



Vermont Department of Environmental Conservation

Agency of Natural Resources

EC7 Facilities Engineering Division

103 South Main Street, Laundry Bldg
Waterbury, VT 05671-0511

[phone] 802-241-3737
[fax] 802-244-4516

Nancy Robinson, Associate Principal
Authorized Representative
Otter Valley Union High School
2997 Franklin Street
Brandon, Vermont 05733

March 1, 2010

**Re: Wastewater Treatment Facility Renovation
Vermont/ USEPA Clean Water Revolving Loan Fund**

Categorical Exclusion from Detailed Environmental Review

Dear Mrs Robinson:

The Department of Environmental Conservation has determined that Otter Valley's proposed **Wastewater Treatment Facility Renovation** project may be excluded from the detailed environmental review procedures that are required for projects that have significant environmental effects. The Department's environmental review procedures require a **30 day public comment period** following the issuance of a Notice of Determination of Eligibility for Categorical Exclusion. If no public comments received during that period demonstrate that this Determination is in error, then the Categorical Exclusion exempting the project from detailed review will become effective.

Copies of documents supporting a Categorical Exclusion are enclosed. Please keep copies of the **enclosed documents available for public inspection** during a public comment period of 30 days. A full listing of the documents that must be available for public inspection is attached. Please call (241-3740) if you have any questions or concerns.

Sincerely,

Thomas G. Joslin, P.E.
Environmental Engineer
Design Section

TGJ/tgj

Enclosures

Nancy Robinson, Associate Principal, Authorized Representative
Otter Valley Union High School; Brandon, Vermont
Wastewater Treatment Facility Renovation
Categorical Exclusion from Detailed Environmental Review
March 1, 2010

Documents Enclosed for Categorical Exclusion Public Comment Period (30 days)

1. ***"Notice of Determination of Eligibility for Categorical Exclusion"***
(Signed by Larry R. Fitch, P.E., Director, Facilities Engineering Division.)
2. ***"Evaluation of Eligibility for Categorical Exclusion"***
(Approved by Larry R. Fitch, P.E., Director, Facilities Engineering Division.)
3. ***"Environmental Review Procedures for Projects Funded Through the Vermont/EPA Revolving Loan Program"***, also available online at:

http://www.anr.state.vt.us/dec/fed/design/docs/Environmental_Review_Procedures_for_VT-EPA_SRF.htm
4. **Categorical Exclusion** request letter, Otter Valley Union High School
5. **Environmental information document** titled "*Otter Valley Union High School - WWTF Improvements, Project Environmental Information*", and dated **February 18, 2010**, by **Weston & Sampson Engineers, Inc.**, of Waterbury, Vermont.
6. ***"Proposed Site Plan"***, construction contract drawing **C-2**, by **Weston & Sampson Engineers, Inc.**, of Waterbury, Vermont.

Additional Documents Needed for Categorical Exclusion Public Comment Period (30 days)

7. **Facilities plan** titled "*Preliminary Engineering Report, Wastewater Treatment Facility Evaluation, Otter Valley Union High School; Brandon, Vermont*", and dated **April 8, 2009**, by **Weston & Sampson Engineers, Inc.**, of Waterbury, Vermont.

**Nancy Robinson, Associate Principal, Authorized Representative
Otter Valley Union High School; Brandon, Vermont
Wastewater Treatment Facility Renovation
Categorical Exclusion from Detailed Environmental Review
March 1, 2010**

COPY LIST

Michael A. Smith, P.E., Weston & Sampson Engineers, Inc, Waterbury, Vermont

Rick Oberkirch, VT-DEC, Environmental Assistance Office, Rutland Region

David H. Webb, P.E., Engineering and Financial Services Section, VT-DEC, Water Supply Division

Matthew Probasco, Environmental Analyst, Stormwater Section, VT-DEC, Water Quality Division

Alan Quackenbush, State Wetlands Coordinator, Wetlands Section, VT-DEC, Water Quality Division

Everett Marshall, Information Manager, Nongame and Natural Heritage Program, VT Dept of Fish & Wildlife

Chuck Schwer, Chief, Site Management Section, VT-DEC, Waste Management Division

Scott Dillon, Archeologist, Division for Historic Preservation, VT Dept Housing and Community Affairs

Winslow Ladue, Chief, Financial Management Section, VT-DEC, Facilities Engineering Division



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Notice of Determination of Eligibility for Categorical Exclusion

Otter Valley Union High School
Wastewater Treatment Facility Renovation

Vermont/ USEPA Clean Water Revolving Loan Number: To be determined.

In accordance with section VII of the Department's Environmental Review Procedures for Projects Funded Through the Vermont/ EPA Revolving Loan Program, the **Otter Valley Union High School Board of Directors** has requested that its proposed **Wastewater Treatment Facility Renovation** project be evaluated for eligibility for a Categorical Exclusion from the detailed environmental review that is described in the Procedures and required for projects with significant environmental effects.

Consideration of the **Otter Valley Union High School** request for Categorical Exclusion included a review of the following documents:

Environmental information document titled "*Otter Valley Union High School - WWTF Improvements, Project Environmental Information*", and dated **February 18, 2010**, by **Weston & Sampson Engineers, Inc.**, of Waterbury, Vermont.

Facilities plan titled "*Preliminary Engineering Report, Wastewater Treatment Facility Evaluation, Otter Valley Union High School; Brandon, Vermont*", and dated **April 8, 2009**, by **Weston & Sampson Engineers, Inc.**, of Waterbury, Vermont.

Upon completion of its independent evaluation, the Department has determined that the proposed project meets the criteria for issuance of a Categorical Exclusion.

Specifically, the project will not increase the permitted annual average flow (hydraulic) capacity of the existing wastewater treatment facility, and it will not increase permitted pounds of pollutants that may now be discharged to an unnamed brook tributary to Otter Creek. The project will not add a new discharge of treated wastewater to surface waters or groundwater. Further, the project does not involve (create) serious local or environmental issues, or meet any of the criteria that would result in denial of an Exclusion.

Otter Valley Union High School; Brandon, Vermont
Wastewater Treatment Facility Renovation
Evaluation of Eligibility for Categorical Exclusion from Detailed Environmental Review
February 25, 2010

Further information on the project and this Determination is available for inspection at the following locations:

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Otter Valley Union High School
2997 Franklin Street
Brandon, Vermont 05733

telephone (802) 247-6833
nrobinson@rnesu.org

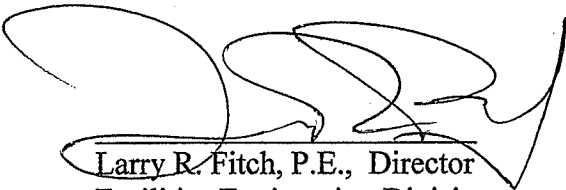
Tom Joslin, P.E.
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No significant administrative action will be taken on this project for thirty (30) days from issuance of this Notice of Determination, to allow for public response.



Larry R. Fitch, P.E., Director
Facilities Engineering Division

 Feb 26, 2010
Date

Department of Environmental Conservation
Vermont Agency of Natural Resources



Vermont Department of Environmental Conservation

Agency of Natural Resources

EC7 Facilities Engineering Division

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TO: Larry Fitch, Director, Facilities Engineering Division *J Concurrence. JF 2/26/10*

FROM: *165* Tom Joslin, Environmental Engineer, Design Section, Facilities Engineering Division

SUBJECT: **Otter Valley Union High School
Wastewater Treatment Facility Renovation**

**Evaluation of Eligibility for Categorical Exclusion
from Detailed Environmental Review**

DATE: February 25, 2010

A. Project Identification

Project Name: Otter Valley Union High School
Wastewater Treatment Facility Renovation

Address: Nancy Robinson, Associate Principal
Authorized Representative
Otter Valley Union High School
2997 Franklin Street
Brandon, Vermont 05733

Project Location: Wastewater Treatment Facility
2997 Franklin Street, Brandon, Vermont

Vermont/ USEPA Clean Water Revolving Loan Number: **To be determined.**

**Otter Valley Union High School; Brandon, Vermont
Wastewater Treatment Facility Renovation
Evaluation of Eligibility for Categorical Exclusion from Detailed Environmental Review
February 25, 2010**

B. Summary of Environmental Review

In accordance with section VII of the Department's Environmental Review Procedures for Projects Funded Through the Vermont/ EPA Revolving Loan Program, **the Otter Valley Union High School Board of Directors** has requested that its proposed **Wastewater Treatment Facility Renovation** project be evaluated for eligibility for a Categorical Exclusion from the detailed environmental review that is described in the Procedures and required for projects with significant environmental effects.

