

Vermont Better Roads Grant Program Application

Please complete one application per category and/or project you are applying for. You may make copies of the application for multiple applications per category and/or multiple categories.

Please check the Category you are applying for:

- B. Correction of a Road Related Erosion Problem and/or Stormwater Mitigation Retrofit for both gravel and paved roads
- C. Correction of a Stream Bank or Slope Related Problem
- D. Structure/culvert upgrades

Town/Organization: Town of Pittsford, VT

Project Name: Recreation Area Bridge Replacement (Design Engineering)

Road Name: Recreation Area Road TH #: 56 Structure # (if applicable): _____

Road Type: Please Select (N/A) Please Select (N/A)
Please Select (N/A)

Watershed: Sugar Hollow Brook → Otter Creek → Lake Champlain

Please provide a thorough description of the problem (ex. Roadway has steep slope with no ditch which is causing roadway erosion):

The wooden bridge spanning Sugar Hollow Brook (a tributary of Furnace Brook, which flows into Otter Creek) at the Pittsford Recreation Area has supports/abutments which are too narrow, accelerating the brook's flow and causing streambank erosion downstream which carries sediment downstream.

Description of Project and how you plan to complete the work (ex. Stone line 500' of ditch by reshaping ditch and stone lining, working from the top of the project down to the bottom):

The first step in replacing this 1970's-era bridge is to obtain a design to be based upon a hydraulic study, which was requested on February 5.

Expected Effects (+ & -) on water quality (ex. Erosion will be eliminated by placing the stone ditch):

Once the design for a replacement structure is complete and the replacement structure is in place, the town expects an end to accelerated flows and resulting erosion and sediment mobilization downstream.



Distance from end of project to nearest water (stream, lake, or stormwater system that outlets directly to water). Please Select

0-50' from Sugar Hollow Brook

Progress to Date:

Thus far, the town has secured a design proposal from Otter Creek Engineering. The town has also consulted with ANR's Josh Corvajal and has ordered a hydraulic study.

Is there an emergency reason this project must be completed quickly? If yes, please explain:

N/A

Has this project been identified through a municipal road inventory, capital budget plan, tactical basin plan, culvert inventory, or other management plan? If yes, please list which.

Yes: _____

No

Please list any professionals you may have contacted for assistance with this project (ANR River Management Engineer, Army Corps of Engineers, VTrans District Technical staff, Basin Planner etc.):

The town has contacted ANR's River Management Engineer, Josh Corvajal. The town has also ordered a hydraulic study from Nick Wark (pending). The town has also obtained a design engineering proposal from Otter Creek Engineering.

Is the project located in the town "Right of Way?" Yes, No, Both (if "Both" please explain further).

The project is located on town property.

Will the town road crew complete this work? Yes, No, Some (if "some" please explain further).

N/A



Describe how the grant funds will be spent and/or attach a project budget:

Attached

How do you plan to meet the required 20% match on this grant?:

The Town's highway crew may assist Otter Creek Engineering with the excavation of a test pit for the evaluation of soils. The rest of the match would be cash.

Requested Grant Amount (\$20,000 max Category B, \$40,000 max Categories C & D): \$5,000.⁰⁰

Estimated Total Project Cost (including 20% local match): \$6,250.⁰⁰

Estimated Completion Date: July 30, 2016

REQUIRED ATTACHMENTS:

- Itemized Cost Estimate (labor, equipment, materials)
(For assistance, call Better Backroads at 802-828-4585)
- Project Location Map
(Please show location of affected water; 1:12,000 USGS map, if possible)
- Sketch of proposed erosion control measures, including:
 - Distances (ft.)
 - Estimate of waste & borrow quantities
 - Approx. location of town/other right-of-way and/or property lines
- Photo(s) of the project area.
- Agreement for Entry and/or Deed of Easement (if project is outside Town ROW).
- If project involves stream or river/road conflict, include documentation of consultation with a River Management Engineer.
- Other appropriate supporting documents.

