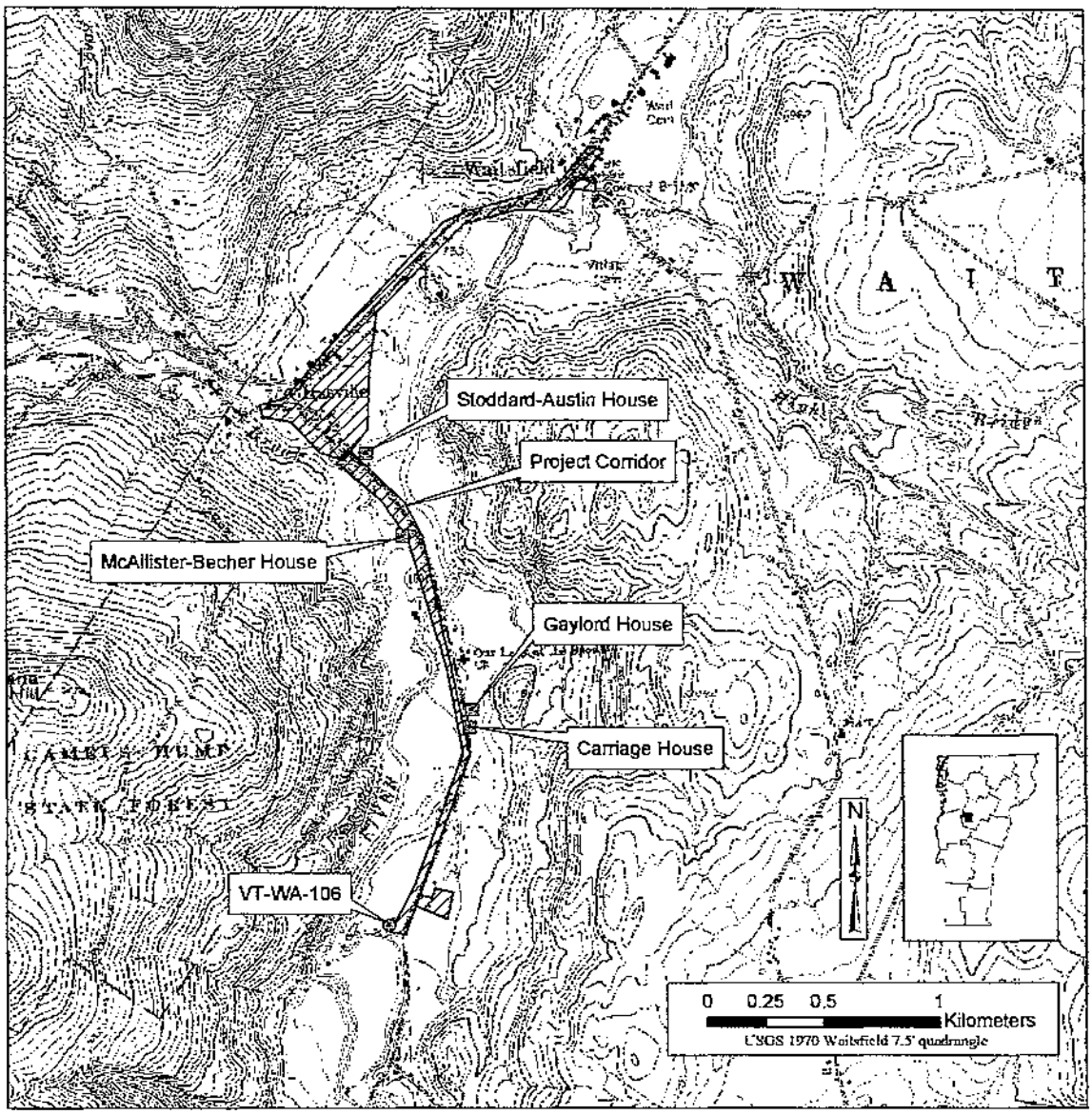
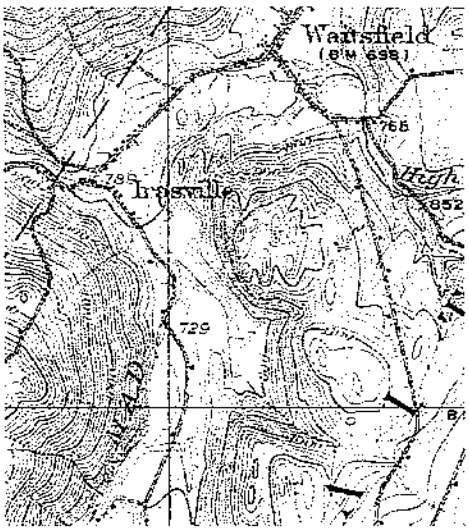


Figure 1. Map showing the location of the proposed Waitsfield and Irasville Wastewater Pipeline Project, Waitsfield and Irasville, Washington County, Vermont

Beers 1873



USGS Lincoln Mountain 1921

Figure 2. Historic maps showing the location of the proposed Waitsfield and Irasville Wastewater Pipeline Project, Waitsfield and Irasville, Washington County, Vermont.

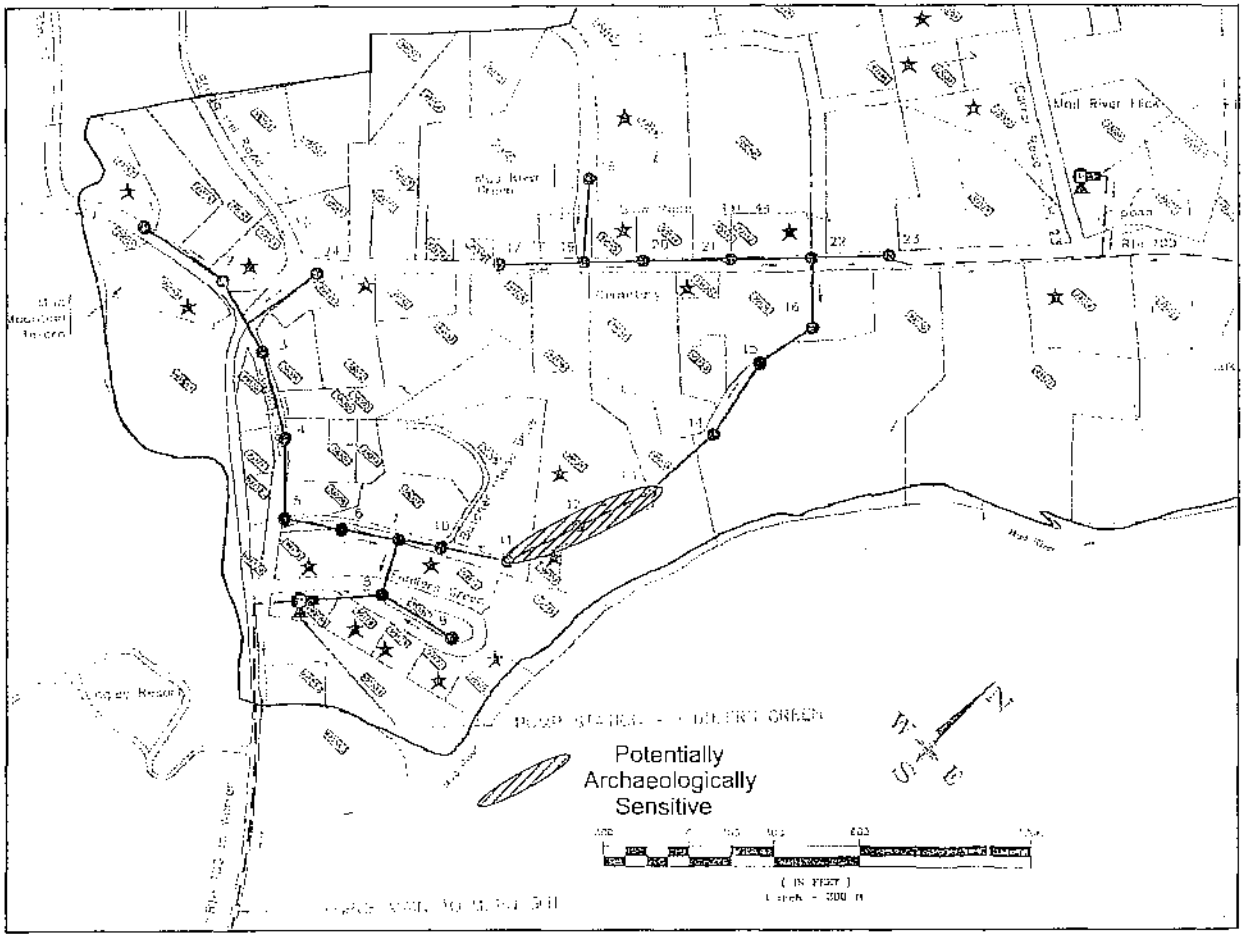


Figure 3. Map showing the location of the potentially sensitive area in Irasville that may be disturbed by the proposed Waitsfield and Irasville Wastewater Pipeline Project, Waitsfield and Irasville, Washington County, Vermont.

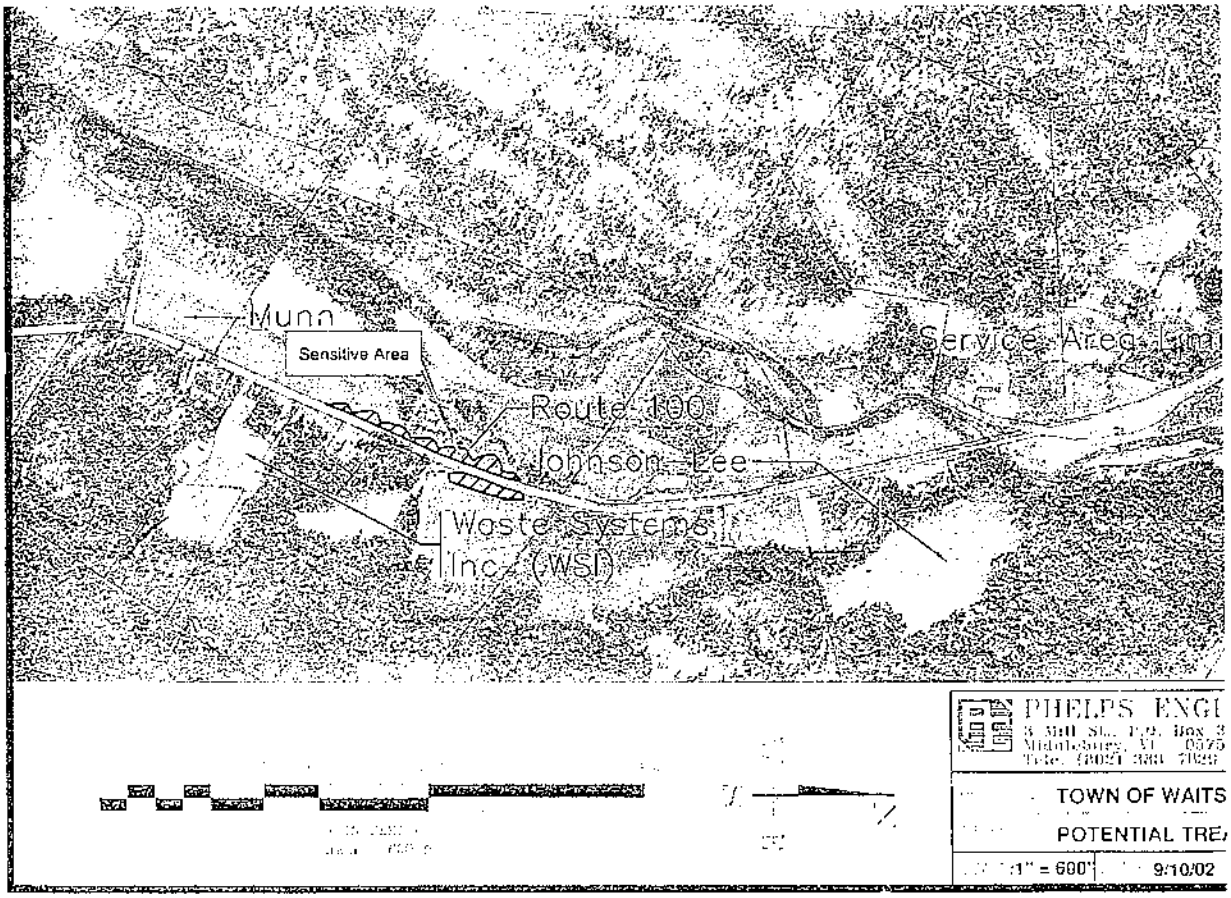


Figure 4. Map showing the location of the potentially significant areas just outside of the existing right-of-way for VT Route 100 south of Irasville, Vermont.

Bibliography

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1873 *Atlas of Washington Co. Vermont.* F.W. Beers and Co., New York.

Knight, Charles

2002 *End of Field Letter for the Phase I Site Identification Survey and Phase II Site Evaluation Survey of the Wastewater Collection and Treatment Facility at site VT-WA-106 (the Munn site), Waitsfield and Irasville, Washington County, Vermont.* University of Vermont Consulting Archaeology Program, Vermont.

Thomas, Peter A., and Robert Florentin

1995 *Phase I Archaeological Site Identification Survey Aldeborgh and Munn Pond Sites, Warren and Waitsfield, Vermont.* University of Vermont Consulting Archaeology Program. Report No. 140

United States Geological Survey

1921 SW/4 Lincoln Mountain 15" quadrangle. United States Geological Survey, Washington D.C.

1970 Waistfield 7.5' quadrangle. United States Geological Survey, Washington, D.C.

The UNIVERSITY of VERMONT

CONSULTING ARCHAEOLOGY PROGRAM

99003.30 T22

October 18, 2007

John Kiernan
Phelps Engineering, Inc.
3 Mill Street
P.O. Box 367
Middlebury, VT 05753

RE: End Of Field Letter for Archaeological Phase I Site Identification Survey for the Proposed Waitsfield Water Source Project, Waitsfield, Washington County, Vermont

Dear John:

From September 7 – 18, 2007, the University of Vermont Consulting Program (UVM CAP) conducted an archaeological Phase I site identification survey for the proposed Waitsfield Water Source Pipeline project located in the town of Waitsfield, Washington County, Vermont (Figure 1). Prior to the Phase I survey, the UVM CAP conducted an Archaeological Resources Assessment (ARA) of the proposed project alignment options (Knight 2006) as part of Vermont's ACT 250 permit application process. Following the ARA, project design plans were altered, resulting in the elimination of a previously identified archaeologically sensitive area located on the Mad River floodplain on the north side of Tremblay Road. The Phase I survey was conducted in four remaining archaeologically sensitive areas, and included the project right-of-ways in a large hayfield located north of the Waitsfield Elementary School, two portions of pasture on the Kenyon property, a portion of the recreational park at the intersection of VT RTE 100 and Tremblay Road, and along the proposed access road leading to the location of the proposed new water tower location.