The applicant's request, along with the following planning documents, have been reviewed, and our findings are summarized below:

Environmental information document titled "*Otter Valley Union High School - WWTF Improvements, Project Environmental Information*", and dated **February 18, 2010**, by **Weston & Sampson Engineers, Inc.**, of Waterbury, Vermont.

Facilities plan titled "*Preliminary Engineering Report, Wastewater Treatment Facility Evaluation, Otter Valley Union High School; Brandon, Vermont*", and dated **April 8, 2009**, by **Weston & Sampson Engineers, Inc.**, of Waterbury, Vermont.

1. Project Description

Otter Valley Union High School (OVUHS) is located in **Rutland County**, Vermont. The existing OVUHS wastewater treatment plant is located on the high school property on the west side of U.S. Route 7, about three miles south of the center of Brandon village.

The treatment plant includes an influent screening manhole immediately outside the southwest corner of the high school main building, but most of the plant is located several hundred feet southwest of the high school building. Other treatment structures include two concrete tanks (super primary aerated lagoons), an operating building (housing a clarifier and mixed media filter), buried sludge storage tank, buried chlorine contact/ effluent storage tank, and a dechlorination/ effluent monitoring building. An outfall pipe conveys treated effluent to an unnamed brook that is tributary to Otter Creek.

The dechlorination/ effluent monitoring building was added recently (December 2008), but otherwise the treatment plant has seen little modification

Otter Valley Union High School; Brandon, Vermont
Wastewater Treatment Facility Renovation
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since its original construction in 1976. In most cases, the process equipment is at or near the end of its useful life.

The proposed project will renovate or replace the existing treatment equipment but will not change the existing overall treatment process. The project will not increase the plant's current 25,000 gallons per day permitted annual average discharge capacity or its design organic treatment capacity.

The project will be implemented under a single construction contract. The contract documents will contain standard requirements to limit hours of construction and to control noise, dust and discharges of stormwater runoff or pollutants during construction.

2. Justification for Categorical Exclusion

We have determined that the proposed project meets the criteria for issuance of a Categorical Exclusion.

Specifically, the project will not increase the **design hydraulic** capacity of the **OVUHS** wastewater treatment plant by more than 20 percent, and it will not increase the design **organic** treatment capacity (**equivalent population served**) by more than 30 percent.

The project will **not** create a **new discharge** to surface waters or groundwater, and there will be **no increase** of permitted effluent **pollutant loadings** (pounds per day).

The existing wastewater plant is located within the **groundwater source protection area** of the artesian well that serves OVUHS, but the project will not discharge to groundwater, and any new buried yard piping will be securely joined by mechanical, heat fused or solvent welded joints, in order to minimize the potential for leakage of sewage or chemicals into the groundwater.

The project is not expected to adversely affect wetlands, wetlands buffer zones, floodplains, historic sites, archeological sites, habitats of threatened or endangered species, or other environmentally or culturally sensitive areas.

The project does not involve (create) serious local or environmental issues, or meet any of the criteria that would result in denial of an Exclusion.

Vermont Department of Environmental Conservation
Facilities Engineering Division

Environmental Review Procedures for
Projects Funded Through the
Vermont/EPA Revolving Loan Program

I. Purpose and Policy

- a. Section 602(b)(6) of Title VI of the Federal Clean Water Act requires that states have an environmental review process for Title VI projects. This process can be the same as that applied to Title II projects under the National Environmental Policy Act (NEPA) or can be modified if the intent of NEPA is met. The State of Vermont, Department of Environmental Conservation (VT DEC) provides state grant funds to projects under Title II and Title VI and applies the NEPA process to Title II projects. It is our intent to apply substantially the same process to Title VI projects. A statement of the process follows.

II. Definitions

- a. Terminology. All terminology used in this part will be consistent with the terms as defined in 40 CFR Part 1508 (the CEQ Regulations). Any qualifications will be provided in the definitions set forth in each subpart of the procedure.
- b. The term "environmental review" means the process whereby an evaluation is undertaken by the VT DEC to determine whether a proposed project may have a significant impact on the environment and therefore require the preparation of an EIS.
- c. The term "environmental information document" means any written analysis prepared by an applicant or contractor describing the environmental impacts of a proposed project. This document will be of sufficient scope to enable the responsible official to assess the environmental impacts of the proposed project.
- d. The term "loan" means a loan of funds by a written loan agreement from the VT/EPA Revolving Loan Fund (SRF).
- e. "Applicant" means any local authority which has filed an application for loan assistance from the SRF.
- f. "Responsible official" means the Director, VT Public Facilities Division, or a designated representative thereof, who is authorized to fulfill the requirements of these procedures.
- g. The term "record of decision" (ROD) means a document prepared and issued by the VT DEC responsible official on the environmental impact statement which includes an identification of mitigation measures.
- h. The term "planning/design loan" means a loan which is issued for the purpose of preparation of a plan (including environmental review process) and/or preparation of design drawings

and specifications for a potential construction project.

- i. The term "project" means a construction project which receives a loan for the purpose of building a publicly owned treatment works.

III. Applicability

These procedures apply to all construction projects funded wholly or partly from funds within the VT/EPA Revolving Loan Fund which are derived from the federal capitalization grant, except as provided in Section IV. These procedures may be carried out during the planning/design project which received a loan from the revolving fund.

IV. Overview of the Environmental Review Process

The process for conducting an environmental review of wastewater facility construction projects includes the following steps:

- a. Consultation. The applicant is encouraged to consult with VT DEC early in project formulation or the facilities planning stage to determine whether a project is eligible for a categorical exclusion from the remaining substantive environmental review requirements of these procedures, to determine alternatives to the proposed project for evaluation, to identify potential environmental issues and opportunities for public recreation and open space, and to determine the potential need for partitioning the environmental review process and/or the need for an Environmental Impact Statement (EIS).
- b. Determining categorical exclusion eligibility. At the request of an applicant, VT DEC will determine if a project is eligible for a categorical exclusion as described in Section VII of these procedures.
- c. Documenting environmental information. If the project is determined to be ineligible for a categorical exclusion, or if no request for a categorical exclusion is made, the potential applicant subsequently prepares an Environmental Information Document (EID) for the project.

In the event that the proposed action is of a limited nature, but does not qualify for a categorical exclusion, and that an EID has been approved previously by the US EPA or VT DEC for wastewater facilities, the responsible official may determine to what extent updated information may suffice to provide the requisite environmental review of the project.

- d. Assessing environmental impacts. The VT DEC reviews the environmental information document and based upon an assessment of the environmental impacts of the proposed project, the VT DEC:
 1. Prepares and issues a Finding of No Significant Impact (FNSI); or
 2. Prepares and issues a Notice of Intent to prepare an original or supplement EIS and Record of Decision (ROD).
- e. Monitoring. The construction and post-construction operation and maintenance of the facilities are monitored to ensure implementation of mitigation measures identified in the FNSI or ROD.

V. Consulting During the Facilities Planning Process

The responsible official shall initiate the environmental review process early to identify environmental effects, avoid delays, and resolve conflicts. The environmental review process should be integrated throughout the facilities planning process. Potential applicants should consult with VT DEC early in the facilities planning process to determine the appropriateness of a categorical exclusion, the scope of an Environmental Assessment, or the appropriateness of the early preparation of an Environmental Impact Statement (EIS). The consultation would be most useful during the evaluation of project alternatives prior to the selection of a preferred alternative to assist in resolving any identified environmental problems.

VI. Coordination With Other Environmental Review and Consultation Requirements

Various state and federal laws and executive orders address specific environmental concerns and review procedures. The responsible official shall integrate to the greatest practicable extent those concerns and applicable procedures during implementation of the environmental review process to ensure an interdisciplinary approach to assessing impacts including adherence to other state and federal environmental objectives. Coordination shall be implemented early with the State Clearinghouse Review Process.

Referenced below are pertinent laws, regulations, or executive orders which should be included in this coordinated effort:

- a. Landmarks, historical, and archaeological sites
 - 1. Historic Sites Act;
 - 2. National Historic Preservation Act;
 - 3. Archaeological and Historic Preservation Act;
 - 4. Executive Order 11593, "Protection and Enhancement of the Cultural Environment;"
 - 5. Executive Order 12372, "Intergovernmental Review of Federal Programs;"
- b. Wetlands, floodplains, important farmlands, coastal zones, wild and scenic rivers, fish and wildlife, and endangered species.
 - 1. Executive Order 11990, "Protection of Wetlands;"
 - 2. Executive Order 11988, "Floodplain Management;"
 - 3. Farmland Protection Policy Act;
 - 4. EPA Policy to Protect Environmentally Significant Agricultural Lands, September 8, 1978;
 - 5. Coastal Zone Management Act;
 - 6. Wild and Scenic Rivers Act;

7. Fish and Wildlife Coordination Act; and
8. Endangered Species Act.

c. Air Quality-Clean Air Act, as amended in 1977.