By signing this application I certify that all the information provided is accurate to the best of my knowledge. We will comply with all the requirements of the grant including making our books available for audit if required.

SIGNATURE OF APPLICANT: (Must be Town Administrator/Manager or Select Board Chair)

Name: *[Signature]*

Title: 4/15/2016



OTTER CREEK ENGINEERING

January 20, 2016

Mr. John Haverstock, Town Manager
Town of Pittsford
P.O. Box 10
Pittsford, VT 05736

Subject: Town of Pittsford - Sugar Hollow Brook Culvert Replacement
Proposal for Engineering Services

Dear John:

Thank you for selecting Otter Creek Engineering (OCE) to provide civil engineering services for the replacement of a culvert on Sugar Hollow Brook. We appreciate the opportunity to assist with this project.

PROJECT UNDERSTANDING

It is our understanding that the Town of Pittsford is planning the replacement of the existing wood bridge over Sugar Hollow Brook at the Town's recreation area. The project will include the removal and abandonment of the existing structure and installation of a new three-sided concrete box culvert. The sizing of the new culvert will be based upon regulatory direction provided by the Vermont Agency of Natural Resources Stream Alteration Program and a VTrans Hydraulic Analysis (to be provided through the Town). A State of Vermont Stream Alteration Permit and a U.S. Army Corps of Engineers General Permit will be required for construction. The following Scope of Services is based on our understanding of the project, our experience with similar projects and our familiarity with the State and Federal permitting process.

SCOPE OF SERVICES

1. **Topographic Survey and Base Mapping** - A topographic survey of the area will be completed by OCE, as required to perform the final engineering. Our topographic survey will include structures, drainage courses, driveways, roadways, relevant surface features and utilities. Based upon our knowledge of the project area, underground utilities are not anticipated; however, we will contact local utility companies, the Town Recreation Director and look for visible field evidence. A topographic base plan with 1-foot intervals will be generated. A boundary survey is not included in our scope of work at this time. The roadway right-of-way limits will be depicted on the drawings based upon information provided by the Town. We will establish a semi-permanent control system for both horizontal and vertical control within the project area. The control system will include traverse points and a temporary benchmark.

PO Box 712 404 East Main Street East Middlebury, Vermont 05740 802.382.8522
110 Merchants Row 4th Floor, Suite 15 Rutland, Vermont 05701 802.747.3080

www.OtterCrk.com



2. **Final Design** - OCE will prepare final design drawings, construction specifications and contract documents for the proposed improvements. Included in our services is a site visit to evaluate soils. The Town will provide an Operator and excavator to dig a test pit. Our design will be predicated on the understanding that the pathway across the stream can be temporarily closed during the construction process. The contract documents will utilize industry standard EJCDC format that we have used on past culvert projects and will include an Advertisement for Bid, Information for Bidders, Bid Schedule, General Conditions, Special Conditions and Technical Specifications for the project.
3. **Permitting** - We will assist in the preparation of permit applications and supporting technical data for the Town's submission. At this time, we anticipate the need for a State of Vermont, Stream Alteration Permit and a US Army Corps of Engineer's General Permit for the proposed culvert replacement. We have assumed that the project will be permitted for construction during the regulatory period of July 15 to October 1. While authorization may be obtained for work outside of this time frame, the construction requirements are more extensive. If it is determined that a State of Vermont Wetland Permit is required (not anticipated at this time) our scope and budget will need to be modified accordingly for a wetlands delineation and additional permit application. All permit application fees will be paid directly by the Town.
4. **Bid and Construction Phase Services** - At this time, bid and construction phase services have not been requested. We would be happy to provide a budget for those services upon the Town's request.

PROJECT SCHEDULE

The Project Schedule assumes this project would be designed and permitted in 2016.

<u>Task</u>	<u>Completion Date</u>
1. Field Surveys	Already completed
2. Design and Contract Documents	April, 2016
3. Permitting	May, 2016

Our schedule assumes that OCE will receive the hydraulic information, provided by the Town via VTrans, by no later than March 1, 2016.