As a result of the Phase I survey, one previously unknown prehistoric Native American site, designated VT-WA-169 in the Vermont Archaeological Inventory (VAI) was identified within the right-of-way in the large hayfield north of the elementary school, on the east side of VT RTE 100 (Figure 2). A detailed description of the results of the Phase I survey, recommendations and conclusions are presented below.

Results

Area 1, Site VT-WA-169

Area 1 includes the right-of-way south of Vermont Route 100, and it is located in an active agricultural field that extends approximately 300 m (984 ft) between a disturbed area northeast of the Waitsfield school building and a feed access road farther to the

northeast (see Figure 2). In general, the fill slope associated with Vermont Route 100 is from 1.0 to 1.5 m (3.3 to 4.9 ft) in height. Eight linear transects containing a total of 30, 50 x 50 cm (20 x 20 in) in size, test pits were excavated in Area 1 (see Figure 2). All test pits were spaced 10 m (33 ft) apart. All test pits were excavated to a depth of 1.0 m (3.3 ft) below the ground surface.

Site VT-WA-169 was identified in Transect 6, Test Pit 2 by the recovery of 10 specimens of chert lithic debitage from buried alluvial strata at 50-70 cm (20-28 in) below the ground surface (see Figure 2). Hand soil coring was undertaken to a depth of 1.4 m (4.6 ft) below the ground surface and no evidence of former stable ground surfaces (paleosols or anthrosols) were identified in Transect 6, Test Pit 2, or in any other adjacent test pits along Transect 6. Topographically, Transect 6 is located on a T2 terrace, approximately 150 m (492 ft) northwest of the current channel of the Mad River. The relict channel (T1 terrace) turns north near Transect 7, Test Pit 1, indicating that site VT-WA-169 was located near a prominent bend in the former Mad River channel.

To better determine the size, integrity possible function and age of the prehistoric artifacts recovered at site VT-WA-169, a horizontal metric grid was established and an additional 17 standard shovel test pits were excavated at intervals ranging from 1, 2.5 and 5 m (3.3, 8 and 16 ft)grid intervals (Figure 3). In addition, Transect 6, Test Pit 2 was expanded into a 1.0 x 1.5 m test unit (see Figure 3). A portion of a cultural feature, designated Feature 1, likely a hearth, was encountered in Test Pit N100 E102, SE, and likewise, this test pit was also expanded into a 1.0 x 1.5 m test unit (see Figure 3).

Feature 1 was fully exposed at 50 cm (20 in) below the ground surface, and in planview, it is characterized as oval shaped and laden with fragments of heat fractured quartz rock. Feature 1 measures 35-40 cm (14-16 in) east-west, and 30 cm (12 in) north-south. In addition to the fire-affected rock, one chert debitage specimen was recovered from within the Feature 1 soil matrix. Approximately three liters of Feature 1 soil matrix was returned to the laboratory for fine-grained analysis.

A temporally diagnostic projectile point, determined to be an Orient Fishtail type, which is attributable to the Transitional period, ca. 1000-500 B.C., was recovered from an alluvial strata at 50-60 cm 920-24 in) below the ground surface in Test Pit N100 E99 (see Figure 3). The Orient type point is made of the identical type of chert recovered from Transect 6, Test Pit 2, and the flake found within Feature 1, has a broken tip section and was likely fashioned or refurbished on site. Recovering Orient Fishtail type projectile points in situ is extremely rare in Vermont, with only several documented sites are known.

Three specimens of lithic debitage other than chert were recovered from site VT-WA-169, and all were found from the uppermost, disturbed modern plow zone. One quartzite flake each was recovered from Test Pits N97 E107, SE and N100 E102, NW, and one milky quartz flake from N100 E102, NE. Given the vertical disparity between these flakes and the chert debitage, it is unknown at present how these flakes relate to each other. A second, later prehistoric occupation may be present at site VT-WA-169.

In total, at least 48 lithic artifacts were recovered from site VT-WA-169, and all but one were found in a core area measuring 4 m^2 (43 ft^2). The artifact inventory includes one chert projectile point, 24 chert flakes, 2 quartzite flakes, one milky quartz flake, and a least 30 fragments of fire-affected rock. Additional artifacts are likely to be extracted from the processed Feature 1 soil.

No other prehistoric Native American sites were identified in the test pits along Transects 4, 5, 7 and 8. Transects 4, 5, 6 and 7 were located on the T2 terrace, and the stratigraphic soil profiles recorded for these test pits indicate the presence of one and two uppermost plow zones underlain by variably weathered alluvial strata. Test pits located along Transect 8 within the T1 terrace (relict channel) contained variable stratigraphic profiles that included thick deposits of unsorted sand and gravel, unweathered alluvial strata and/or historic debris.

Area 2

Area 2 is located on the south side of Vermont Route 100 within the right-of-way in an active agricultural and livestock field (Figure 4). One transect, designated Transect 9, containing 6 test pits spaced at 10 m (33 ft) intervals, was used to sample this area. No prehistoric Native American archaeological sites were identified in Area 2.

Stratigraphic soil profiles recorded for the test pits excavated along Transect 9 indicate the presence of an uppermost, disturbed historic plow zone which was underlain by an alluvial stratum of fine gray sand. Beneath the alluvial stratum, a thick layer of unsorted sands and gravels was encountered in test pits 1-4, and ultimately the water table within this stratum. In test pits 5 and 6, the soil was a gley, likely associated with the developing wetlands along the toe-of-slope of Vermont Route 100.

Area 3

Area 3 is located south and east of the intersection of Vermont Route 100 and Tremblay Road (Figure 5). A north-south flowing, unnamed tributary of the Mad River flows through the area. A public park is located on the north side of the stream. The south side of the stream is presently an active agricultural field. Three linear transects, designated Transects 10, 11 and 12, containing a total of 13 standard sized test pits were used to sample this area (see Figure 5).

Transect 11 is located on the south side of the stream, within the Vermont Route 100 right-of-way. Five test pits spaced at 4 m (13 ft) were located along Transect 11. No prehistoric Native American sites were identified as a result of the excavation of the test pits along Transect 11. Stratigraphic soil profiles recorded for these test pits include an uppermost plow zone/fill stratum underlain sand and gravel strata.

Transects 10 and 12 were located to the north of the stream, within the public park (see Figure 5). No prehistoric Native American sites were identified in this portion of

Area 3. Stratigraphic soil profiles recorded for test pits along Transect 10 and 12 included various fill layers and alluvial strata comprised of sand, gravel and cobbles.

Area 4

Area 4 is located in the northern portion of the proposed project area and includes a section of the proposed access road along Bushnell Road leading to the proposed water tower (Figure 6). Three linear transects containing a total of 27 standard sized test pits were excavated in Area 4. Transects 1 and 2 were located on the north side of Bushnell Road, in a fallow agricultural field. Transect 3 was located in the side yard of a vacant camp, on a steep terrace edge, valley edge feature. No prehistoric Native American sites were identified in Area 4. Stratigraphic soil profiles recorded for the test pits excavated in Area 4 include an uppermost, disturbed plow zone underlain by sandy, gravelly intact subsoil.

Conclusions and Recommendations

The UVM CAP conducted an archaeological Phase I site identification survey for the proposed Waitsfield Water Source project in the summer of 2007. As a result of the survey, one previously unknown prehistoric Native American site, designated VT-WA-169, was identified within archaeologically sensitive Area 1. Based on the recovery of a diagnostic projectile point, the site can be attributed to the Transitional period, ca. 1000-500 B.C. In addition to the projectile point, several dozen lithic artifacts and a hearth-like feature were identified. The site is deeply buried and therefore, it has the potential to provide significant information about a poorly understood time period of Vermont prehistory. Given the potential significance of site VT-WA-169, we recommend that a Phase II site evaluation be undertaken at the site prior to any proposed construction if the site cannot be completely avoided. If necessary, the Phase II evaluation will establish the site's overall size and confirm its likely eligibility for inclusion on the National Register of Historic Places (NRHP).

No archaeological sites were identified in sensitive Areas 2-4 and therefore, no further archaeological work is recommended in these areas prior to proposed project construction. On sensitive area within the project limits remains untested due to the landowner's concerns for livestock. This area is located north of the Kenyon Farm Supply store, on Kenyon property. Specifically, a section of T2 terrace, similar to that containing site VT-WA-169, is located within the right-of-way of Vermont Route 100. We recommend that if a Phase II site evaluation is to be conducted at site VT-WA-169, supplemental Phase I investigation at this untested area be undertaken at the same time to determine the presence/absence of archaeological resources in this area. A schedule will need to be worked out with the present landowners, Douglas and Donna Kenyon.

Please feel free to contact us anytime if you have questions regarding the results of this Phase I study, or our progress in the laboratory. At your request, we can prepare a Phase II scope of work for the Phase II site evaluation of site VT-WA-169 and/or the additional Phase I work on the Kenyon property. A copy of this letter has been forwarded

to Scott Dillon of the Vermont Division for Historic Preservation (VDHP) for his review and concurrence.

Sincerely,

Geoffrey A. Mandel
Research Supervisor

Charles Knight, Ph.D.
Assistant Director

cc: Scott Dillon - VDHP

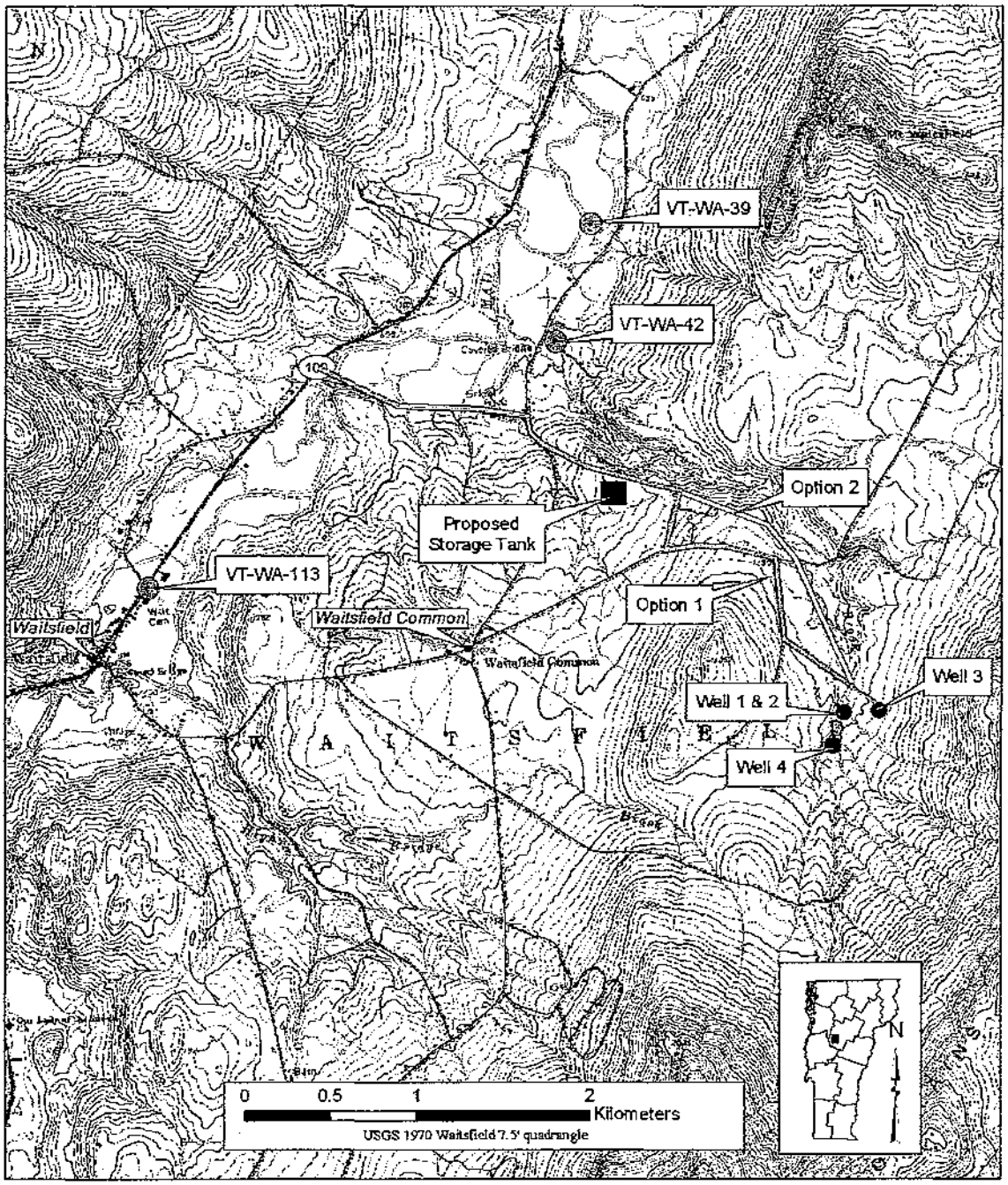

Figure 1. Map showing the location of the proposed Waitsfield Water Source Project, Waitsfield, Washington County, Vermont.