VII. Categorical Exclusions

a. At the request of an applicant, the responsible official shall determine from existing information and documents whether an action is consistent with the categories eligible for exclusion from review identified in VII (b) and not inconsistent with the criteria in VII (c).

b. Categories of actions eligible for exclusion. For these procedures actions consistent with any of the following categories are eligible for a categorical exclusion:

1. Actions for which the facilities planning is solely directed toward minor rehabilitation of existing facilities, functional replacement of equipment, or toward the construction of new ancillary facilities adjacent or appurtenant to existing facilities which do not affect the degree of treatment or capacity of the existing facility by more than 20%. Such actions include, but are not limited to, infiltration and inflow corrections, replacement of existing facility, equipment or structures, and the construction of additional treatment structures on existing sites.
2. Actions in communities of less than 10,000 persons which are for minor upgrading and minor expansion of existing treatment works or collection lines, or for on-site disposal systems.
3. Other actions developed in accordance with paragraph (d) of this section.

c. Criteria for not granting a categorical exclusion.

1. The full environmental review procedures must be followed if undertaking an action consistent with the categories described in paragraph (b) may involve serious local or environmental issues, or meets any of the criteria listed below:
 - a. The facilities to be provided will create a new discharge to surface or groundwater;
 - b. The facilities will result in substantial increases in the volume of discharge or the loading of pollutants from an existing source or from new facilities to receiving waters;
 - c. The facilities would provide capacity to serve an equivalent population 30% greater than the existing equivalent population;
 - d. The action is known or expected to have a significant negative effect on the quality of the human environment, either individually, cumulatively over time, or in conjunction with other federal, state, local, or private actions;

- e. The action is known or expected to directly or indirectly affect: (1) cultural resource areas such as archaeological and historic sites, (2) habitats of endangered or threatened species, (3) environmentally important natural resource areas such as floodplains, wetlands, important farmlands, aquifer recharge zones, or (4) other resource areas identified in supplemental guidance issued by the VT DEC; or
 - f. The action is known or expected not to be cost-effective or to cause significant public controversy.
2. Notwithstanding the provisions of paragraph (b), if any of the above conditions exist, the responsible official shall ensure:
- a. That a categorical exclusion is not granted or, if previously granted, that it is revoked according to paragraph e2(c) of this part;
 - b. That either a FNSI or an EIS and ROD are prepared and issued.
- d. Developing new categories of excluded actions. The responsible official or other interested parties may request that a new category of excluded actions be created, or that an existing category be amended or deleted. The request shall be made in writing to the Director, and shall contain adequate information to support the request. Proposed new categories shall be developed by VT DEC. The following shall be considered in evaluating proposals for new categories:
- 1. Actions in the proposed category should seldom result in the effects identified in Paragraph VIII.(c)(1);
 - 2. Based upon previous environmental reviews, actions consistent with the proposed category have not required the preparation of an EIS; and
 - 3. Whether information adequate to determine if a potential action is consistent with the proposed category will normally be available when needed.
- e. Proceeding with loan agreements.
- 1. After a categorical exclusion on a proposed treatment works has been granted, and notices published, loan agreements may proceed without being subject to any further environmental review requirements, unless the responsible official determines that the project, or the conditions at the time of the categorical determination was made, have changed significantly since the independent VT DEC review of information submitted by the applicant in support of the exclusion.
 - 2. For categorical exclusion determinations five or more years old, the responsible official shall re-evaluate the project, environmental conditions and public views, and prior to a loan agreement, either:
 - a. Reaffirm--issue a public notice reaffirming the original environmental determination to proceed with the project without need for any further environmental review;
 - b. Supplement--update the information in the decision document on the

categorically excluded project and prepare, issue, and distribute a revised notice; or

- c. Reassess--revoke the categorical exclusion and require a complete environmental review to determine the need for an EIS, followed by preparation, issuance, and distribution of a FNSI, or EIS and ROD.

VIII. Environmental Review Process

- a. Review of completed facilities plans. VT DEC shall review the completed facilities plan with particular attention to the Environmental Information Document (EID) and its utilization in the development of alternatives and the selection of a preferred alternative. An adequate Environmental Information Document shall be an integral part of any facilities plan submitted to Vermont DEC. The EID shall be of sufficient scope to enable the responsible official to make determinations on requests for partitioning the environmental review process and for preparing a FNSI.
- b. Environmental assessment. The environmental assessment process shall cover all potentially significant environmental impacts. VT DEC personnel shall assess environmental impacts before the facilities plan approval if needed for compliance with environmental review requirements. Each of the following subjects, and requirements, shall be included in the EID so that Vermont DEC personnel may objectively identify potentially significant environmental concerns and the potential impacts.
 1. Description of the existing environment. For the delineated facilities planning area, the existing environmental conditions relevant to the analysis of alternatives, or to determining the environmental impacts of the proposed action, shall be considered.
 2. Description of the future environment without the project. The relevant future environmental conditions shall be described. The no action alternative should be discussed.
 3. Purpose and need. This should include a summary discussion and demonstration of the need, or absence of need, for wastewater facilities in planning area, with particular emphasis on existing public health or water quality problems and their severity and extent.
 4. Documentation. Sources of information used to describe the existing environment and to assess future environmental impacts should be clearly referenced. These sources should include regional, state, and federal agencies with responsibility or interest in the environmental concerns.
 5. Analysis of alternatives. This discussion shall include a comparative analysis of feasible alternatives, including the no action alternative, throughout the study area. The alternatives shall be screened with respect to capital and operating costs; direct, indirect, and cumulative environmental effects; physical, legal, or institutional constraints; and compliance with regulatory requirements. Special attention should be given to: The environmental consequences of long-term, irreversible, and induced impacts; and that applicants have satisfactorily demonstrated analysis of potential recreation and open-space opportunities in the planning of the proposed treatment works. The reasons for rejecting any alternatives shall be presented in addition to any

significant environmental benefits precluded by rejection of an alternative. The analysis should consider when relevant to the project:

- a. Flow and waste reduction measures, including infiltration/flow reduction and pretreatment requirements.
 - b. Appropriate water conservation measures;
 - c. Alternative locations, capacities, and construction phasing of facilities;
 - d. Alternative waste management techniques, including pretreatment, treatment and discharge, wastewater reuse, land application, and individual systems;
 - e. Alternative methods for management of sludge, other residual materials, including utilization options such as land application, composting, and conversion of sludge for marketing as a soil conditioner or fertilizer.
 - f. Improving effluent quality through more efficient operation and maintenance;
 - g. Appropriate energy reduction measures; and
 - h. Multiple use including recreation, other open space, and environmental education.
6. Evaluating environmental consequences of proposed action. A full range of relevant impacts of the proposed action shall be discussed, including measures to mitigate adverse impacts, any irreversible or irretrievable commitments of resources to the project and the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity. Any specific requirements, including loan conditions and area wide waste treatment management plan requirements, should be identified and referenced. In addition to these items, the responsible official may require environmental review requirements be included with the facilities plan. Such requirements should be discussed whenever meetings are held with applicants.
7. Minimizing adverse effects of the proposed action.
 - a. Structural and nonstructural measures, directly or indirectly related to the facilities plan, to mitigate or eliminate adverse effects on the human and natural environments, shall be identified during the environmental review. Among other measures, structural provisions include changes in facility design, size, and location; nonstructural provisions include staging facilities, monitoring and enforcement of environmental regulations, and local commitments to develop and enforce land use regulations.
 - b. The Vermont DEC shall not accept a facilities plan, nor approve loan assistance for its implementation, if the applicant has not made, or agreed to make, changes in the project, in accordance with determinations made in a FNSI or the ROD for a EIS. The Vermont DEC shall condition a loan or seek other ways to ensure that the applicant will comply with such environmental

review determinations.

- c. FNSI/EIS determination. The responsible official shall apply the criteria under Section XI to the following:

1. A complete facilities plan;
2. The EA; and
3. Other documentation deemed necessary by the responsible official adequate to make an EIS determination by Vermont DEC. Following an independent environmental review of the project, the responsible official shall document

in writing the reasons for his determination to issue a FNSI or to prepare an EIS. The responsible official's determination to issue a FNSI or to prepare an EIS shall constitute final Vermont DEC action.