COST PROPOSAL

We have estimated the level of effort required to complete the project. This estimate is based upon our experience with similar projects that we have recently completed and the requirements of regulatory officials. The project will be invoiced as follows:

<u>Task</u>	<u>Fee</u>
Survey, Design and Permitting - (Lump Sum)	\$ 6,250
TOTAL	\$ 6,250



We will invoice monthly based upon the work completed at the end of each month. As the project progresses, we will keep you informed of the budget status, and discuss any changes from the anticipated scope. Additional services requested by the Town will be provided on an hourly basis in accordance with Otter Creek Engineering's most current Schedule of Rates and Fees at the time services are provided.

AUTHORIZATION

If this proposal and the attached Standard Terms and Conditions meet with your approval, this document can serve as a Professional Engineering Services Agreement with signature of an authorized agent of the Owner and date in the space provided below. Please sign and date both copies, retain one copy for your file and return the other to our office.

The schedule and cost proposal provided are valid for a period of forty-five (45) days. If authorization is given beyond this period, we reserve the right to modify these items prior to agreement execution.

We appreciate the opportunity to submit this proposal. If you have any questions regarding its content, or you wish to meet to discuss the proposal, please do not hesitate to call me.

Sincerely,

A handwritten signature in blue ink that reads 'Craig Jewett'.

Craig Jewett, P.E.
Senior Project Engineer

A handwritten signature in blue ink that reads 'Mark P. Youngstrom'.

Mark P. Youngstrom, P.E.
Principal Engineer

AUTHORIZATION TO PROCEED

Signature: _____

Name: _____

Date: _____

STANDARD TERMS AND CONDITIONS

OTTER CREEK ENGINEERING, INC. (OCE)
AND TOWN OF PITTSFORD (CLIENT)
SUGAR HOLLOW BROOK CULVERT
January 20, 2016



Standard of Care: Services provided by OCE under this agreement will be performed in a manner consistent with the degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances.

Applicable Law: This agreement shall be subject to the applicable laws of the State of Vermont.

Compensation for Services: Invoices will be submitted monthly and payable within thirty (30) days. A service charge of 1.5% per month will be assessed on overdue balances. In the event any portion of an account remains unpaid for 90 days, the Client shall pay applicable service charges and all costs of collection, including reasonable attorney fees.

Additional Services: In the event the Client requests services outside those outlined in the Agreement, OCE may provide those services at an additional fee at established rates or other basis agreed upon with the Client. At the request of the client, an amendment to the original agreement will be prepared to document these additional services.

Ownership of Instruments of Service: All documents, including those on electronic media, prepared by OCE as instruments of service shall remain the property of OCE. Any reuse or change without written approval by OCE is prohibited.

Information Provided by Others: OCE shall indicate to the Client the information needed for rendering of services. The Client shall provide the necessary information as is available. OCE shall be entitled to rely on its accuracy, completeness, and authority to furnish it to OCE. The Client recognizes that OCE cannot assure the accuracy, completeness and sufficiency of such information and therefore, indemnifies OCE from all claims arising from its use.

Buried Utilities: The Client shall provide OCE with any available information on the location, size, and type of all underground improvements. OCE shall rely on this information in the preparation of plans and drawings and for subsurface penetrations. The Client agrees to hold OCE harmless from any damage, liability, or costs resulting from inaccuracy of this information, except for damages caused by the sole negligence of OCE in the use of Client furnished information.

Opinions of Probable Cost: In providing opinions of probable cost, the Client understands that OCE has no control over the contractor's method of pricing, or the cost of materials and labor, and that such opinions are provided on the basis of OCE's experience and qualifications. OCE makes no warranty, expressed or implied, as to the accuracy of such opinions as compared to bid or actual costs.

Permits and Approvals: OCE shall assist the Client in applying for those permits and approvals as listed in the Agreement. OCE does not guarantee receipt of permits or approval by regulatory agencies.