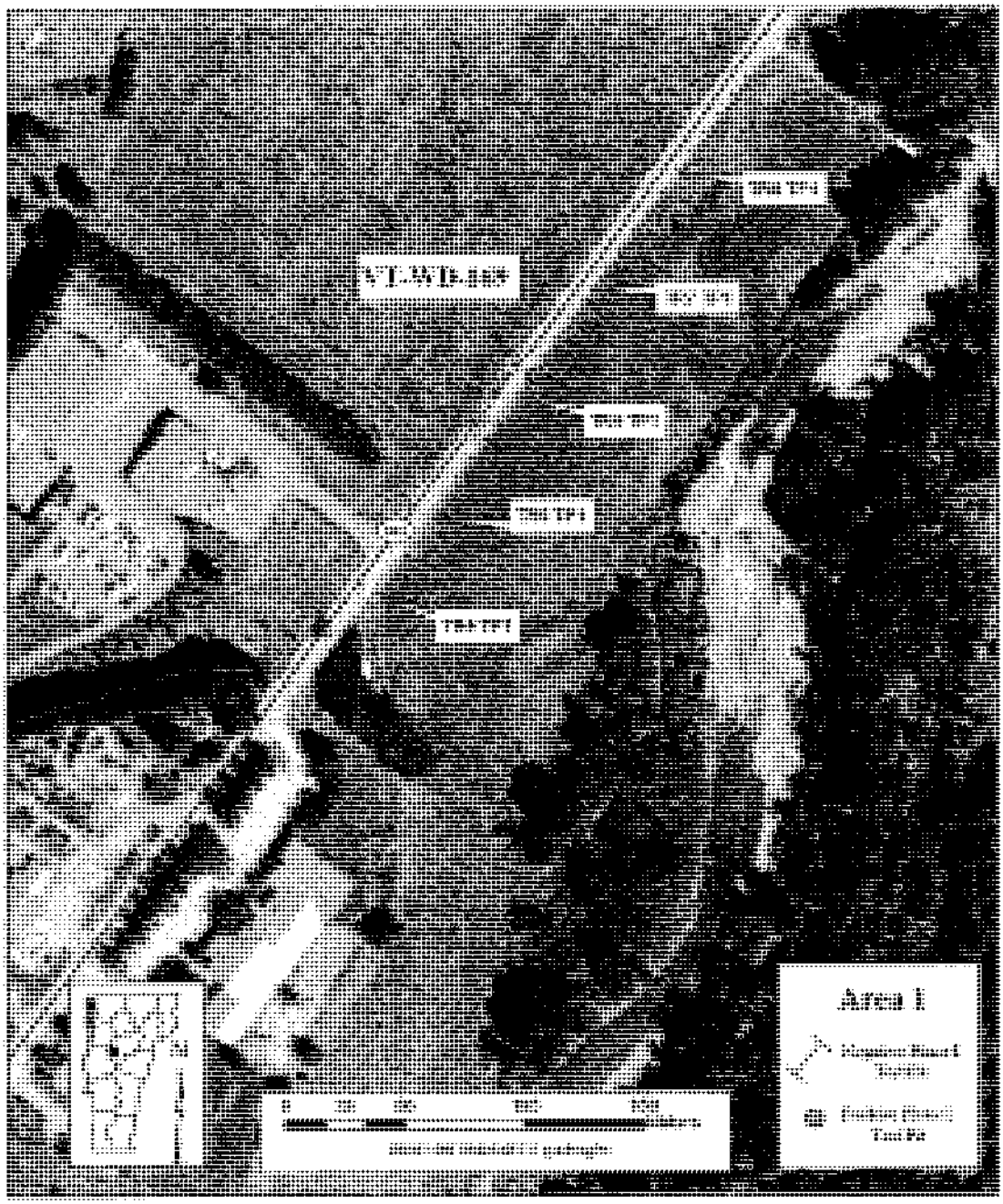

Figure 2. Map showing the location of Phase I Transects 4-8 and precontact Native American site VT-WA-169 within the APE of the proposed Waitsfield Water Source Project, Waitsfield, Washington County, Vermont.

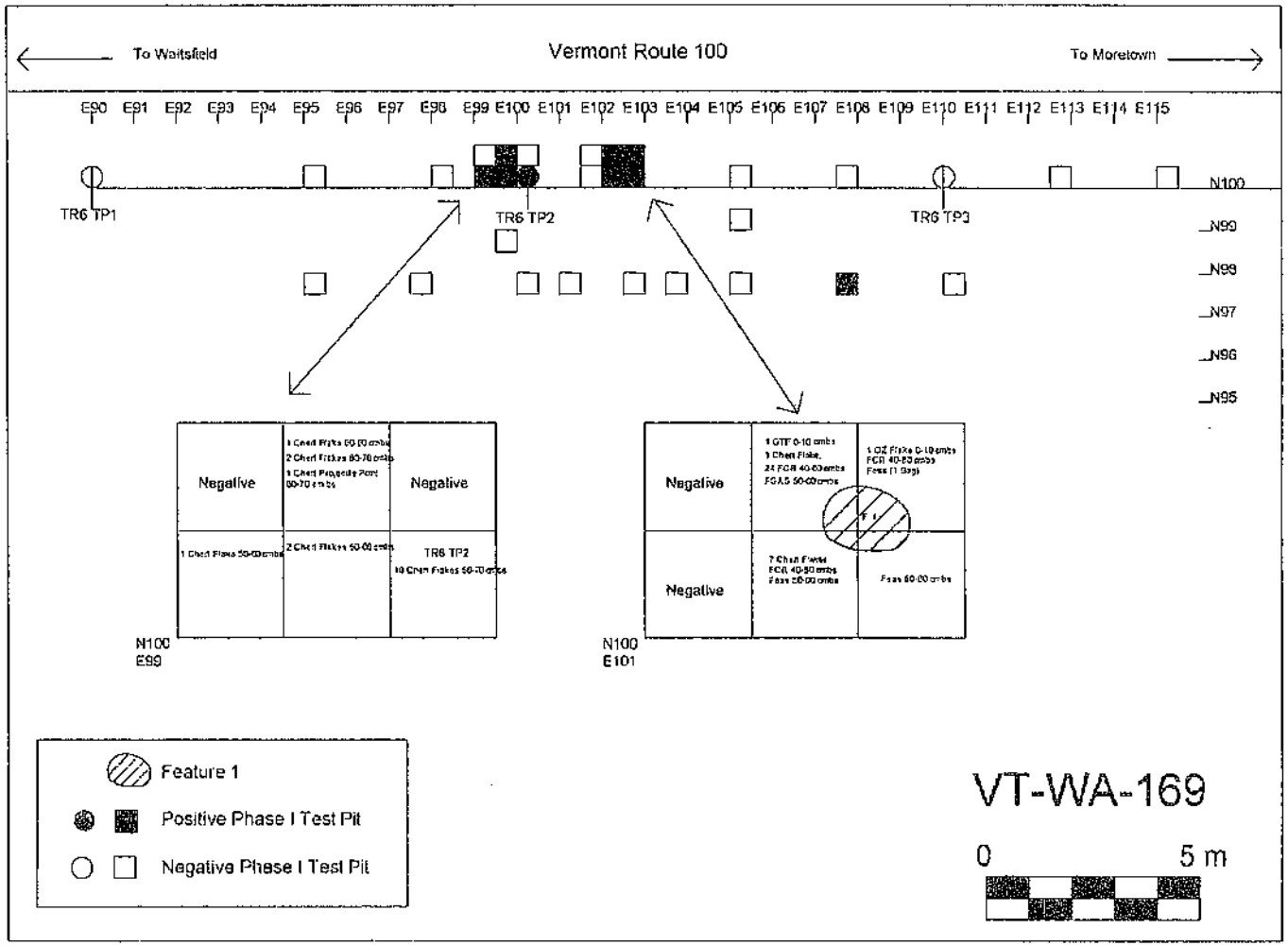

Figure 3. Detail of the Phase I testing along transect 6 in Area 1 and site VT-WA-169 within APE of the proposed Waitsfield Water Source Project, Waitsfield, Washington County, Vermont.

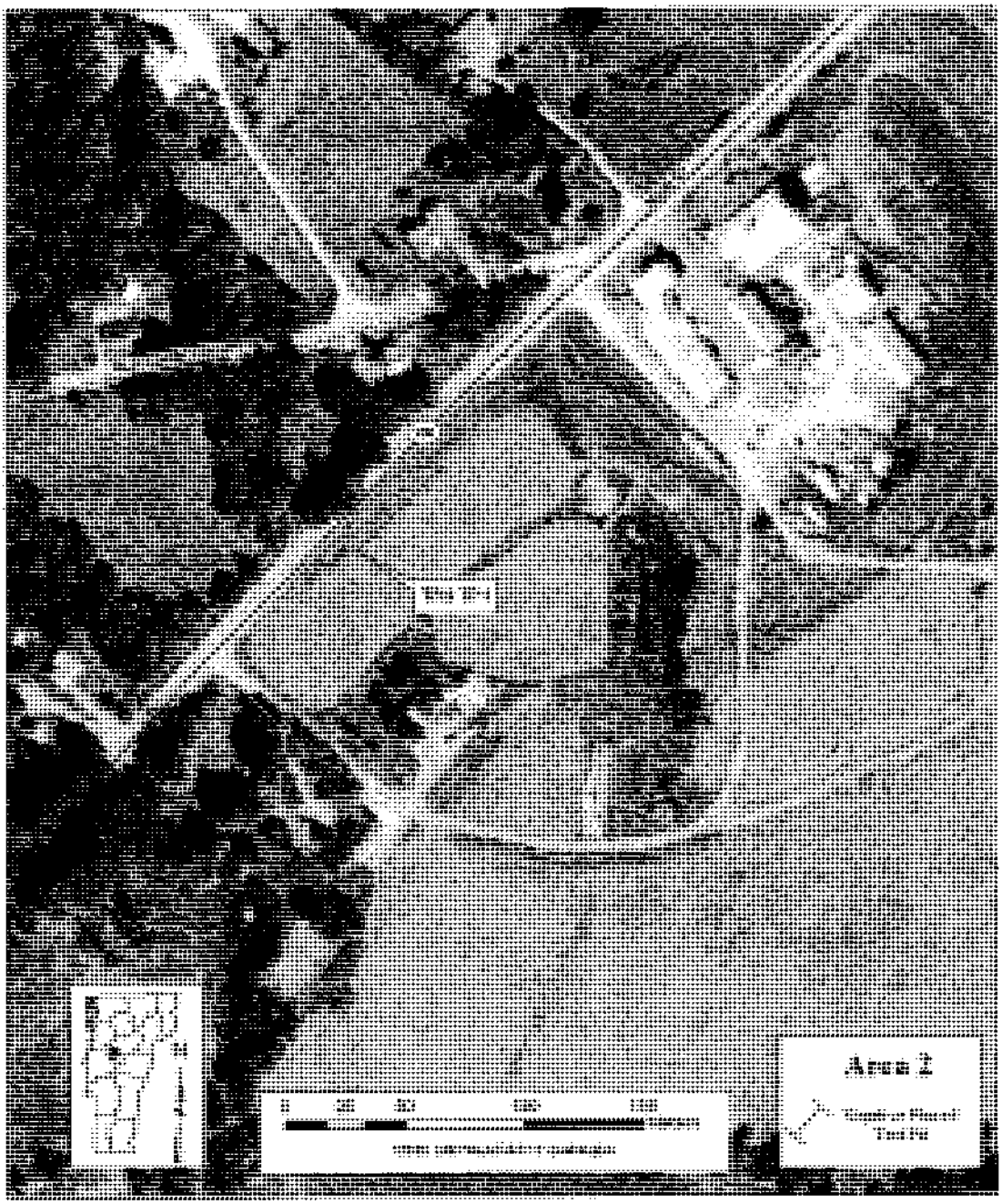

Figure 4. Phase I Transect 9 within the APE of the proposed Waitsfield Water Source Project, Waitsfield, Washington County, Vermont.

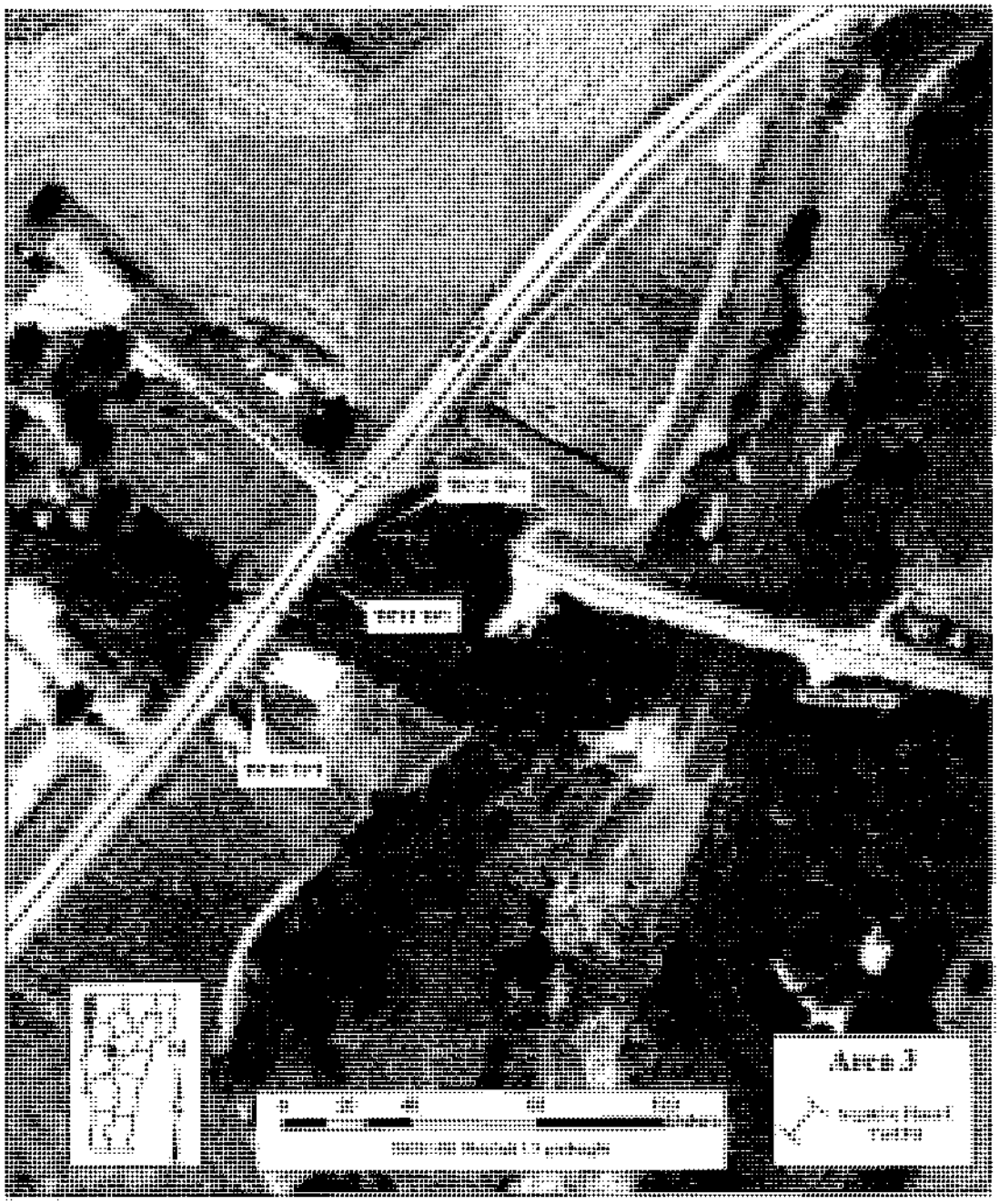

Figure 5. Phase I Transects 10-12 within the APE of the proposed Waitsfield Water Source Project, Waitsfield, Washington County, Vermont.