IX. Partitioning the Environmental Review Process

- a. Purpose. Under certain circumstances, the building of a component/portion of a wastewater treatment system may be justified in advance of completing all environmental review requirements for the remainder of the system(s). When there are overriding considerations of cost or impaired program effectiveness, the responsible official may approve a loan for a discrete component of a complete wastewater treatment system(s). The process of partitioning the environmental review for the discrete component shall comply with the criteria and procedures described in paragraph (b) of this section. In addition, all reasonable alternatives for the overall wastewater treatment works system(s) of which the component is a part shall have been previously identified and each part of the environmental review for the remainder of the overall facilities plan shall comply with all requirements under Section VIII.

- b. Criteria for partitioning. The project component must:

1. Immediately remedy a severe public health, water quality, or other environmental problem;
2. Not foreclose any reasonable alternatives identified for the overall wastewater treatment works system(s);
3. Not cause significant adverse direct or indirect environmental impacts including those which cannot be acceptably mitigated without completing the entire wastewater treatment system of which the component is a part; and
4. Not be highly controversial.

- c. Request for partitioning. The applicant's request for partitioning must contain the following:

1. A description of the discrete component proposed for construction before completing the environmental review of the entire facilities plan;

2. How the component meets the above criteria;
 3. The environmental information required by Section VIII for the component; and
 4. Any preliminary information that may be important to Vermont DEC in an EA determination for the entire facilities plan.
- d. Approval of requests for partitioning. The responsible official shall:
1. Review the request for partitioning against all requirement of this procedure;
 2. If approvable, prepare and issue a FNSI;
 3. Include a loan condition prohibiting the building of additional or different components of the entire facilities plan for which the environmental review is not complete.

X. Finding of no Significant Impact (FNSI) Determination

- a. Criteria for producing and distributing a FNSI. If, after completion of the environmental review, Vermont DEC determines that an EIS will not be required, the responsible official shall issue a FNSI. The FNSI will be based on Vermont DEC independent review of the EID and any other environmental information deemed necessary by the responsible official consistent with the requirements of Section VIII. The FNSI shall list mitigation measures necessary to make the recommended alternative environmentally acceptable.
- b. Proceeding with loan agreement.
 1. Once the issued FNSI becomes effective for the facilities plan for the study area, a loan agreement may proceed without preparation of an additional FNSI, unless the responsible official determines that the project or environmental conditions have changed significantly from that which underwent environmental review.
 2. For an Environmental Assessment/FNSI five or more years old, the responsible official shall re-evaluate the project, environmental conditions, and public views, and, prior to approval of loan agreement, either:
 - a. Reaffirm--issue a public notice reaffirming the original environmental determination to proceed with the project without revising the Environmental Assessment;
 - b. Supplement--require an update of the Environmental Assessment, issue and distribute a revised FNSI; or
 - c. Reassess--withdraw the FNSI and publish a notice of intent to produce an Environmental Assessment, followed by the preparation, issuance, and distribution of the Environmental Assessment and ROD.

c. Revisions to the Project.

1. Statement of Findings. If the project scope of work is revised after FNSI has been issued, but the revision is determined by the VT DEC to be a minor revision, the VT DEC shall issue a Statement of Findings (SOF) documenting the reason for the revision and its impact, if any, on the environment. The SOF shall be distributed to parties who previously indicated interest in the project environmental review process.
2. Amendment. If the project scope of work is revised after a FNSI has been issued, but the revision is determined by the DEC to be significant, the DEC shall issue an amendment to the FNSI with proper public notification as identified in Section XV and shall provide for a public meeting to discuss the amendment.

XI. Criteria for Initiating Environmental Impact Statements (EIS)

- a. Conditions requiring an EIS. The responsible official shall assure that an EIS will be prepared and issued when it is determined that the treatment works or collector system will cause any of the conditions to exist, or when:
 - b. The project may significantly affect the pattern and type of land use (industrial, commercial, agricultural, recreational, residential) or growth and distribution of population;
 - c. The effects resulting from any structure or facility constructed or operated may conflict with local, regional, or state land use plans or policies;
 - d. The project may have significant adverse effects on wetlands, including indirect and cumulative effects, or any major part of the project may be located in significant wetlands;
 - e. The project may significantly affect a habitat identified on the Department of the Interior' or the state's threatened and endangered species lists, or may be located in the habitat;
 - f. Implementation of the project may directly cause or induce charges that significantly:
 1. Displace population;
 2. Alter the character of existing residential areas;
 3. Adversely affect a floodplain; or
 4. Adversely affect significant amounts of important farmlands or agricultural operations on this land.
 - g. The project may directly, indirectly, or cumulative have significant adverse effects on parklands, preserves, other public land, or areas of recognized scenic, recreational,

archaeological, or historic value;

- h. The project may directly, or through induced development, have a significant adverse effect upon local ambient air quality, local ambient noise levels, surface water or groundwater quality or quantity, water supply, fish, shellfish, wildlife, and their natural habitats;
- i. The treated effluent is being discharged into a body of water where the present classification is too lenient or is being challenged as too low to protect present or recent uses, and the effluent will not be of sufficient quality or quantity to meet the requirements of these uses; or
- j. Other conditions. The responsible official shall also consider preparing an EIS if: the project is highly controversial; the project, in conjunction with related federal, state, or local resource projects, produces significant cumulative impacts; or if it is determined that the treatment works may violate federal, state, or local laws or requirements imposed for the protection of the environment.

XII. Environmental Impact Statement (EIS) Preparation

- a. Steps in preparing the EIS. In addition to the other requirements specified in this procedure, the responsible official will conduct the following activities:
 - 1. Notice of intent. If a determination is made that an EIS will be required, the responsible official shall prepare and distribute a notice of intent.
 - 2. Scoping. As soon as possible, after the publication of the notice of intent, the responsible official will convene a meeting of affected federal, state, and local agencies, the applicant and other interested parties to determine the scope of the EIS. As part of the scoping meeting, VT DEC will, as a minimum:
 - a. Determine the significance of issues for and the scope of those significant issues to be analyzed in depth in the EIS;
 - b. Identify potential cooperating agencies and determine the information or analyses that may be needed from cooperating agencies or other parties;
 - c. Discuss the method for EIS preparation and the public participation strategy;
 - d. Identify consultation requirements of other environmental laws; and
 - e. Determine the relationship between the EIS and the completion of the facilities plan and any necessary coordination arrangements between the preparers of both documents.
 - 3. Identifying and evaluating alternatives. Immediately following the scoping process, the responsible official shall commence the identification and evaluation of all potentially viable alternatives to adequately address the range of issues identified in the scoping process. Additional issues may be

addressed, or others eliminated, during this process and the reasons documented as part of the EIS.

- b. Method for preparing EIS. After Vermont DEC determines the need for an EIS, it shall select one of the following methods for its preparation:
 - 1. By Vermont DEC contracting directly with a qualified consulting firm;
 - 2. By utilizing a third party method whereby the responsible official enters into "third party agreements:" for the applicant to engage and pay for the services of a third party to prepare the EIS. Such agreement shall not be initiated unless both the applicant and the responsible official agree to its creation. A third party agreement will be established prior to the applicant's EID and eliminate the need for the comment. In proceeding under the third party agreement, the responsible official shall carry out the following practices:
 - a. In consultation with the applicant, choose the third party contractor and manage that contract;
 - b. Select the consultant based on ability and absence of conflict of interest. Third party contractors will be required to execute a disclosure statement prepared by the responsible official signifying they have no financial or other conflicting interest in the outcome of the project; and
 - c. Specify the information to be developed and supervise the gathering, analysis, and presentation of the information. The responsible official shall have sole authority for approval and modification of the statements, analyses, and conclusion included in the third party EIS.

XIII. Record of Decision (ROD) for the EIS and Identification of Mitigation Measures

- a. Record of Decision. After a final EIS has been issued, the responsible official shall prepare an issue a ROD prior to, or in conjunction with, the approval of the facilities plan. The ROD shall include identification of mitigation measures derived from the EIS process including loan conditions which are necessary to minimize the adverse impacts of the selected alternative.
- b. Specific mitigation measures. Prior to the approval of a facilities plan, the responsible official must ensure that effective mitigation measures identified in the ROD will be implemented by the applicant. This should be done by revising the facilities plan, initiating other steps to mitigate adverse effects, or including conditions in loans requiring actions to minimize effects. Care should be exercised if a condition is to be imposed in a loan document to assure that the applicant possesses the authority to fulfill the conditions.
- c. Proceeding with loan agreements.
 - 1. Once the ROD has been prepared on the selected or preferred alternative(s) for the facilities plan described within the EIS, loan agreements may proceed without preparation of a supplemental EIS unless the responsible official determines that the project or the environmental conditions described within

the current EIS have changed significantly from the previous environmental review.