Construction Observation: OCE will provide persons qualified to observe and report on construction and determine whether the work is in general conformance with the Contract Documents. The Client recognizes that Construction Review is intended to minimize the risk of problems arising during construction; that it is not insurance, and does not constitute a warranty or guarantee of any type. The Contractor shall retain responsibility for the quality of their work and for adhering to the plans and specifications. OCE shall not be required to make exhaustive or continuous on-site observations to check the quality or quantity of the work, and shall not be responsible for scheduling, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the responsibilities of the Contractor.



Shop Drawing Review: OCE will review Contractor submittals for conformance with the design concept and the contract documents. The review shall not include an evaluation of the accuracy or completeness of details, such as quantities, dimensions, and fabrication processes.

Jobsite Safety: The Contractor is solely responsible for jobsite safety. OCE, through its professional activities, or presence at the site, has no authority to exercise control over any contractor in connection with its means, methods, sequences, or any health or safety precautions.

Hazardous Materials: OCE's scope of services does not include any work related to asbestos, or hazardous or toxic materials. In the event it becomes known that such materials are present at the job site, OCE may suspend work on the project, without any liability for damages, until the Client retains a qualified specialist to abate the situation and warrant that the job site is safe and in full compliance with applicable laws.

Mediation: The Client and OCE agree that all disputes between them and arising out of or relating to this Agreement shall be submitted to nonbinding mediation unless the parties mutually agree otherwise.

Indemnification: OCE and the Client agree, to the fullest extent permitted by law, to indemnify and hold harmless each other from any damage, liability or cost, including reasonable attorney's fees and costs of defense, to the extent caused by their own, negligent acts, errors or omissions arising from the Project.

Limitation of Liability: In recognition of the relative risks and benefits of the project, the Client agrees to the fullest extent permitted by law, to limit the liability of OCE to the Client and to all Contractors on the project, so that the total aggregate liability shall not exceed \$50,000 or OCE's total fee for services, whichever is greater.

Defects in Service: The Client will promptly report to OCE any defects or suspected defects in service or work so that OCE may take measures to minimize the consequences of such a defect.

Termination: Either the Client or OCE may terminate this agreement at any time with or without cause upon giving the other party seven calendar days' notice. In the event of termination, the Client shall pay OCE for all services rendered and expenses to the date of termination, including work in progress.

Taxes: The amount of any Federal, State, or local excise, value added tax, or gross receipts tax which may be imposed on the Engineer's fees under this agreement, shall be added to the fees under this agreement as accrued, and paid to the Engineer by the Client. This does not apply to Federal or State income or payroll taxes.

SCHEDULE OF RATES AND FEES



ENGINEERING:

▪ Principal Engineer	\$120.00 per hour
▪ Managing Engineer	\$110.00 per hour
▪ Senior Project Engineer.....	\$100.00 per hour
▪ Hydrogeologist	\$100.00 per hour
▪ Project Engineer	\$87.00 per hour
▪ Senior Engineering Technician.....	\$87.00 per hour
▪ Senior Resident Project Representative.....	\$87.00 per hour
▪ Environmental Scientist.....	\$73.00 per hour
▪ Resident Project Representative	\$75.00 per hour
▪ Engineering Technician	\$75.00 per hour
▪ Administrative Assistant.....	\$50.00 per hour

EXPENSES:

Subcontracted Services:

Special consultants, material testing, equipment charges, outside survey or mapping, reproduction services, as required At Cost Plus 10%

Mileage Allowable IRS Rate

Lodging, Meals At Cost

Per Diem (lodging, meals) \$100 per night

Photocopies:

	<u>Bond</u>	<u>Mylar</u>
▪ 8 1/2" x 11" (Black and White)	\$0.10 each	
▪ 8 1/2" x 11" (Color)	\$0.50 each	
▪ 24" x 36" (Standard Size)	\$3.00 each	\$12.00 each
▪ Other Large Scale Copies	\$0.50 / sf	\$ 2.00 /sf

Toll Phone ChargesNo Charge

Other Charges By Special Mutual Agreement

TERMS:

Please refer to terms set forth in the Agreement.