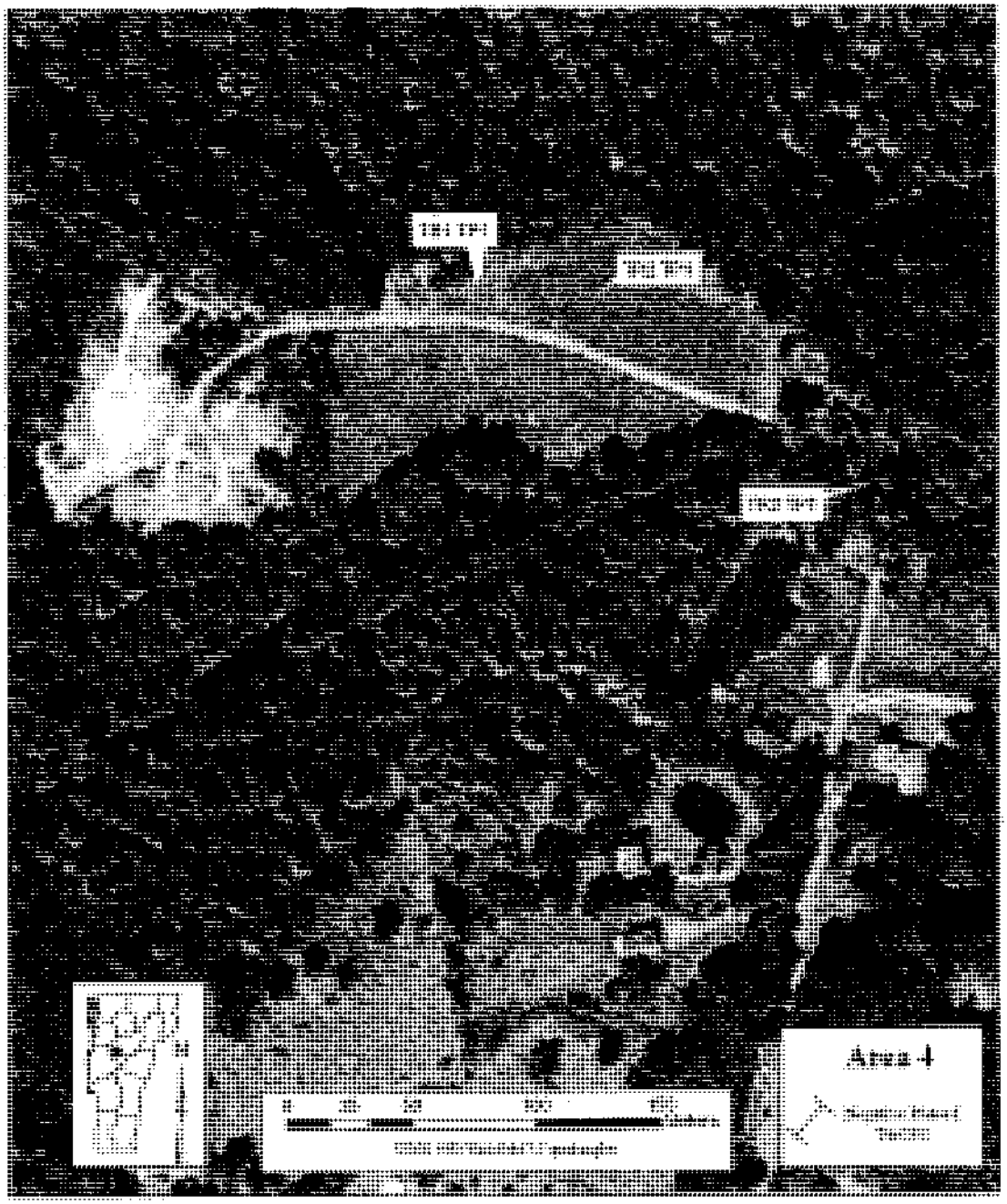

Figure 6. Phase I Transects 1-3 within the APE of the proposed Waitsfield Water Source Project, Waitsfield, Washington County, Vermont.

The UNIVERSITY of VERMONT

CONSULTING ARCHAEOLOGY PROGRAM

RECEIVED
PHELPS ENGINEERING, INC.
FILE 22/03.30/2009

December 17, 2008

John Kiernan
Phelps Engineering
3 Mill Street
P.O. Box 367
Middlebury, VT 05753

RE: End of Field Letter for Archaeological Phase I Site Identification Survey for the Proposed Waitsfield Water Source Loop Project Located in Waitsfield, Washington County, Vermont

Dear John:

From November 20 to December 2, 2008, the University of Vermont Consulting Archaeology Program (UVM CAP) conducted an archaeological Phase I site identification survey for the proposed Waitsfield Water Source Loop project located in Waitsfield, Washington County, Vermont (Figure 1). The town of Waitsfield, through the consulting engineering firm of Phelps Engineering, Inc., proposes to construct a waterline along the western side of Old County Road (Figure 2). The archaeological study reported here was undertaken as part of Vermont's ACT 250 permit process. The proposed waterline along Old County Road is supplemental to the alignment along Vermont Route 100, north of Waitsfield, before it veers east along Tremblay Road to its water source. A site inspection of the proposed waterline realignment Area of Potential Effects (APE) was conducted by Geoffrey Mandel (UVM CAP) and John Kiernan (Phelps Engineering, Inc.) on November 13, 2008. As a result of the site inspection, three areas sensitive for precontact Native American era sites were identified along the proposed supplemental waterline alignment along Old Country Road and included: (1) the floodplain terrace south and west of the intersection of VT Route 100 and Old County Road, opposite the health care facility (Area 1), and (2) the heads-of-gullies and adjacent terraces associated with several drainages located along the western side of Old County Road (Area 2), and (3) the portion of the Mad River floodplain located north of the intersection of Vermont Route 100 and Old County Road, opposite of the Kenyon farmstead and supply store (Area 3) (see Figure 2).

In September 2007, during the course of a Phase I survey along the proposed original Town of Waitsfield waterline alignment, the UVM CAP identified precontact Native American site VT-WA-169 along the eastern side of Vermont Route 100 (Knight 2006, Mandel and Knight 2007) (see Figure 2). Site VT-WA-169 is attributable to the Transitional period, ca. 1000-500 B.C., based on the recovery of a temporally diagnostic projectile point. In addition to the projectile point, specimens of fire-affected rock were

111 Delehanty Hall, Burlington, VT 05405, Telephone (802) 656-4310, Fax (802) 656-8033
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recovered in close association to the projectile point, suggesting that a cultural feature, likely a hearth, are also present at the site. The cultural artifacts were deeply buried beneath alluvial strata and modern plowzones. Site VT-FR-169 is located along a relict terrace of the Mad River, and as such, indicates that this portion of the river valley is archaeologically sensitive for precontact Native American era sites. Site VT-FR-169 represents one of the few precontact era Native American sites known within the Mad River valley.

The 2008 Phase I site identification survey of the proposed supplemental alignment along Old Country Road involved the excavation of 67, 50 x 50 cm (20 x 20 in) in size, test pits along 11 linear transects within the proposed project APE. A detailed description of the results, recommendations and conclusions are presented below.

Results

Area 1

Area 1 is located south and west of the intersection of Vermont Route 100 and Old County Road, in a hayfield (see Figure 2). A confluence of two small, unnamed tributaries of the Mad River is present at the western end of Area 1. The current channel of the Mad River is located from 200-350 m (656-1,148 ft) to the east. Given the close proximity of previously identified site VT-WA-169, this portion of the Mad River floodplain was considered to be highly sensitive for precontact Native American era archaeological sites.

One linear transect, designated Transect 1, was used to test Area 1. Transect 1, oriented parallel to Old County Road, contained 13 test pits. Test Pit 1 was located closest to the intersection of Vermont Route 100 and Old County Road, and Test Pit 13 adjacent to the confluence of the two unnamed tributaries of the Mad River (Figure 3). Test Pits 1-7 were spaced 10 m (33 ft) apart, and Test Pits 8-12 were spaced 5 m (16 ft) apart, given the close proximity to the unnamed streams' confluence. Test Pit 13 was located 10 m (33 ft) to the west of test Pit 12 due to a farm access road.

Test Pits along Transect 1 were excavated to depths from 60-100 cm (24-39 in) below the ground surface. No precontact Native American era sites were identified within the test pits excavated along Transect 1. Stratigraphic soil profiles recorded the test pits indicated that no paleosols (former stable ground surfaces) were encountered as a result of the subsurface testing within this portion of the Mad River floodplain. In all 13 test pits, an uppermost, disturbed, 10-36 cm (4-14 in) thick, brown to dark brown silt loam plowzone was present. In several test pits, the plowzone incorporated fill sediment associated with the construction of Old County Road. Beneath the plowzone, alluvial flood strata were encountered. In several test pits (1, 2, 4, 6, 9-12) a developing "B", or weathered soil was visible, suggesting that this portion of the floodplain has been stable for a considerable period of time. Where the weathered subsoil was missing, historic fill or a deeply buried plowzone was identified. Beneath the weathered alluvial stratum, a series of alternating grayish brown, olive brown and dark yellowish brown sand and/or

silt strata were encountered. In the shallower of the excavated test pits, a basal stratum of mixed sands, gravel and cobbles were encountered. No precontact Native American sites were identified in the test pits excavated along Transect 1.

Area 2

Area 2 is located along the west side of Old County Road where the road follows an elevated slope/terrace edge overlooking the Mad River Valley floodplain to the east (see Figure 2). The slope/terrace edge is bisected by several small seasonal and permanent drainages. The west side of Old County Road is occupied hy residential homes, an inn, and a children's daycare. Visible disturbances include road intersections, drainage ditches, culverts, utilities, driveways, septic systems and landscaping. To test Area 2, 9 linear transects, containing a total of 47 test pits, were excavated within portions of the proposed project's APE (Figure 4).

Transects 2 and 3 were located north of the Yellow House Inn, in front of several outhuildings and silo, and within a pasture further north (see Figure 4). Transect 2 contained 11 test pits, spaced at 5 m (16 ft) intervals, which were located 4-5 m (13-16 ft) west of Old County Road. Transect 3 was located 3 m (9.8 ft) to the west and parallel to Transect 2, Test Pits 6-11 (see Figure 4). The locations of Transects 2 and 3 corresponded to the broad head-of-gully visible on the eastern side of Old County Road. No precontact Native American era sites were identified within this portion of Area 2.

Stratigraphic soil profiles recorded for the test pits excavated along Transect 2 included an uppermost, disturbed, 27-53 cm (11-21 in) thick, dark yellowish brown modern plowzone with intermixed road fill. Beneath this uppermost stratum, a weathered, mixed sand, gravel and cobble stratum was encountered, which likely represents intact sediment or glacial till. Soil profiles recorded for the test pits excavated along Transect 3 contained an uppermost plowzone underlain hy glacial till. All test pits were excavated to depths from 50-70 cm (20-28 in) below the ground surface.

Transect 4 is located along the western side of Old County Road, approximately 80 m (262 ft) north of Transects 2 and 3 (see Figure 4). Transect 4 originally contained four test pits spaced 3 m (9.8 ft) apart across a small section of residential lawn located south of Brightenback Lane. Following the excavation of Test Pits 2 and 3, it was determined that this area was heavily disturbed hy the construction of a culvert. In both test pits, fill was encountered to depths of 50-60 cm (20-24 in) helow the ground surface. Bedrock ledge was present heneath the fill.

Transects 5 and 6 were located to the north of Brightenhack Lane, in the lawns of a private residence and children's daycare facility. Transects 5 and 6 contained 6 test pits each, spaced at 5 m (16 ft) intervals. In all 12 test pits, historic fill was mixed with an uppermost historic era plowzone. The subsoil heneath the fill consisted of dark yellowish brown glacial till. The test pits along Transects 5 and 6 were excavated to depths from 25-70 cm (10-28 in) below the ground surface. No precontact era Native American sites were identified in the test pits excavated along Transects 5 and 6.

Transects 7 and 8 were located in a residential lawn east of the intersection of Old Center Fayston Road, and west of a prominent wetland and unnamed Mad River tributary (see Figure 4). Transects 7 and 8 were located 2 and 5 m (6.6 ft and 16 ft), respectively, north of Old County Road. Each contained 4 test pits spaced at 3 m (9.8 ft) intervals. During the course of testing, a local resident informed the UVM CAP that a septic tank was buried immediately to the north of Transect 8. No precontact Native American era sites were identified in the test pits excavated along Transects 7 and 8.