2. For EISs five or more years old, the responsible official shall re-evaluate the project, environmental conditions, and public views, and compare them to the information contained within the EIS and, prior to loan agreement, make a determination to either:
 - a. Reaffirm--prepared, issue, and distribute a FNSI affirming the original environmental determination to proceed with the project, and documenting that no additional significant impacts were identified during the re-evaluation which would require supplementing the EIS; or
 - b. Supplement--conduct additional studies and prepare, issue, and distribute a supplemental EIS and document the original or any revised decision in an addendum to the ROD.

XIV. Monitoring for Compliance

- a. General. The responsible official shall ensure adequate monitoring of mitigation measures and other loan conditions identified in the FNSI or ROD.
- b. Enforcement. If the applicant fails to comply with loan conditions, the responsible official may consider applying the following sections:
 1. withhold payment
 2. suspend or terminate the loan agreement for cause
 3. suspend the applicant as an eligible applicant
 4. take other appropriate administrative action or
 5. institute judicial proceedings

XV. Public, Federal Agency, and Other State Agency Involvement

- a. The VT DEC shall make diligent efforts to involve the public in the environmental review process consistent with program statutes, regulations and State Clearinghouse for Intergovernmental Review policies on public participation. The responsible official shall ensure that public notice is provided and shall ensure that public involvement is carried out following state policies and guidelines on public participation.

General. Consistent with state public participation regulations, it is VT DEC policy that certain public participation steps be achieved before the VT DEC completes the environmental review process. As a minimum, for projects not qualifying for a categorical exclusion, potential applicants shall conduct:

1. One public meeting when alternatives have been developed, but before an alternative has been selected, to discuss all alternatives under consideration and the reasons for rejection of others; and
2. One public hearing prior to formal adoption of a facilities plan to discuss the

proposed facilities plan and any needed mitigation measures. In the event that a full-scale facilities plan is not prepared, or an existing facilities plan is amended because the proposed action is determined to be of a limited nature, the responsible official may approve the substitution of a public meeting with appropriate public notice instead of a public hearing for this requirement.

- b. Publication of notices of intent. As soon as practicable after a decision is rendered to issue a categorical exclusion or FNSI, or to prepare an EIS (but before initiating the process), the responsible official shall send the notice of intent to interested and affected members of the public, and shall publish the notice of intent in a newspaper of general circulation in the community of the project.

The responsible official shall not take administrative action on the project for at least thirty (30) calendar days after release of the notice of determination on the categorical exclusion or release of the FNSI to allow time for public response.

- c. Record of Decision. The responsible official shall disseminate the record of decision to those parties which commented on the draft of final EIS. One copy shall be submitted to EPA.
- d. EIS. The responsible official shall follow, as applicable, procedures identified at 40 CFR, Part 6, Subpart B, for official filing requirements, availability of documents, commenting process, and supplements to the EIS.
- e. Scope. The responsible official may institute additional NEPA-related public participation procedures as are deemed necessary during the environmental review process.

XVI. The Environmental Impact Statement Format

Preparers of EIS must use plain language and may use appropriate graphics so that decision makers and the public can readily understand them. Statements shall be based upon the analyses and supporting data from the natural and social sciences and the environmental design. The format used for the EIS shall encourage good analysis and clear presentation of alternatives, including the proposed action, and their environmental, economic, and social impacts. The following standard format for EISs should be used unless the responsible official determines that there is a compelling reason to do otherwise:

- a. Cover Sheet;
- b. Executive Summary;
- c. Table of Contents;
- d. Purpose of and need for action;
- e. Alternatives including proposed action;
- f. Affected environment;

- g. Environmental consequences of the alternative;
- h. Coordination (includes list of agencies, organizations, and persons to whom copies of the EIS are sent);
- i. List of preparers;
- j. Index (commensurate with complexity of EIS);
- k. Appendices.

XVII. Executive Summary

The executive summary shall describe in sufficient detail (10-15 pages) the critical facets of the EIS so that the reader can become familiar with the proposed project or action and its net effects. The executive summary shall focus on:

- a. The existing problem;
- b. A brief description of each alternative evaluated (including the preferred and no action alternatives) along with a listing of the environmental impacts, possible mitigation measures relating to each alternative, and any areas of controversy (including issues raised by governmental agencies and the public); and
- c. Any major conclusions.

A comprehensive summary may be prepared in instances where the EIS is unusually long in nature. The comprehensive summary may be circulated in lieu of the EIS; however, both documents shall be distributed to any federal, state, and local agencies who have EIS review responsibilities and also shall be made available to other interested parties upon request.

XVIII. Body of the EIS

- a. Purpose and need. The EIS shall clearly specify the underlying purpose and need to which VT DEC is responding.
- b. Alternatives including the proposed actions. In addition to alternatives indicated in 40 CFR 1502.14, the EIS shall discuss:
 - 1. Alternatives considered by the applicant. This section shall include a balanced description of each alternative considered by the applicant. These discussions shall include size and location of facilities, land requirements, operation and maintenance requirements, auxiliary structures such as pipelines and construction schedules. The alternative of no action shall be discussed and the applicant's preferred alternative(s) shall be identified. For alternatives which were eliminated from detailed study, a brief discussion of the reasons for their having been eliminated shall be included.
 - 2. Alternatives available to VT DEC. VT DEC alternatives to be discussed shall

include:

- a. Taking an action; or
 - b. Taking an action on a modified or alternative project, including an action not considered by the applicant; and
 - c. Denying the action.
3. Identifying preferred alternative. In the final EIS, the responsible official shall signify the preferred alternative.
- c. Affected environment and environmental consequences of the alternatives. The affected environment on which the evaluation of each alternative shall be based includes, for example, hydrology, geology, air quality, noise, biology, socioeconomic, energy, land use, and archeology and historic subject. The discussion shall be structured so as to present the total impacts of each alternative for easy comparison among all alternatives by the reader. The effects of a "no action" alternative should be included to facilitate reader comparison of the beneficial and adverse impacts of other alternatives to the applicant doing nothing. A description of the environmental setting shall be included in the "no action" alternative for the purpose of providing needed background information. The amount of details in describing the affected environment shall be commensurate with the complexity of the situation and the importance of the anticipated impacts.
 - d. Coordination. The EIS shall include:
 1. The objections and suggestions made by local, state, and federal agencies before and during the EIS review process must be given full consideration, along with the issues of public concern expressed by individual citizens and interested environmental groups. The EIS must include discussions of any such comments concerning our actions, and the author of each comments should be identified. If a comment has resulted in a change in the project of the EIS, the impact statement should explain the reason.
 2. Public participation through public hearings or scoping meetings shall also be included. If a public hearing has been held prior to the publication of the EIS, a summary of the transcript should be included in this section. For the public hearing which shall be held after the publication of the draft EIS, the date, time, place, and purpose shall be included here.
 3. In the final EIS, a summary of the coordination process and VT DEC responses to comments on the draft EIS shall be included.

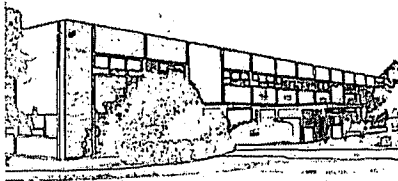
XIX. Incorporation by Reference

Material may be incorporated by reference as provided by 40 CFR 1502.21. In addition such material shall be organized to the extent possible into a Supplemental Information Document and be made available for review upon request. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the period allowed for comment.

XX. List of Preparers

When the EIS is prepared by contract, either under direct contract to VT DEC or through an applicant's or grantee's contractor, the responsible official must independently evaluate the EIS prior to its approval and taken responsibility for its scope and contents. The VT DEC officials who undertake this evaluation shall also be described under the list of preparers.

ERP0194



OTTER VALLEY UNION HIGH SCHOOL

Mr. Nopadon Sundarabhaya, P.E. - Design Section Chief

Vermont Agency of Natural Resources

Facilities Engineering Division

103 South Main Street - Laundry Building

Waterbury, VT 05671-0511

Re: Otter Valley Union High School - Wastewater Treatment Facility Improvements
Request for Categorical Exclusion

Dear Nopadon:

The Otter Valley Union High School is seeking to maintain eligibility for the above mentioned project, within the Clean Water SRF Loan program. This project, which will be advertised for bid on March 2, 2010, is an upgrade of an existing wastewater treatment facility. The nature of this upgrade is modernization, only. We do not plan to increase the treatment capacity of this facility. This project will not change the intended use of the facility or the school which it serves. In addition, all work will take place within the limits of the existing Wastewater Treatment Facility site.