September, 2014

John

From: Wark, Nick <Nick.Wark@vermont.gov>
Sent: Monday, February 08, 2016 11:02 AM
To: John
Subject: RE: Hydraulic Study Request

Hi John,

Our website has changed a bit and I am not sure why they haven't just taken down that old page as it does not work. Here is a new link to the Hydraulics Unit page : <http://vtransengineering.vermont.gov/bureaus/pdb/structures/hydraulics>

And here is a direct link to the request form : <http://apps.vtrans.vermont.gov/environmentalrequestsconsultants/Default.aspx>

You are all set with this one, I will enter it right now, but in the future you can use the links above or just call your VTrans district office and they will help you out.

-Nick

Nick Wark, P.E., CFM
Hydraulics Engineer
Vermont Agency of Transportation

From: John [<mailto:Manager@pittsfordVermont.com>]
Sent: Friday, February 05, 2016 3:03 PM
To: Wark, Nick <Nick.Wark@vermont.gov>
Subject: Hydraulic Study Request

Hi Mr. Wark.

I was unable to submit the hydraulic study request form, so I scanned it and am emailing it to you as an attachment.

Please let me know if you have any questions.

Thanks.

John Haverstock

Pittsford Town Manager
(802) 483-6500 x20
Manager@pittsfordvermont.com













Stream bank
Erosion



John

From: Carvajal, Joshua <Joshua.Carvajal@vermont.gov>
Sent: Thursday, April 14, 2016 9:45 PM
To: John
Subject: Re: Pittsford's Rec Area Bridge Project
Attachments: Pittsford Rec Area Atlas Map.pdf

John,

Thanks for meeting with me to discuss this proposed replacement bridge at the Town Recreational Area (map attached).

Based on the field measurement I took, the new bridge open span will need to be a minimum of 30 ft to satisfy bankfull width requirements. The requested Vtrans Hydraulics Report will confirm what open area will be needed to satisfy the Hydraulics Manual requirement for passage of the Q25 flood event for this Town road. Upon receipt of the report, we will can discuss what types of crossings are suitable for this site.

This project will require coverage under the Stream Alteration General Permit (SAGP). The reporting form will need to be completed and a \$200 fee submitted to Montpelier prior to construction. The fee form is available at http://www.watershedmanagement.vt.gov/rivers/docs/SA/Stream%20Alt%20Application_11052015.pdf