Stratigraphic soil profiles recorded for the test pits in this area include an uppermost, 12-25 cm (6-12 in) thick historic fill/plowzone stratum underlain by yellowish brown glacial till. The test pits along Transects 7 and 8 were excavated to depths from 38-60 cm (15-24 in) below the ground surface.

Transect 12 was located on the east side of the prominent wetland and unnamed stream, opposite Transects 7 and 8. Transect 12 contained three test pits spaced at 4 m (13 ft) intervals. The local topography consists of level lawn situated between a steep terrace edge above the wetland and driveway. No precontact era Native American sites were identified in the test pits excavated along Transect 12.

Stratigraphic soil profiles recorded for the three test pits excavated along Transect 12 include an uppermost 15-30 cm (6-12 in) thick modern era plowzone underlain by weathered strong yellowish brown sand and gravel.

Area 3

Area 3 is located in the northern portion of the proposed project's APE (see Figure 2). The area is currently used as an active cattle pasture. Area 3 includes the northern portion of stepped terraces above the Mad River floodplain (Figure 5). Visible disturbances include a cattle access tunnel running beneath Vermont Route 100, between the pasture and the Kenyon farmstead. The fill prism along the western side of Vermont Route 100 is prominent, and approximately 2-3 meters in height. A mounded field drive is located alongside the western edge of Vermont Route 100, approximately halfway across the length of pasture.

Two transects, designated Transects 9 and 10, were used to sample the southern portion of the area (see Figure 5). Transect 9 traversed the upper, stepped terraces located south of the cattle access tunnel. Transect 9 contained 7 test pits spaced at 5m (16 ft) intervals. Transect 10 was located north of Transect 9, and began north of the cattle access tunnel and extended north up to the elevated field drive entrance. Transect 10 contained 4 test pits spaced at 5 m (16 ft) intervals. A third transect, 11, located north of the elevated field drive, was not excavated due to frozen ground conditions, thick surface ice and ground water percolation (Figure 6).

Stratigraphic soil profiles recorded for the test pits excavated along Transect 9 include a 20-30 cm (8-12 in) thick, very dark grayish brown plowzone underlain by intact

subsoil. The subsoil strata include a very dark brown sand and gravel, and heneath, an olive clay. The soil profiles recorded for the test pits along Transect 10 indicate that thick, cobble-filled historic era fill associated with the cattle access tunnel or Vermont Route 100 was present to depths of 50 cm (20 in) at which point excavation was terminated in all of the test pits due to impenetrable cobbles.. Intact subsoil or buried paleosols were not encountered. No precontact era Native American sites were identified within the test pits excavated along Transects 9 and 10, however testing along transect 11 must still be carried out when the ground is dry..

Conclusions and Recommendations

The UVM CAP conducted an archaeological Phase I site identification survey within two archaeological sensitive areas (Areas 1 and 2), and a partial survey in sensitive Area 3, within the APE of the proposed Waitsfield Water Source Loop project, located in Waitsfield, Washington County, Vermont. As a result, no precontact era Native American archaeological or significant historic Euroamerican sites were identified within Areas 1 and 2. As a result of the Phase I study in these areas, the proposed project will have no effect on significant cultural resources and no further archaeological study is recommended there. Due to poor excavation conditions, archaeological subsurface testing within the northern portion of Area 3, along Transect 11, was suspended. This area will have to be revisited and testing completed when conditions improve, likely in the spring of 2009. This portion of Area 3 is considered to be highly sensitive for precontact era Native American sites, given its similar topographic setting that of site VT-WA-169, which is also located along a former Mad River channel terrace edge (see Figures 1 and 2). An amended end of field letter which includes the results, conclusions and recommendations for the testing in Area 3 will be produced following the completion of subsurface testing.

Please feel free to contact us anytime if you have any questions about this study or our progress on laboratory work and report writing. A copy of this letter will be sent to Scott Dillon of the Vermont Division for Historic Preservation (VDHP) for his review and concurrence.

Sincerely,

Geoffrey A. Mandel
Research Supervisor

Charles Knight, Ph.D.
Assistant Director

cc: Scott Dillon-VDHP

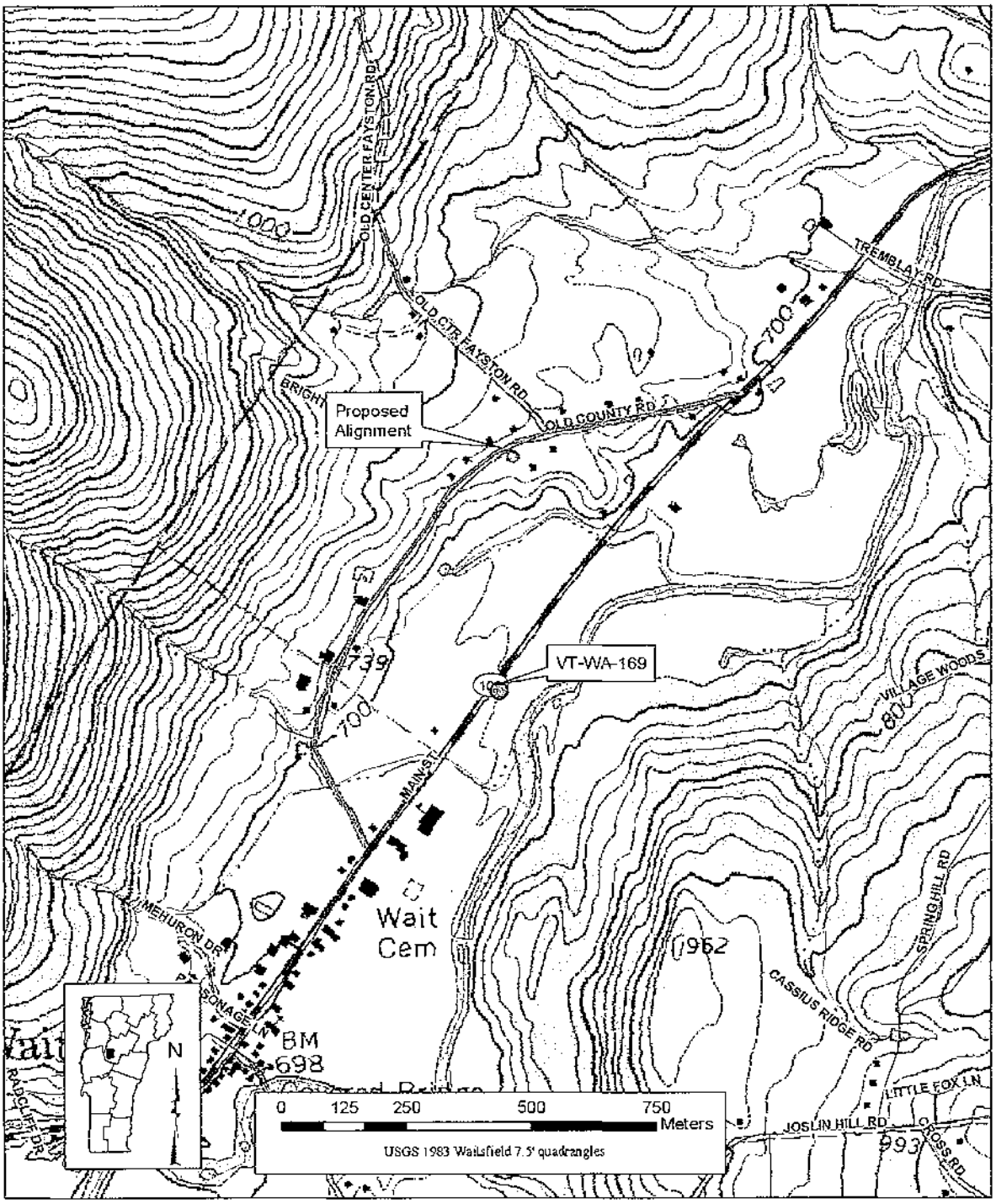

Figure 1. Map showing the location of the proposed Waitsfield Water Source Loop Project, Waitsfield, Washington County, Vermont.

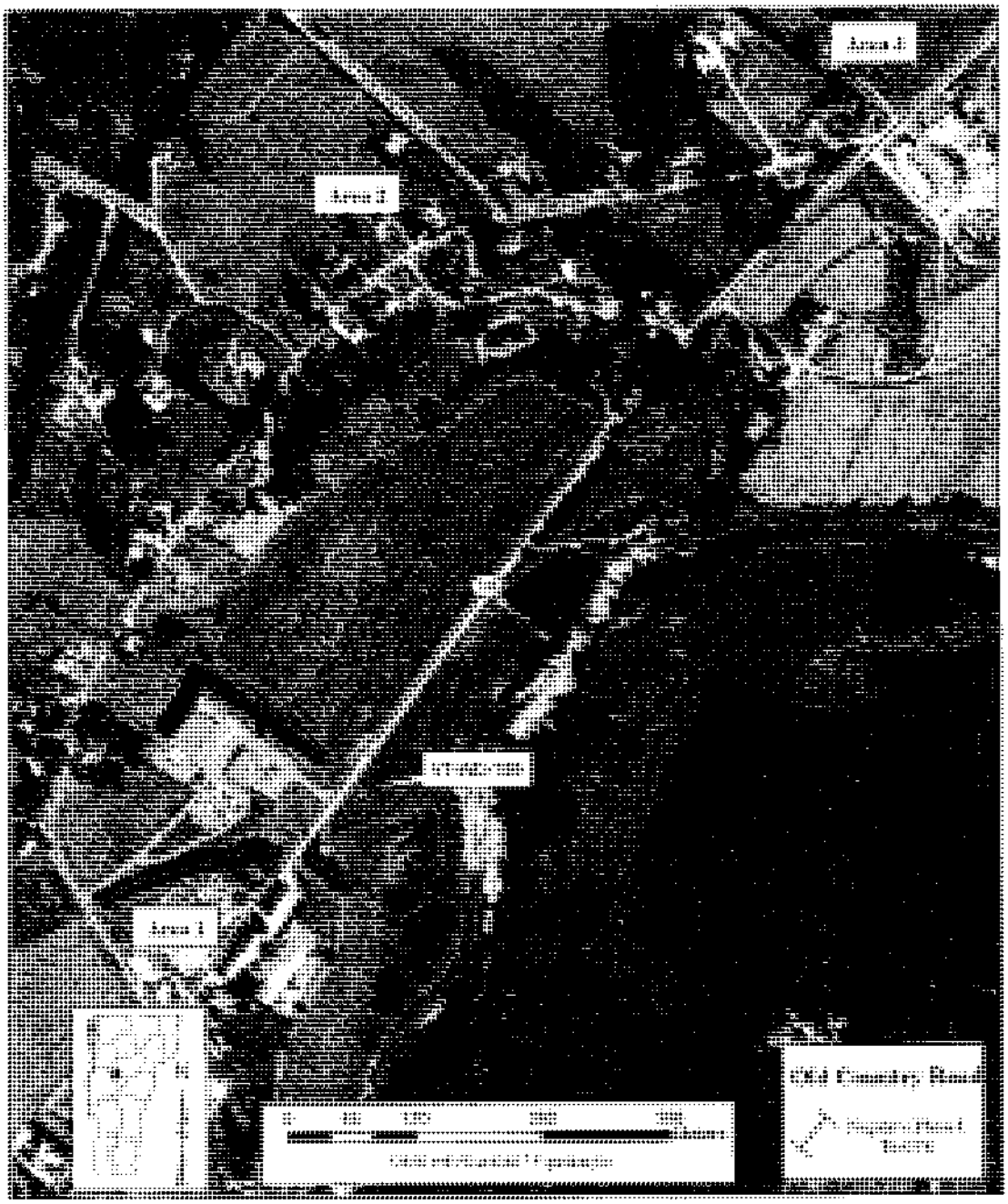

Figure 2. Map showing the location of Areas 1-3 within the proposed Waitsfield Water Source Loop Project, Waitsfield, Washington County, Vermont.

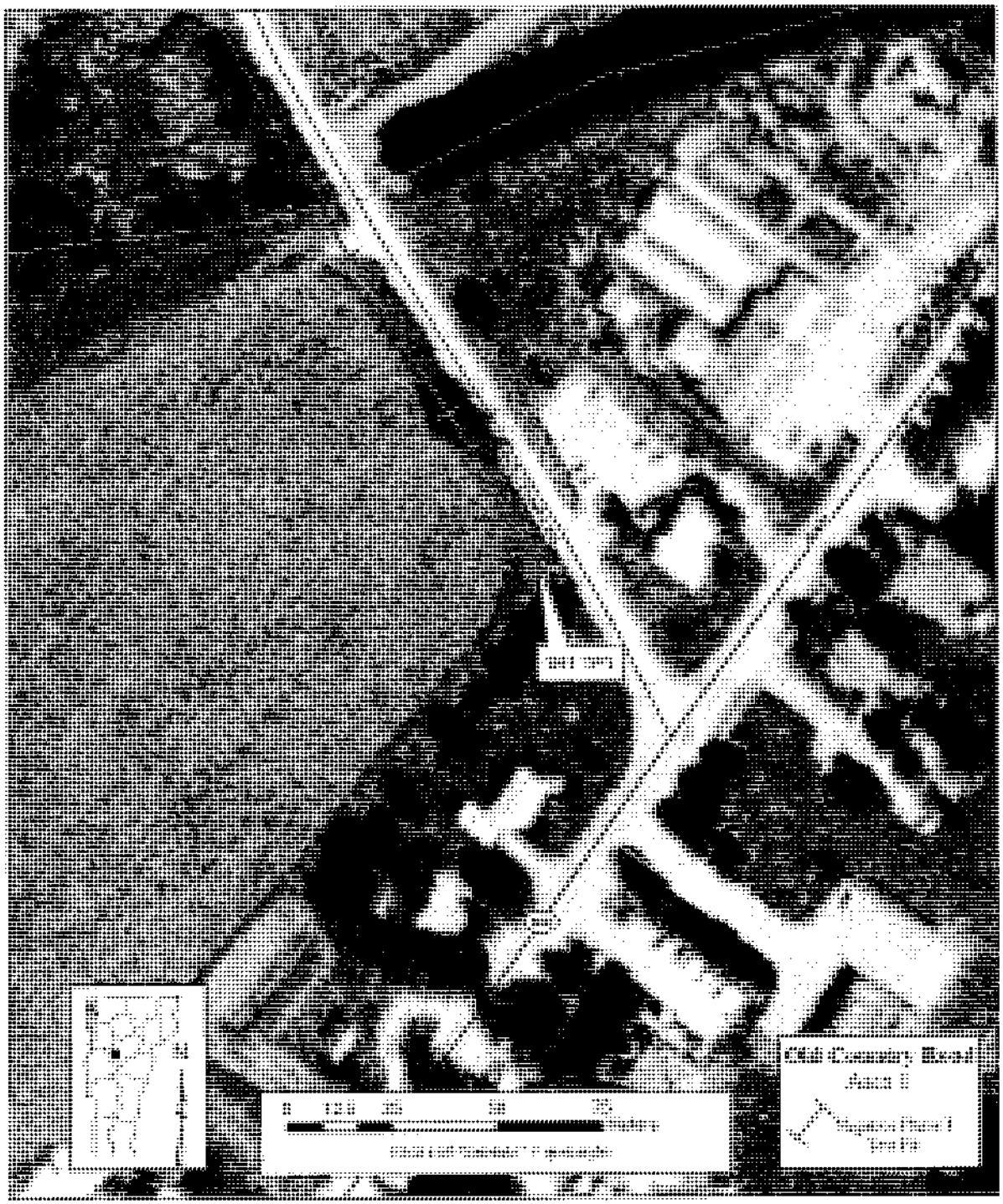

Figure 3. Map showing the location of the archaeological testing within Area 1 for the proposed Waitsfield Water Source Loop Project, Waitsfield, Washington County, Vermont.