In light of this, we are requesting a categorical exclusion from a full environmental review for this project.

Please contact our engineering consultant, Michael Smith, P.E., at Weston & Sampson at (802) 244-5051 if you have questions or need additional information.

Sincerely,

Rob Naylor

OVUHS School Board Liaison

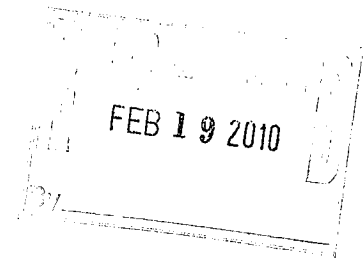
Cc: Michael A. Smith, P.E.

Brenda Fleming, Business Manager

Weston & Sampson Project No. 2090314

February 18, 2010

Tom Joslin, P.E.
Vermont Department of Environmental Conservation
Facilities Engineering Division
Design Section
103 South Main Street – Laundry Building
Waterbury, Vermont 05671-0511



**Re: Otter Valley Union High School - WWTF Improvements
Project Environmental Information**

Dear Tom:

Otter Valley Union High School in Brandon, Vermont owns and operates a tertiary wastewater treatment facility (WWTF). This facility, constructed in the early 1970's, is beyond it's useful life. Weston & Sampson prepared a Preliminary Engineering Evaluation in April 2009 which evaluated several options for addressing the school's future wastewater needs. The final recommendation was to refurbish the existing WWTF and continue current operations.

The design of this project has been completed and the school intends to advertise the project for bid on March 2, 2010. The following is a summary of the environmental information, formerly prepared for submission to the USDA – Rural Development office. The school is no longer seeking funding for this project through the USDA. The content and layout of this report is intended to cover environmental investigation and environmental mitigation consideration requirements based on the size and scope of this project. This report is paired with an Engineering Report which provides a basis of design, cost, and further justification for pursuing this work.

1.0 PURPOSE AND NEED FOR PROJECT

1.1 Project Description

Following is an evaluation of feasible options for improvements to these facilities which will enable it to efficiently treat and dispose of wastewater for another 20 years. Many options exist for replacement of the existing WWTF with innovative treatment processes; however, they would require wholesale reconstruction of the WWTF. While the WWTF has outlived its design life, it continues to perform well; and we feel that most of the process structures are useable. The existing structures are a valuable asset to OVUHS.

1.2 Purpose and Need of Project

The overall long-term goal of this report is to enhance wastewater treatment and improve the efficiency of the operation such that discharge permit requirements are met while operating costs are minimized. Recommended improvements will serve to extend the useful life of these facilities another 20 years.

2.0 ALTERNATIVES TO THE PROPOSED ACTION

Keeping in mind that the school has limited funds available for improvements, Weston & Sampson has identified three relatively simple, low cost, low impact alternatives for improvement to the WWTF. These improvements are:

1. Rehabilitate or replace existing process equipment
2. Convert the lagoons to a Sequencing Batch Reactor (SBR)
3. Decommission the WWTF and pump raw sewage to the Brandon wastewater collection system

Rehabilitate Existing WWTF

Although the OVUHS WWTF will not require an expansion for increased loadings, certain parts of the facility will need to be upgraded to improve operating conditions and maintain operating efficiencies over the next twenty years. These improvements will not significantly change the overall operation of the WWTF. These recommended improvements, along with others, discussed herein, will repair the WWTF, improve its operating and energy efficiency, and help to minimize operating costs.

The following is a general list of improvements identified in our unit process evaluation:

1. Remove the existing influent screening manhole and install a new structure, with a new screen at the WWTF. The new screen will have a closer bar spacing and be more effective.
2. Modify the lagoon influent piping and interconnecting piping such that one lagoon at a time can be taken off line for maintenance and cleaning, without disrupting the process.
3. Replace the valve on the existing equalization line between the lagoons.
4. Replace the aeration system diffusers with new equipment, and space the diffusers for maximum aeration and treatment efficiency.
5. Inspect the lagoon walls. Rout out large cracks, and grout them in to seal the tank and increase the life of the structure.
6. Replace the aeration blowers. The new blowers should have variable frequency drives (VFD's) and should be paced with a signal from a dissolved oxygen probe, located within the lagoons, for maximum operator process control and power use efficiency.

Wastewater Treatment Facility Improvements - Project Environmental Information

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7. Remove the existing lagoon effluent pump and rail system, and modify piping within the dosing pump station to allow for gravity flow from the lagoons to this structure, from varying levels within the lagoons.
8. Replace submersible dosing pumps with VFD-driven pumps, which are paced from a differential pressure transmitter within the dosing pump station wet well.
9. Replace the existing clarifier in kind, but eliminate the clarifier recirculation pump and piping. The new clarifier must have a surface skimmer and piping to direct skimmings to the plant sewage pump station. In addition, the new clarifier waste line should have a motor-operated plug valve which will allow automatic wasting using a timer.
10. Replace the existing effluent sand filter in kind, but eliminate the use of pneumatic controls. The new sand filter must have electrically operated control valves. The simple control scheme for this unit should remain in place. A new filter backwash pump should be installed with the rest of the filtration equipment.
11. Replace chlorine contact tank baffles.
12. Cap and delineate the existing outfall cleanout assembly.

In addition to the items identified during our unit process evaluation, we offer the following general recommendations for improvement to provide a more efficiently operating facility:

1. The laboratory area within the existing Operating Building shares the same space with the electrical controls, power service entrance, chemical storage, and maintenance equipment. We recommend a small 10' by 10' building addition off of the west side of the Operating Building which could house maintenance materials, tools, and spare chemicals. This would remove these things from the lab and control equipment area, making the Laboratory space more useable.
2. We recommend replacement of the laboratory cabinets, counters and sink, with lab-standard equipment. A fire extinguisher, first aid kit and emergency eye-wash should be installed in this area, as well.
3. Replace the roof of the Operating Building with a standing seam metal roof, as it is badly weathered.
4. Re-insulate and re-side the building with painted, or stained, T1-11 (same as exists), as it is very badly weathered and poorly insulated.
5. Replace and relocate all HVAC equipment. Unit heaters, and ventilation equipment is in poor condition and have exceeded their useful life. Relocate this equipment as necessary to facilitate the implementation of other improvements.
6. Replace the existing lighting with fluorescent lighting, and increase the amount of lighting to meet requirements for the process and lab work areas.
7. Add windows to the process room of the Operating Building for better natural lighting.
8. Install an above-grade door in the east wall of the Operating Building, next to the sand filter, to provide access for future maintenance and sand media replacement.
9. Install hard-wired smoke detectors.
10. Install sanitary facilities as part of the addition for the equipment and tools. There is currently not a restroom or a shower at this facility.
11. Install telephone service to the WWTF. This must be a separate line from the school's main service, so that calls can be made out of the plant.
12. Install an alarm auto-dialer for alarm conditions at the WWTF.

13. Install an aluminum grated cat-walk above the clarifier and sand filter. The new cat-walk will have OSHA-compliant hand rails.
14. Provide piping from the new sand filter to allow filter backwash to drain into the plant wastewater pump station. This will eliminate the long, above grade, run of drain line from the Operating Building to Lagoon No. 1.
15. Purchase a refrigerated/insulated composite sampler.
16. Install a MSDS information cabinet on the wall inside the lab area.

Anticipated costs are outlined in the Preliminary Engineering Report.

Convert the WWTF to the Sequencing Batch Reactor Process

An alternative to aerated lagoons for treatment is conversion of the plant to an activated sludge process. This is a process by which treated wastewater is recirculated to the influent end of the biological process to "seed" the incoming raw wastewater. This seeding improves the treatment efficiency of the facility. The most practical way to convert this WWTF to the activated sludge process, and minimize new construction, is to convert the plant to a sequencing batch reactor (SBR) configuration.

While there are several types of SBR, the basic SBR process consists of at least two identically equipped tanks with a common inlet, that alternates raw sewage discharge between them. The tanks are set up with a "plug flow" configuration, with raw wastewater coming in at one end, and treated water flowing out the other. While one tank is in settle/decant mode the other is aerating and filling. Prior to the inlet, there is a pre-equalization tank, or bio-selector; which provides a place for mixing of the raw wastewater and the "seed" wastewater, or return activated sludge (RAS). The biological digestion process begins in the pre-equalization tank.