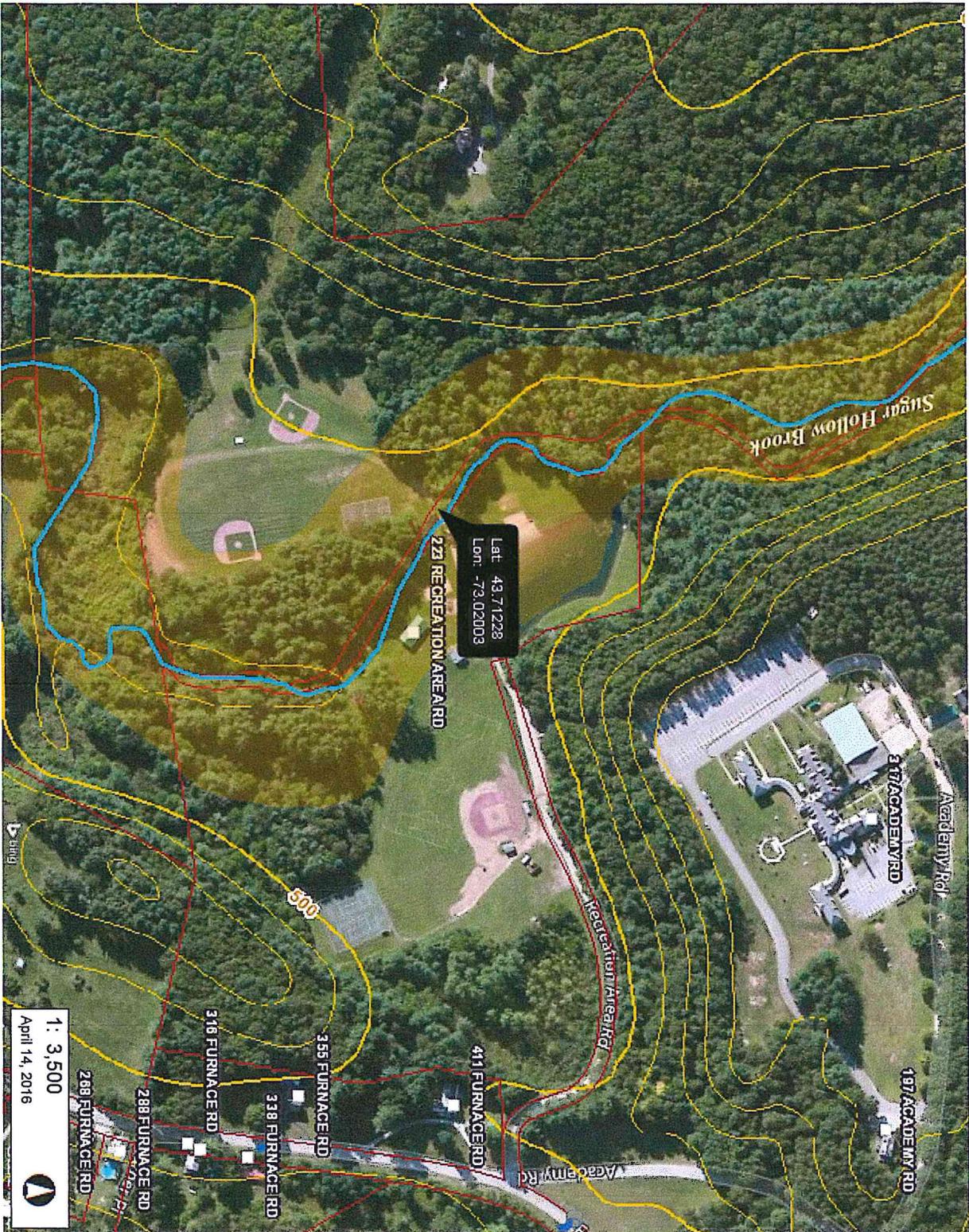
Please let me know if you have any questions.

Josh Carvajal, P.E. CFM
Rivers Program
Agency of Natural Resources
Department of Environmental Conservation

cell: (802) 490-6163

www.watershedmanagement.vt.gov/rivers.htm
floodready.vermont.gov

Our email addresses have changed (@vermont.gov)
NEW: joshua.carvajal@vermont.gov
Please update your address book!



1: 3,500
April 14, 2016

178.0 0 89.00 178.0 Meters
WGS_1984_Web_Mercator_Auxiliary_Sphere
1" = 292 Ft 1cm = 35 Meters
© Vermont Agency of Natural Resources
THIS MAP IS NOT TO BE USED FOR NAVIGATION

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. ANR 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.



LEGEND

- ◆ Hazard Class
- ◆ High Hazard Potential
- ◆ Significant Hazard Potential
- ◆ Low Hazard Potential
- ◆ Undetermined Hazard Potential
- ◆ Historical Dam Location
- ▨ DFRM Floodways
- ▨ DFRM Preliminary Floodways
- ▨ Special Flood Hazard Areas (A Counties)
- AE (1-percent annual chance flood)
- A (1-percent annual chance flood)
- AO (1-percent annual chance zone (feet))
- 0.2-percent annual chance flood ha
- Special Flood Hazard Areas (F DFRM)
- AE (1-percent annual chance flood)
- A (1-percent annual chance flood)
- AO (1-percent annual chance zone (feet))
- 0.2-percent annual chance flood ha
- Buildings (E911)
- VTRANS State and Town Long
- VTRANS State Short Structure
- Town Bridge
- Town Culvert
- Stream
- Parcels (where available)

NOTES

Map created using ANR's Natural Resources Atlas