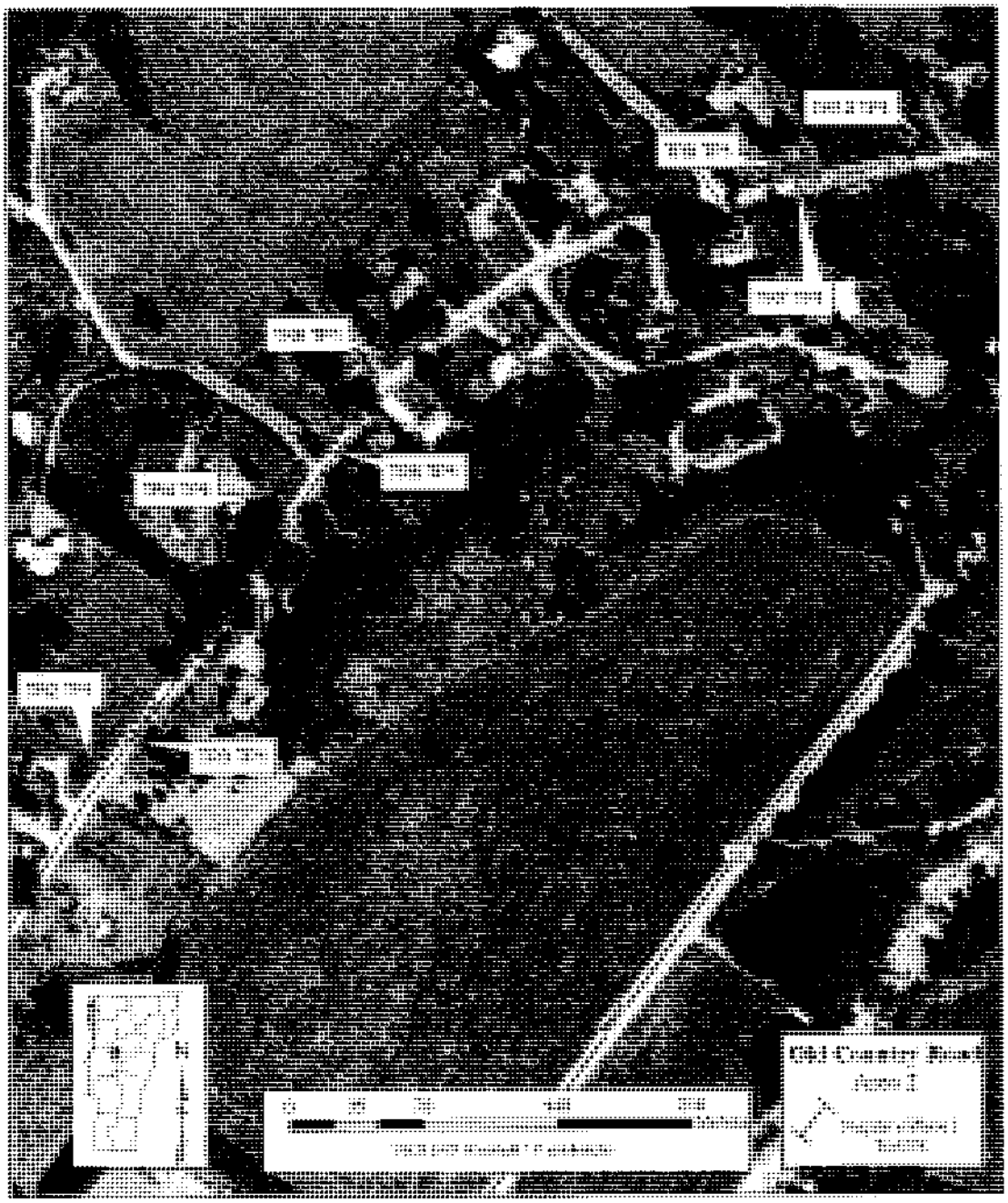

Figure 4. Map showing the location of the archaeological testing within Area 2 for the proposed Waitsfield Water Source Loop Project, Waitsfield, Washington County, Vermont.

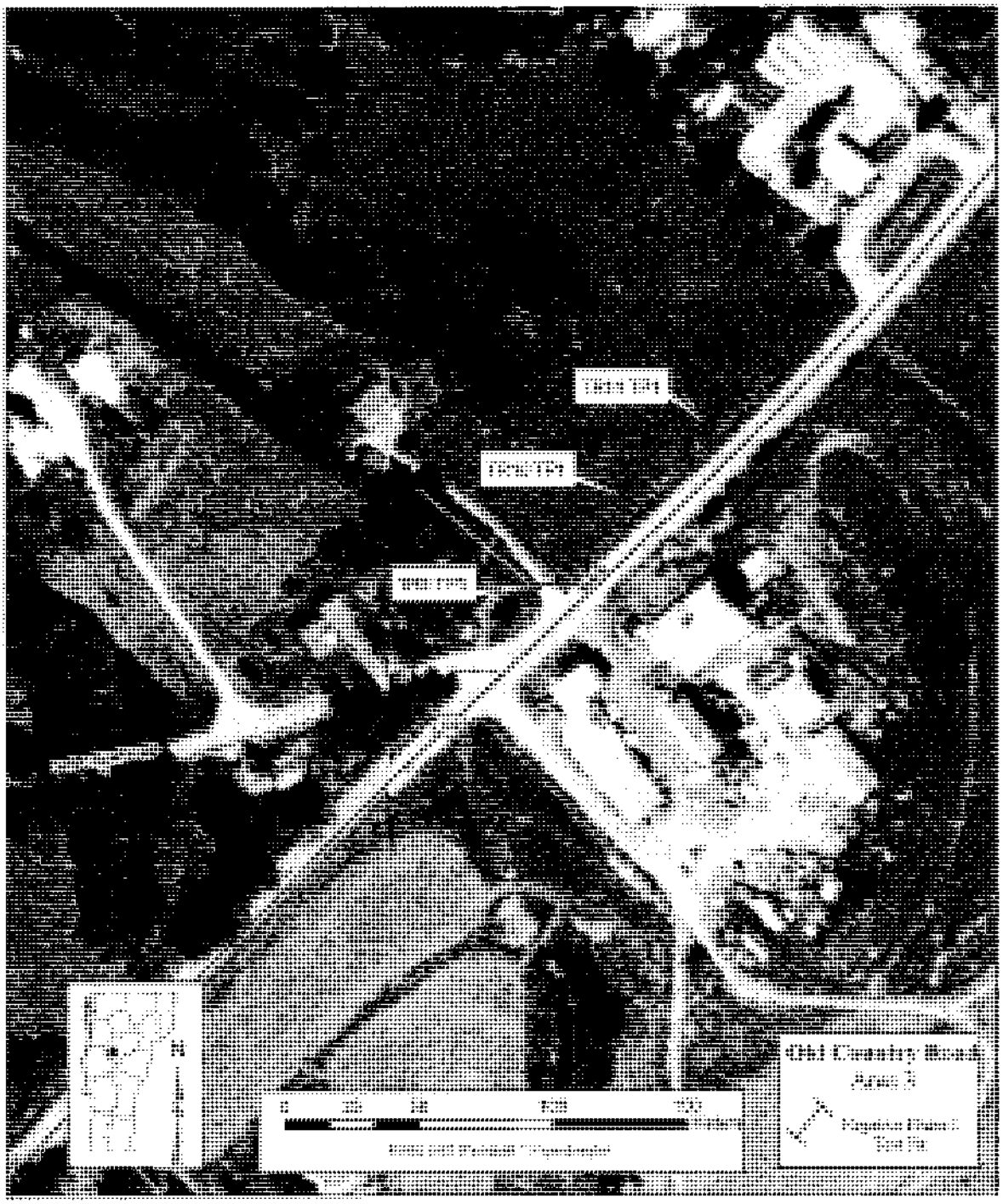

Figure 5. Map showing the location of the archaeological testing within Area 3 for the proposed Waitsfield Water Source Loop Project, Waitsfield, Washington County, Vermont.

Figure 6. Photo of partially excavated test pit along Transect 11 for the proposed Waitsfield Water Source Loop Project, Waitsfield, Washington County, Vermont.

Appendix F: Phase 1 Archaeological Resource Assessment Scope for Pilot Project

DRAFT

BIRCHLINE PLANNING LLC

Memo

To: Scott Dillon, Vermont Division for Historic Preservation
Tom Joslin, Vermont DEC Facilities Engineering Division
Josh Nemzer, US EPA Region 1

From: Juli Beth Hinds, AICP

CC: Valerie Capels, Waitsfield Town Administrator
Joshua Schwartz, MRVPD

Date: September 5, 2012

Re: Waitsfield Community Wastewater Loan Fund Project (RF1-164-1) Archaeology

On behalf of the Town of Waitsfield I would like to provide an overview of the Town's progress evaluating the potential for archaeological sensitivity within the Community Wastewater Loan Fund project area, and on establishing a procedure for conducting Phase I Site Identification Survey and associated field work in locations where project-related disturbance would occur on a potentially sensitive site. Following a meeting between myself, Joshua Schwartz of the Mad River Valley Planning District, and Scott Dillon at the Vermont Division for Historic Preservation on July 23rd, and preparation of mapping indicating the project area and proposed pilot construction project site, a proposal was solicited from the University of Vermont Consulting Archaeology Program (UVM-CAP) for these services, which is enclosed.

As you are all aware, substantial work on archaeological sensitivity was conducted as part of Vermont and NEPA approvals for the prior proposal for a conventional sewer system, and for the public water supply project that is now under construction. The Community Wastewater Loan Fund proposal differs in its focus on developing a series of distributed, on-site treatment systems that may or may not be located on existing disturbed sites. The Town must, as we understand, both evaluate the potential for sensitivity within the project area, and establish a procedure by which Phase I site identification survey work can be conducted on individual sites that are proposed for construction, and deemed potentially sensitive.

At this time, we are seeking your initial concurrence with a proposed approach to meeting these requirements for the Community Wastewater Loan Fund project, and with the scope of work provided by UVM-CAP for Phase I site identification survey work on the site of the proposed pilot construction project. We would also like to gain concurrence that the proposed scope of services from UVM-CAP represents an eligible project cost for reimbursement. The Town's proposed approach is as follows:

(1) **Determining overall potential for sensitivity**: Substantial work on the potential for sensitivity within the entire project area (which is coterminous with the public water system service area) already has been completed. Based on discussions with Charles Knight at UVM-CAP, it appears that the most efficient course of action is for the Town's consultant team to prepare an updated narrative using the previously compiled research and maps and

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updating the GIS files, etc. as necessary to reflect the proposed scope of the Community Wastewater Loan Fund program. UVM-CAP's scope of services includes a fee for compiling the data and mapping layers and providing these to the Town's consultant team. The updated narrative would then become part of the revised Facilities Plan that is to be submitted later this fall. We are requesting your concurrence with this approach of re-compiling and presenting the previous research rather than commissioning a new study, since the project service area is coterminous with the water service area and no new information is likely to be gained from a new study.

(2) **Phase I Site Identification Survey for the Pilot Construction Site**: The attached proposal outlines the proposed scope of work for Phase I work on the site of the likely pilot project. The pilot project site, whose approximate (and conservatively large) boundaries were provided to UVM-CAP, is a potentially sensitive site and further investigation is recommended. We are requesting your concurrence that the outlined scope is sufficient for purposes of conducting required Section 106 review, and that these would be considered eligible project costs for reimbursement through the SRF loan.

(3) **Procedure for Subsequent Reviews**: Finally, as sites for additional wastewater systems to be constructed under the Community Wastewater Loan Fund are identified, it is the Town's intent to establish a procedure for determining the level of further review required, as follows:

a. Identify the potential extent of project-related disturbance on a GIS map
b. Provide the map and narrative description of work to be performed to UVM-CAP
c. If the site is deemed potentially sensitive, proceed with a comparable scope to the scope for the pilot project and provide documentation for Section 106 review.

Again, your concurrence that this scope and future approach will be (if executed properly!) sufficient to meet NEPA and Vermont standards for archaeology review would be greatly appreciated and would enable the Select Board and wastewater project team to move forward with preparation of the Facilities Plan and the UVM-CAP scope.