There are four stages to treatment: fill, aeration, settling and decanting. The aeration stage adds air to the mixed liquor via floating mechanical pumps with air inductors. During this period the inlet valve to the tank is open and a RAS pump carries mixed liquid with suspended solids (MLSS) from the effluent end of the reactor tank to the pre-equalization tank.

The settling stage is typically the same amount of time as the aeration stage. During the settling stage flow to the reactor is shut off and the aeration ceases. The sludge formed by the bacteria settles to the bottom of the tank, where the aerobic bacteria continue to multiply until the dissolved oxygen is depleted. Conditions at the bottom of the tank, at the end of the settling stage, support anaerobic bacteria which use oxidized nitrogen instead of oxygen gas, converting nitrogen to a gaseous state. This process is known as denitrification. Phosphorus compounds can also be removed from the mixed liquor through the addition of alum (sodium aluminate). This chemical reacts to form a non-soluble floc which settles to the bottom of the tank. The sludge is allowed to settle until the top 20%-30% of the tank is clear water. In this way, the SBR acts as the aeration tank and as the secondary clarifier, typically found in conventional activated sludge wastewater treatment facilities.

The reactor is now decanted, by slowly lowering a trough into the basin. The trough is connected with flexible piping to the post-equalization tank, where treated effluent is stored before being pumped through the existing gravity sand filter. Sludge accumulating in the SBR

Wastewater Treatment Facility Improvements - Project Environmental Information

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over time would be pumped, or "wasted" to the existing sludge storage tank at the east side of the Operating Building.

Conversion to an SBR facility would require construction of a center wall through each of the two lagoons, to create four basins: pre-equalization, reactor No. 1, reactor No. 2, and post-equalization. Some piping modifications would also be required, as well as the installation of several small submersible pumps. The existing circulator clarifier would no longer be needed, due to the SBR's acting as clarifiers, and could be removed to alleviate the crowded conditions in the process room of the Operating Building.

As noted earlier in this section, there are several types of SBR's. The one we have chosen for the purposes of this evaluation is the Aqua CAM-D SBR kit, as manufactured by Aqua-Aerobic Systems, Inc. of Rockford, Illinois. This particular SBR process consists of a combination aerator/decanter on floats. This provides the major process control features required for a SBR, in a single piece of equipment; thereby, reducing the amount of new construction required, and keeping costs to a minimum. This equipment is also fairly simple and should not require more operator time than is currently spent at the treatment facility. Additional information regarding this system, including the manufacturer's literature, general equipment layout, and operation and maintenance costs are included in Appendix H, "Aqua Aerobic Systems, Inc."

In addition to the improvements required for installation of the SBR equipment in the existing lagoons, the WWTF will still need a new screening manhole, effluent sand filter, and all sixteen of the general improvements listed above.

Decommission WWTF and Pump to Brandon

An alternative to rehabilitation the existing WWTF is to decommission it and pump raw sewage to the Brandon wastewater collection system, for treatment and disposal off site. This alternative, although more costly at the outset, would simplify the school's wastewater treatment operations and reporting, reduce equipment that needs maintenance, and reduce permitting and reporting requirements.

A packaged duplex submersible wastewater pump station would need to be constructed in the vicinity of the WWTF. Ideally, the pump station would be constructed while the WWTF is still in operation. Upon completion of the pump station, flow would be diverted to the new pump station and the WWTF decommissioned. The Pump station would consist of the following:

- 6' diameter pre-cast concrete wet-well
- Two 15 Hp submersible wastewater pumps with slide rails
- Variable speed pump controller with differential pressure wetwell level transducer
- An above-grade pump station control panel with alarm light and horn
- Telemetry for monitoring pump station operation by the Brandon WWTF
- Pad-mounted emergency power generator

Wastewater Treatment Facility Improvements - Project Environmental Information

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The proposed wastewater pump station could be constructed at the gate to the existing WWTF, with a 6" DR-11 high-density polyethylene (HDPE) sewage force main to convey raw sewage from the school to the nearest point on Brandon's gravity sewer system. This point is a terminal manhole on an 8" SDR-35 PVC gravity sewer line on Nickerson Road. This sewer flows to the Carver Street Sewage Lift Station, located at the northwest corner of the Carver Street/Nickerson Road intersection.

The Carver Street Pump Station has two 5 Hp submersible wastewater pumps, each with 100 GPM capacity, in lead/lag configuration. The Brandon WWTF staff says that this particular pump station operates well below its capacity. The Brandon "Emergency Action Plan for Power Failure" for this pump station notes that it has a "dry weather hold time" of 89 hours, and a "wet weather hold time" of 5 hours. For the purposes of this evaluation, we will assume that no additional improvements will be needed at the Carver St. Pump Station in order to accept the OVUHS flows.

Because the proposed sewage force main will be approximately 2.8 miles in length, there will be a rather long detention time within this force main, allowing time for anaerobic bacteria to generate sulfides as the sewage is digested. These sulfides will most likely result in continuous odor complaints, as well as increased corrosion within the collection system and the Carver Street Pump Station. One common approach for controlling sulfide generation is to add chemicals to the pump station wetwell which provide a source of oxygen to keep the wastewater from going completely anaerobic before being discharged. One such chemical is a proprietary product called Bioxide™, which has been used successfully in many similar instances. The chemical is non-hazardous with a low freezing point. Bioxide™ prevents sulfide generation by providing a source of oxygen in the form of nitrate. A chemical feed system consisting of chemical storage tank, metering pumps and control panel would be required, adjacent to the proposed OVUHS sewage pump station.

Decommissioning the WWTF will require the following modifications to the school's existing wastewater facilities:

- Demolition of the lagoon structures
- Demolition of the Operating Building
- Demolition of the new effluent structure
- Demolition of process equipment and piping
- Cap and abandon the existing outfall sewer
- Grade and restore the site to lawn

The anticipated costs for the proposed sewage pump station, force main, odor control system and decommissioning of the existing WWTF are summarized in the Preliminary Engineering Report.

3.0 AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES

Environmental consequences have been evaluated with the understanding that the school has commissioned the design of the rehabilitation alternative. This option has been determined to be the most cost effective based on the Preliminary Engineering Report.

This section provides a breakdown of this project's potential environmental consequences. An OVUHS Environmental Map was created with the ANR Environmental Interest Locator as a reference. This map as well as other local environmental data was used to determine direct effect, indirect effects, and cumulative effects of this proposed project. Due to the relatively small scale of this project the OVUHS WWTF Environmental Map is used as a supplement to correspondence.

3.1 Land Use/Important Farmland/Formally Classified Lands

This proposed project involves site work on an existing facility and land use concerns do not apply. The footprint of construction will remain well within the existing facility.

3.1.1 Affected Environment

This project will not substantially affect the environment. The OVUHS Environmental Map indicates that the WWTF parcel has a drainage area that flows into a Class II Wetland with Hydric Soils. This project does not propose any new facilities in the wetland areas. Furthermore, this project proposes to prevent the possibility of potential effluent quality degradation. Improving the capacity of the WWTF is a beneficial environmental affect.

3.1.2 Environmental Consequences

Construction activity during this project has the potential to increase storm water flows to the wetlands.

3.1.3 Mitigation

The Vermont Erosion Prevention and Sediment Control Field Book will need to be utilized to ensure proper construction preparation and closeout.

3.2 Floodplains

This project does not propose any new facilities in a flood plain.

3.2.1 Affected Environment

No flood zones affected.

3.2.2 Environmental Consequences

No flood zones affected.

3.2.3 Mitigation

No flood zones affected.

3.3 Wetlands

This project does not propose any new facilities in wetland areas.

3.3.1 Affected Environment

Construction activity during this project has the potential to increase storm water flows to wetlands.

3.3.2 Environmental Consequences

The disturbed construction zone is a potential area for increased erosion. Construction site erosion that is not mitigated will cause the transport of excess sediment into water bodies and wetlands.

3.3.3 Mitigation

The Vermont Erosion Prevention and Sediment Control Field Book will need to be utilized to ensure proper construction preparation and closeout.

3.4 Cultural Resources

3.4.1 Affected Environment

All proposed work is on existing facilities. There are no cultural resource impacts.

3.4.2 Environmental Consequences

All proposed work is on existing facilities. There are no cultural resource impacts.

3.4.3 Mitigation

All proposed work is on existing facilities. There are no cultural resource impacts.

3.5 Biological Resources

This project involves site work on an existing facility so no direct or indirect impacts to biological resources are foreseen. No wooded areas will be disturbed during construction.