Please let me know if you have any questions and thanks as always for your time and effort helping with this project.

A Proposal for

Phase I Site Identification Survey for the Proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, Waitsfield, Washington County, Vermont

Submitted to:

Juli Beth Hinds, AICP
Principal
Birchline Planning LLC

Submitted by:

CONSULTING ARCHAEOLOGY PROGRAM
UNIVERSITY OF VERMONT
111 Delehanty Hall
180 Colchester Avenue
Burlington, VT 05405

August 29, 2012

SCOPE OF WORK

Phase I Site Identification Survey for the Proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, Waitsfield, Washington County, Vermont

Project Description

The Town of Waitsfield, through the consulting firm of Birchline Planning LLC, proposes the Waitsfield Wastewater Facilities Plan Winter Park System Update, Waitsfield, Washington County, Vermont (Figure 1). The proposed project will construct a septic system that includes a 10k gallons per day (GPD) dispersal field and replacement area. Under good soil conditions and without pre-treatment, this system will cover roughly an acre (assuming two 100'x100' pressurized in-ground beds, each with 5,000 gpd capacity, for the primary system, and double that for the "replacement" system since it must be constructed at the same time as the primary for indirect discharge-permitted systems, plus 10' of separation minimum between fields). This is considered a maximum area of disturbance. The Winter Park system will likely utilize advanced pretreatment equivalent to a recirculating sand filter, or leachfield that could end up being slightly less than half an acre in the best case. An access road may also be required, depending on whether a dosing tank, pumps, etc. on the dispersal field are required.

The University of Vermont Consulting Archaeology Program (UVM CAP) conducted a desk review of the proposed project area and determined that the area is likely archaeologically sensitive. This review, combined with previous visits to Waitsfield and Irasville for other aspects of the septic line, as well as the Waitsfield drinking water project, lead to the recommendation of a Phase I site identification survey as part of the Section 106 permitting process.

Statement of Objectives

Based on Guidelines for Conducting Archaeology in Vermont produced by the Vermont Division for Historic Preservation (VDHP), the goals of a Phase I site identification survey are to: 1) identify archaeologically sensitive areas to be affected by the proposed project through environmental and historical background studies; 2) determine the existence and location of any prehistoric and/or historic sites within the project's APE; and 3) present preliminary information that can form the basis and framework for a more intensive archaeological evaluation should a site be identified, if the client so desires.

Methods

As part of the Phase I site identification survey, brief environmental and historic background studies will be undertaken to better understand the environmental setting, to identify the types of prehistoric sites that may be present within the project area, and to provide a context for understanding already existing sites and any sites that may be encountered. Most of this information will be drawn from historic maps of the area, as well as other prehistoric site investigations in the area and along the edges of drainage systems throughout Vermont.

Considering the proximity to the Mad River, it is likely that any sites identified within the proposed project area are either small nuclear areas with perhaps one or more outlying

activity areas, as well as larger encampments that represent repeated, long term occupation of the area. Most nuclear areas--those areas around shelters and hearths where the majority of activities typically took place and where the majority of artifacts are likely to be left behind--are frequently as small as 50 m^2 (538 ft^2).

Soils in these areas likely are to be gravels and sands. Since the project area is on maintained lawn, subsurface testing will be carried out in this archaeologically sensitive area. Archaeological testing will involve the excavation of 50 x 50 cm test pits at 5, 2.5 m and closer, intervals within the known concentration of positive test pits, and in adjacent areas to determine site limits. In addition, at least one 1 x 1 m unit will be employed at areas of dense artifact deposits and/or intact stratigraphy underneath the plow zone. The density of artifacts and nature of stratigraphy will determine the number of such units employed at the site. Any additional testing due to surface artifacts and/or positive test pits, and the costs incurred by this additional testing have been included in the overall budget estimate. This work will also help determine the degree of historic ground disturbance in the area, where present.

Any excavation via test pits that is carried out will proceed in 10 cm vertical levels and by soil horizons, where possible. All soils will be sieved through 6.4 mm (1/4 in) mesh screens. Excavation in the fluvial environments will occur to depths of approximately 40-60 cm (16-24 inches) below ground surface, or at least 10 cm (4 in) into intact "C" horizon sediments. Test pits will be staggered between transects for optimal coverage. Stratigraphic profiles from each test pit or from a representative sample of test pits will be recorded according to both texture and Munsell chart colors.

In the laboratory, all artifacts and other cultural remains will be cleaned and cataloged using UVM CAP's standard format and descriptive categories and the data collected will be entered on computer files. All field notes, records, artifacts and other data will be curated at the Consulting Archaeology Program, University of Vermont.

Expected Results

Based on the topography of the proposed project parcel, one or more prehistoric sites may be encountered. Given the anticipated age of the landforms in the general project area a site may date from as early as 7,500 years ago. Considering this long period of potential occupation and the location next to a major water-based throughway, it is possible that any sites identified here will have numerous occupation components. During a Phase I site identification survey, the most common artifacts recovered are typically lithic flakes, including chert, quartzite or quartz specimens, all produced as a by-product of stone tool manufacture. Tools themselves are typically more limited. Pottery dating to the past 3,000 years and burned bone also may be present, but again in more limited quantities. Features such as cooking hearths are unlikely to be encountered in test pits during a Phase I survey due to the limited area that is excavated.

Schedule

Following the Guidelines for Conducting Archaeology in Vermont, a letter briefly summarizing the results of the field work, describing the anticipated analysis and report writing schedule, if any, and providing preliminary recommendations, will be submitted to the client

within about 10 work days of completing the field work. If no sites are found then this end-of-field letter will serve as the final project document. If sites are found, then the end-of-field letter can be used in the permitting process. To comply with State guidelines for archaeology a more complete project document, a draft Phase I report, will be submitted within an estimated 120 workdays of project initiation, unless additional phases of archaeology are necessary. Preparation of the report, while an essential component of the project, will not delay the permitting process. A proposed schedule for various elements of the project is presented below. Dates may be adjusted to reflect the actual date of project authorization, but the UVM CAP will need a written letter of authorization to proceed. It is estimated that the fieldwork portion of the project could be conducted and completed in the late summer or early fall of 2012. The first invoice for the project will follow the completion of field work. Subsequent invoices will follow the completion of other project tasks, if necessary, related to laboratory processing and analysis to be conducted over the winter. If sites are identified and report preparation is necessary, a final invoice will follow completion of the final report. Please note that, depending on project results, it may take up to one year from project initiation to finalize reporting and accounting.

A projected schedule for various elements of the project is presented below; beginning on the day of project authorization, assuming that begins on day one. Considering the size of the sensitive area and the travel time to and from the project area, two days of field study will be required to conduct the Phase I testing.

Day 1:	Begin project.
Day 1:	Set-up project accounting; initial project team meeting.
Day 1-2:	Begin and end field work
Day 15:	End-of field letter report sent to client.

Products

As is required, the results of the Phase I site identification survey will be integrated into a draft and final Phase I report that will contain an abstract, project description, results of the field work and laboratory analyses, conclusions, recommendations, appropriate graphics and tables, etc. If no sites are found, then the end-of-field letter will serve as the final report document. Given the limited nature of the Phase I study, no public outreach is planned.

Budget Estimate

As a non-profit service and research organization within the University of Vermont, the Consulting Archaeology Program works on a cost-reimbursable basis with an established upper limit. It is important to note that only actual expenses will be billed. For instance, if no remains are found lab time may be reduced. All operating and overhead costs are directly related to project and program support, and are established by state and federal audit. A budget worksheet outlining staffing requirements, estimated time for each task, and associated maximum costs is attached. The attached budget also contains time for the request of producing shapefiles and collating all maps and areas previously archaeologically tested for other sections of the Waitsfield septic and drinking water projects carried out by the UVMCAP.

Charles Knight, Ph.D.
Assistant Director

August 29, 2012

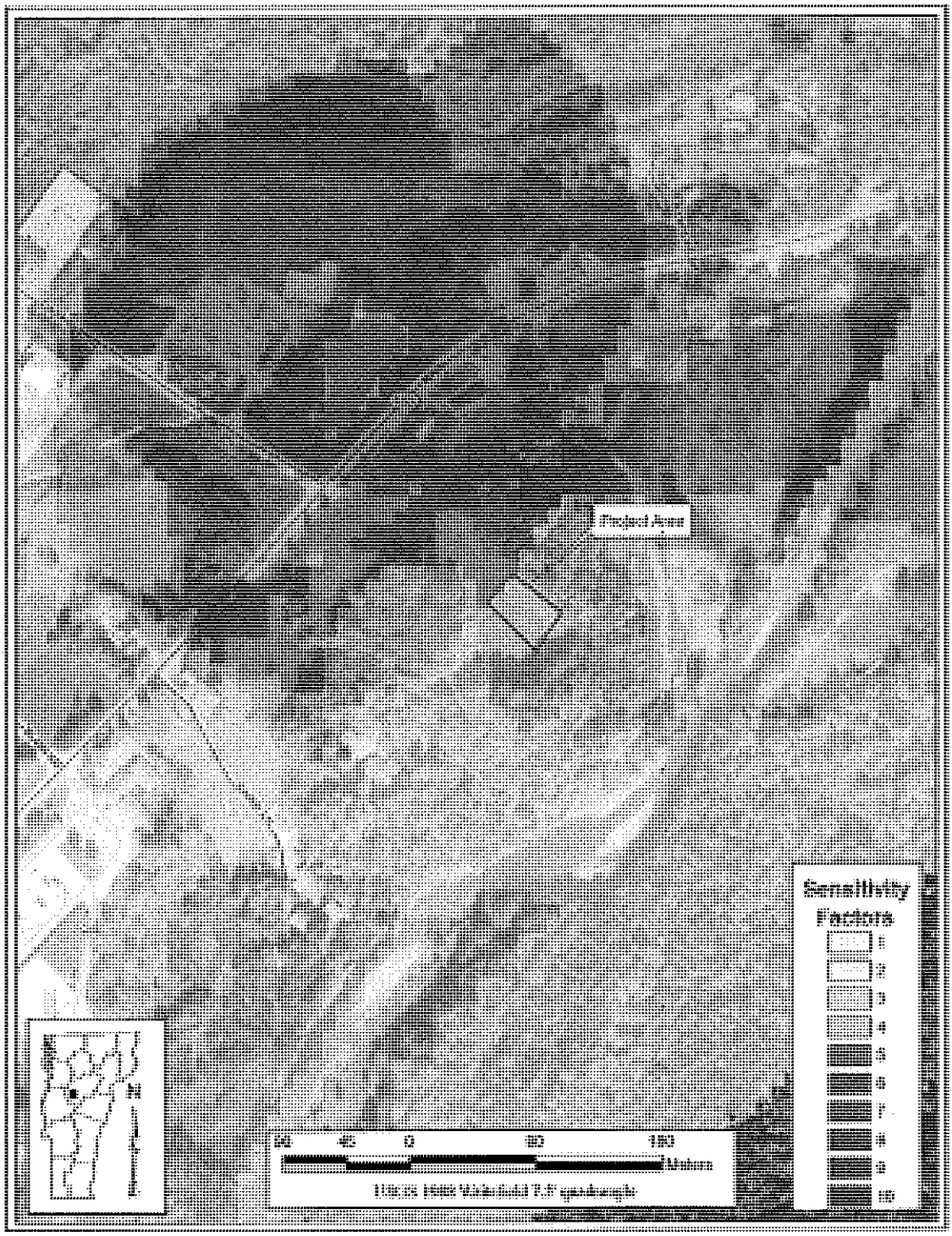

Figure 1. Map showing the location of the proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, and archaeologically sensitive areas, Waitsfield, Washington County, Vermont

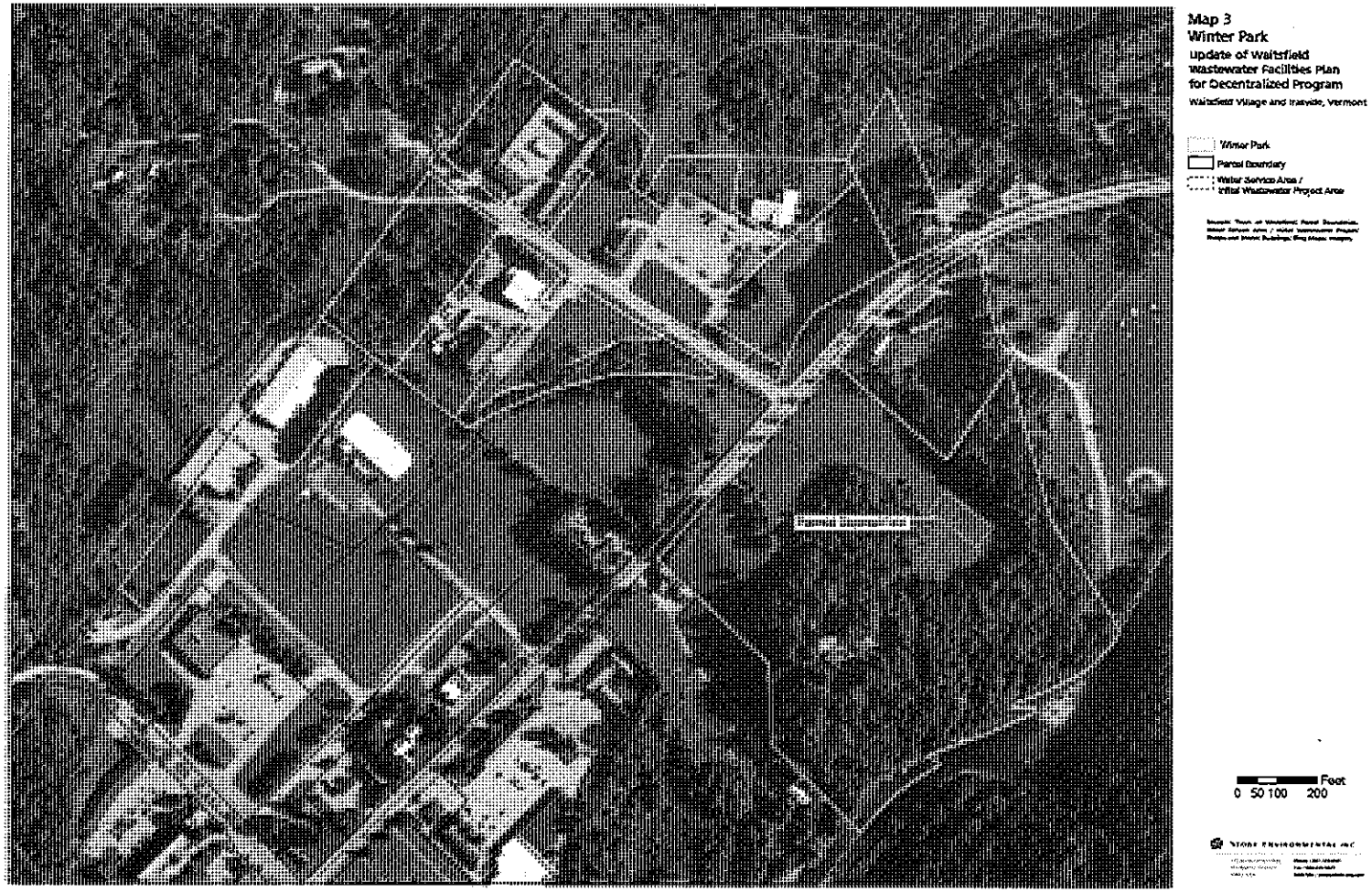

Figure 2. Project map diagramming the layout of the proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, Waitsfield, Washington County, Vermont.

Waitsfield Winter Park Septic System Phase 1 Study, Washington County, VT

Budget Worksheet

	Number	Days	Rate	Cost
Project Administration				
Principal Investigator	1	0.1	328.00	33.00
Background Research/Project Planning				
Research Field Technician	1	0.1	165.00	17.00
Field Work				
Principal Investigator	1	0	328.00	0.00
Research Field Technician	1	2	165.00	330.00
Archaeological Technician 2	2	2	125.00	500.00
Archaeological Technician 1 (temporary)	4	2	100.00	800.00
Laboratory processing and analysis, Cadd drafting				
Staff Assistant 1	1	0.25	173.00	43.00
Archaeological Technician 2	1	1	125.00	125.00
Archaeological Technician 1 (temporary)	1	1	100.00	100.00
Report Writing, Production				
Principal Investigator	1	0.25	328.00	82.00
Research Field Technician	1	1	165.00	165.00
Staff Assistant 1	1	0.25	173.00	43.00
Archaeological Technician 1 (temporary)	1	0	100.00	0.00
Collating of All Previous Water Work				
Principal Investigator	1	0.5	328.00	164.00
Subtotal				2,402.00
Fringe				
Permanent (42.3%)				635.00
Temporary (8.7%)				78.00
Non-Salaried Expenses				
Vehicle Rental and Usage (@45/day and .35/mile)		2	180.00	153.00
Supplies				50.00
Report production and distribution				15.00
Curation @$305/case		1	305.00	305.00
Total				3,638.00
CAP Operating (44%)				1,601.00
UVM IDC (34.5%)				1,807.00
Project Total				**7,046.00**

Appendix G: Phase I Archaeological Resource Assessment for Pilot Project, End-of-Field Letter

DRAFT

The University of Vermont

November 27, 2012

Juli Beth Hinds, AICP
Principal
Birchline Planning LLC

RE: End of Field Letter for Archaeological Phase I Site Identification Survey for the Proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, Waitsfield, Washington County, Vermont

Dear Juli:

From November 15-19, 2012, the University of Vermont Consulting Archaeology Program (UVM CAP) conducted an archaeological Phase I site identification survey within the Area of Potential Effects (APE) for the proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, Waitsfield, Washington County, Vermont (Figure 1). The Town of Waitsfield proposes to construct a septic system that includes a 10k gallons per day (GPD) dispersal field and replacement area. Under good soil conditions and without pre-treatment, this system will cover roughly an acre (assuming two 100'x100' pressurized in-ground beds, each with 5,000 gpd capacity, for the primary system, and double that for the "replacement" system since it must be constructed at the same time as the primary for indirect discharge-permitted systems, plus 10' of separation minimum between fields). This is considered a maximum area of disturbance. The Winter Park system will likely utilize advanced pretreatment equivalent to a recirculating sand filter, or leachfield that could end up being slightly less than half an acre in the best case. An access road may also be required, depending on whether a dosing tank, pumps, etc. on the dispersal field are required.

The University of Vermont Consulting Archaeology Program (UVM CAP) conducted a desk review of the proposed project area and determined that the area is likely archaeologically sensitive. A Phase I site identification survey was recommended. The UVM CAP conducted a Phase I site identification survey as part of the ACT 250 permitting process and no archaeological sites were identified

Results

The archaeological Phase I site identification survey included the excavation of 42, 50 x 50 cm (20 x 20 in) in size, test pits oriented along six linear transects and spaced 5 and 10 m

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apart (Figure 2). Of these, 13 test pits were excavated along two transects (Transects 4 and 6) along the proposed access road alignment, while the rest were excavated within the limits of the proposed septic dispersal field. These test pits were excavated southeast of the existing leach field, and northwest of the terrace edge, which overlooks the Mad River valley.

The project area was an open, fallow field surrounded by woods. All test pits were excavated through a dark gray/brown fine sandy loam Ap horizon (plowzone) that ranged in depth from 21-40 cm below surface, which overlay a dark yellowish brown fine sand B Horizon that extended in depth 21-51 cm below surface. Gravels were encountered throughout the plowzone and the B Horizon. No artifacts of any type were recovered in any of the test pits during the Phase I testing. As a result no significant cultural resources were identified.

Conclusions and Recommendations

The UVM CAP conducted an archaeological Phase I site identification survey for the proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, Waitsfield, Washington County, Vermont. A total of 42 test pits were excavated along six transects within the limits of the proposed dispersal field and the adjoining access road. No archaeological artifacts were recovered during the Phase I testing. As a result, no significant cultural resources will be disturbed by the proposed project and no additional work is recommended.

Please feel free to contact us if you have any questions regarding this study.

Sincerely,

Charles Knight, PhD.
Assistant Director

cc: Scott Dillon - VDHP

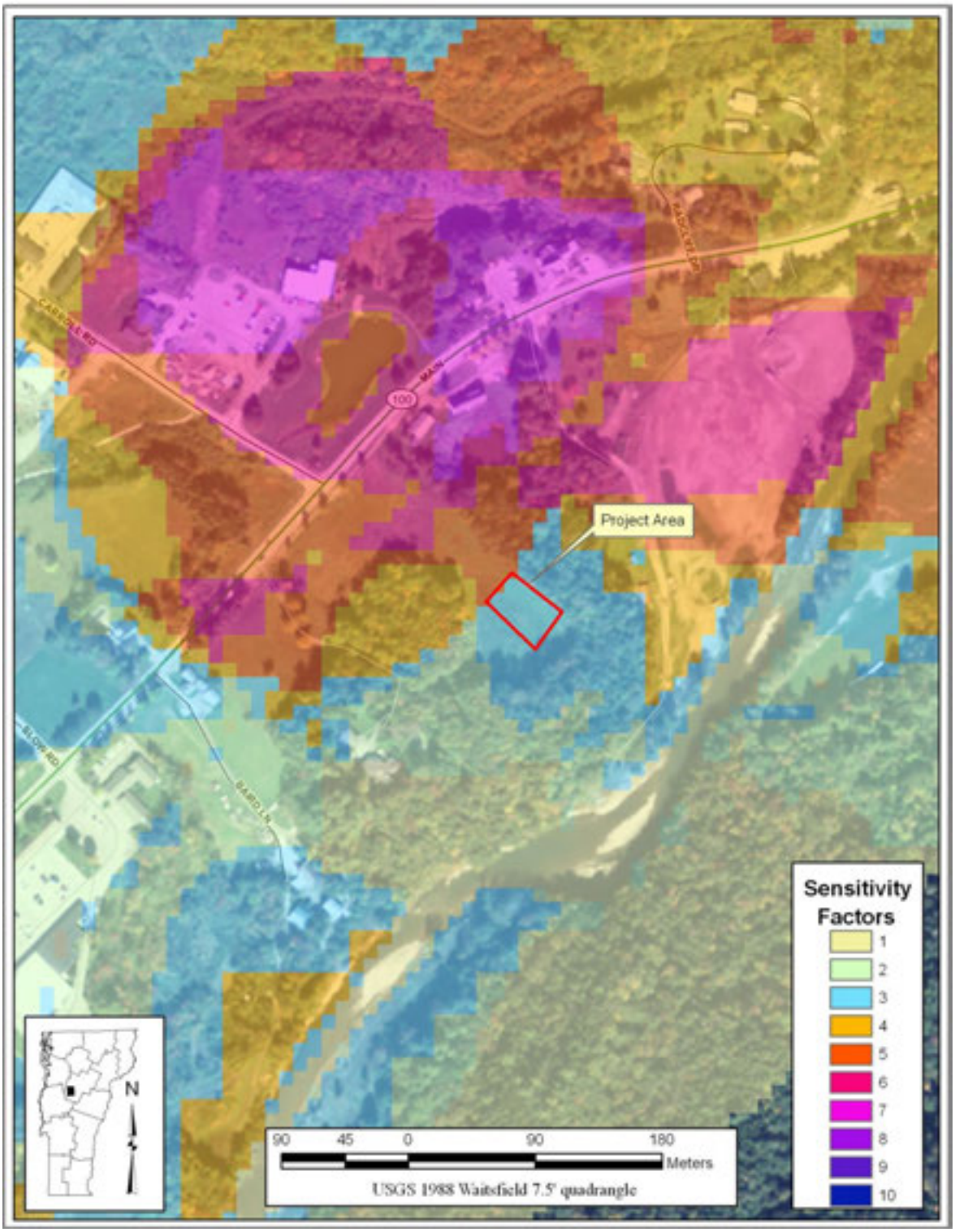

Figure 1. Map showing the location of the proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, in relation to archaeological sensitivity factors, Waitsfield, Washington County, Vermont.

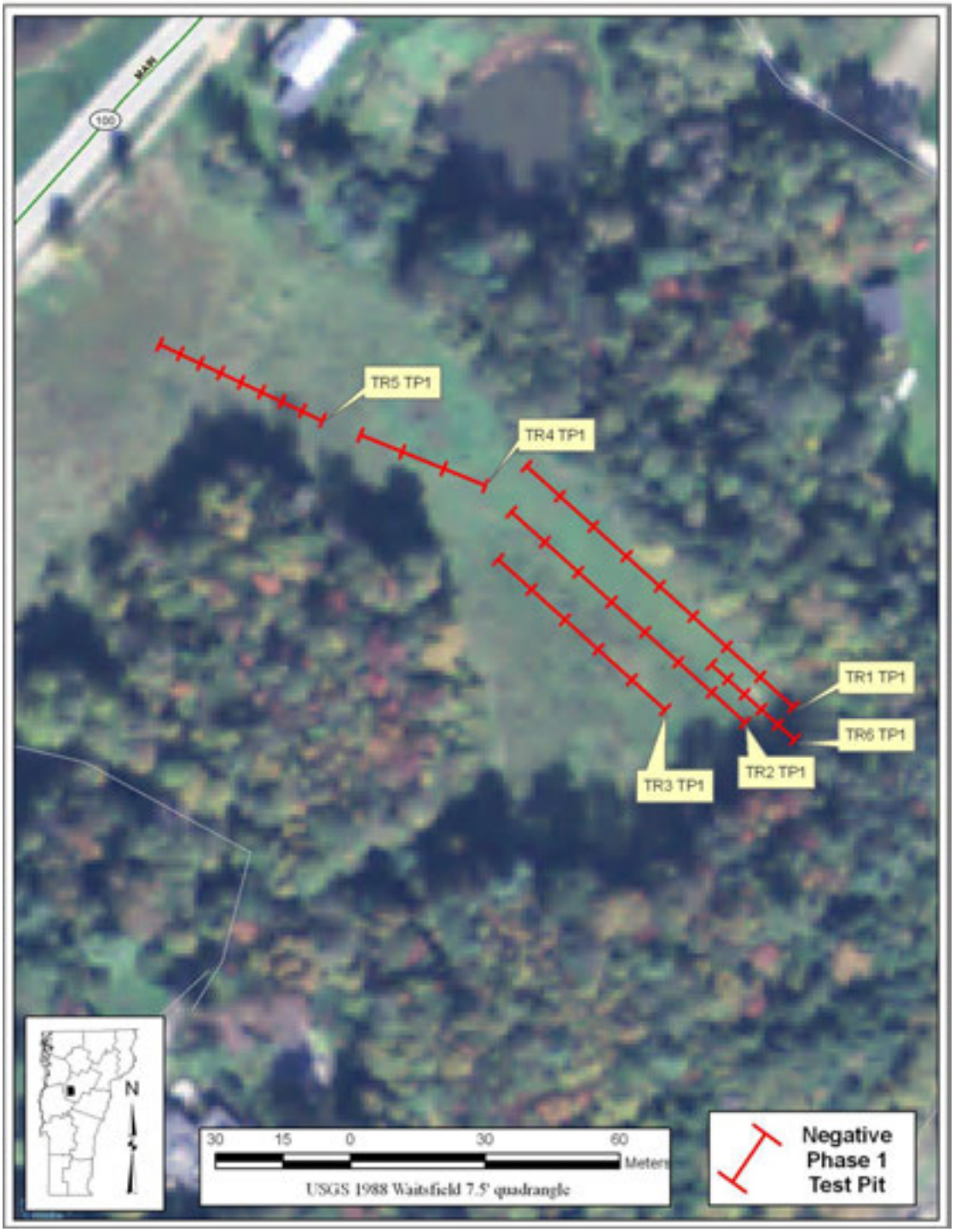

Figure 2. Map showing the location of the Phase I archaeological testing within the limits of the proposed Waitsfield Wastewater Facilities Plan Winter Park System Update, Waitsfield, Washington County, Vermont.