3.5.1 Affected Environment

No direct or indirect impacts to biological resources are foreseen.

3.5.2 Environmental Consequences

No direct or indirect impacts to biological resources are foreseen.

3.5.3 Mitigation

No direct or indirect impacts to biological resources are foreseen.

3.6 Water Quality Issues

The OVUHS WWTF Environmental Map shows OVUHS's source protection area extends over the existing WWTF.

3.6.1 Affected Environment

This proposed work does not directly impact this source protection area.

3.6.2 Environmental Consequences

The proposed work will improve the treatment efficiency of the existing wastewater treatment facility. Surface water quality may improve as a result of this project. Groundwater will not be impacted by this project.

3.6.3 Mitigation

During construction the wastewater treatment facility will need to continue producing quality effluent to reduce the potential impact to the groundwater source protection area. The bulk of the construction will take place during the summer months when the school is out of session, and the WWTF is not discharging.

3.7 Coastal Resources

3.7.1 Affected Environment

There are no coastal resources in Vermont.

3.7.2 Environmental Consequences

There are no coastal resources in Vermont.

3.7.3 Mitigation

There are no coastal resources in Vermont.

3.8 Socio-Economic/Environmental Justice Issues

Based on findings in this Environmental Report and the supporting Engineer Report there should be no affect on local socio-economic/environmental justice issues.

3.8.1 Affected Environment

No foreseeable affect.

3.8.2 Environmental Consequences

No foreseeable consequences.

3.8.3 Mitigation

No foreseeable mitigation necessary.

3.9 Miscellaneous Issues

This project has no other foreseen issues relating to but not limited to the following categories: air quality, transportation, noise, solid waste, hazardous waste, and radon.

3.9.1 Affected Environment

This project has no other foreseen issues.

3.9.2 Environmental Consequences

This project has no other foreseen issues.

3.9.3 Mitigation

This project has no other foreseen issues.

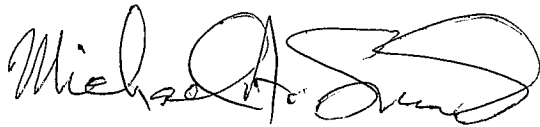
4.0 SUMMARY OF MITIGATION

Project construction will occur on the site of the existing WWTF. The treatment process structures and configuration will not be changing. The nature, scale and scope of this project does not present any foreseeable need for environmental impact mitigation efforts. By following proper construction practices, this project should not pose any negative affects to the environment.

Based on the current scope of this project and the findings herein this project does not pose a negative impact to the environment. If the scope of the project changes and/or any new environmental issues becomes known this Environmental Report will be reassessed. We request concurrence from the Facilities Engineering Division, so that this project can move forward to construction this year.

Sincerely,

WESTON & SAMPSON ENGINEERS

A handwritten signature in black ink, appearing to read "Michael A. Smith". The signature is stylized with large, flowing loops and is positioned above the printed name.

Michael A. Smith, P.E
Project Manager

Enclosures-

Figure 1: Site Layout

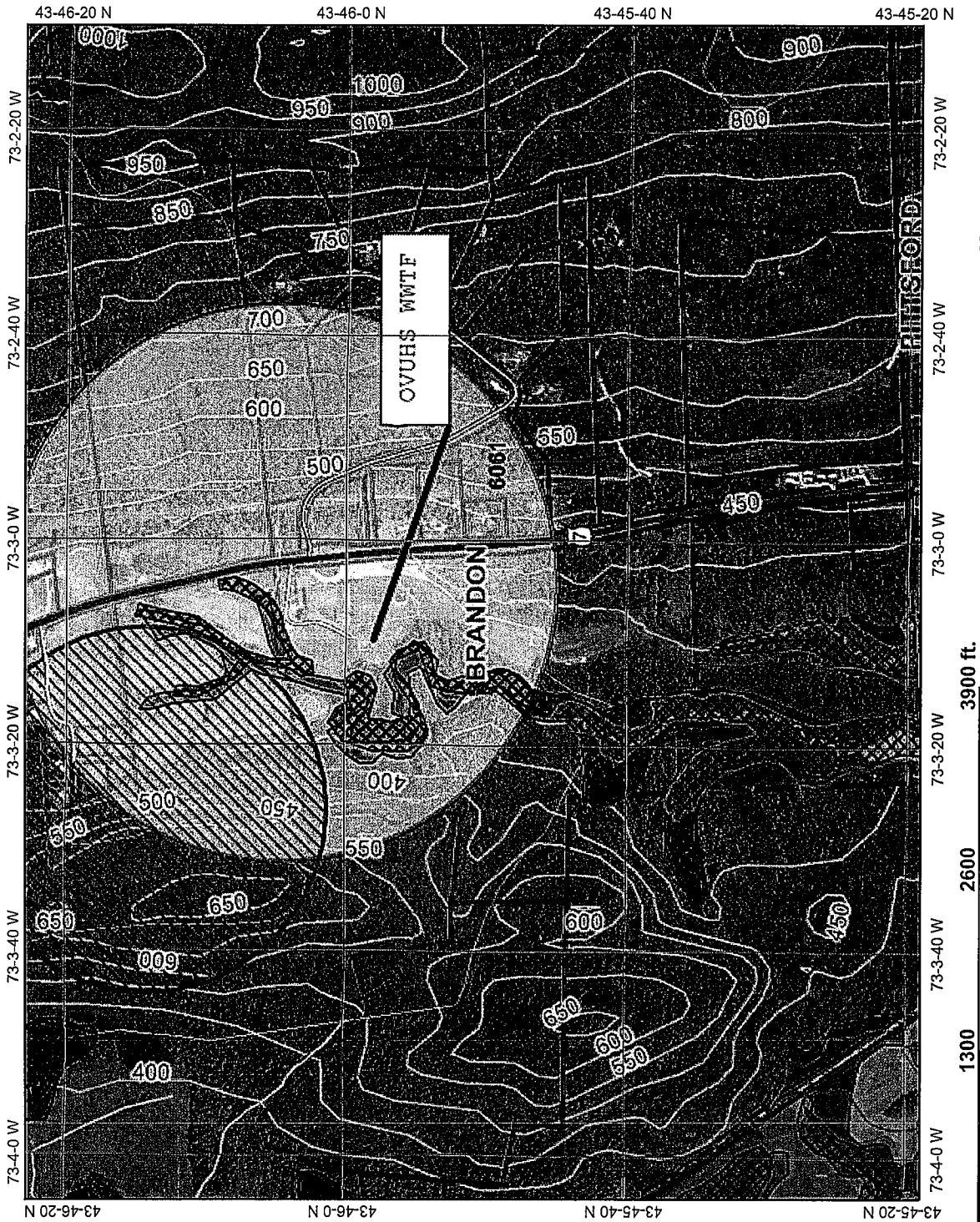
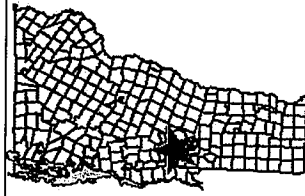
Figure 2: OVUHS Environmental Map



ANR Environmental Interest Locator

Vermont Agency of Natural Resources (ANR)

OVUHS Environmental Map



Legend

- Roads
 - US Highway
 - Vermont State Highway
 - Class One
 - Class Two
 - Legal Trail
 - Emergency U-Turn Area
 - Proposed Class Two
 - Proposed Class Three
 - Proposed Vermont State Highway
 - Proposed US Highway
 - Proposed Interstate
 - Discontinued Interstate
 - Class Three
 - Class Four
 - State/National Forest Highway
 - Military Road (No Public Access)
 - Private Road
- Rutland County Special Flood Hazard Areas (effective 8.28.2008)
 - AE (1-percent annual chance floodplains with elevations)
 - A (1-percent annual chance floodplains without elevations)
 - AO (1-percent annual chance zone of shallow flooding 1-3 feet)
 - 0.2-percent annual chance flood hazard zone
 - VSWI
- Wetlands
 - Class 1 Wetland
 - Class 2 Wetland
 - Class 3 Wetland
 - Proposed VSWI
 - Class 1 Wetland
 - Class 2 Wetland
 - Class 3 Wetland
- Rare, Threatened, and Endangered Species
 - Threatened or Endangered
 - Rare (Not T or E)
 - Significant Natural Communities
 - Palustrine
 - Terrestrial
 - Groundwater

Scale: 1:13,806

Map center: 455557, 140587

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. VtAGI and the State of Vermont make no representations of any kind, including but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

URL: http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/launch.jsp

