



75 Fairfield Street • St. Albans, VT 05478 • (802) 524-5958 • Fax (802) 527-2948

Via Email

August 4, 2023

**Dan Albrecht**, Senior Planner  
Chittenden County Regional Planning Commission  
110 W Canal St #202  
Winooski, VT 05404

**RE: Application**

Greetings, Dan:

Attached please find NRPC's application responding to the Northern Lake Champlain Clean Water Service Provider's 3<sup>rd</sup> *Call For Applications For Clean Water Projects*. Our application, prepared following extensive conversations with Basin Planner Karen Bates, seeks financial support for project development work in three towns in the Champlain Islands.

We believe the application is complete. Nonetheless, do please let us know if you have any questions.

Sincerely,

Dean L. Pierce  
Senior Regional Planner

**Attachments:**

- Application
- Attachments/Supporting materials

# Water Quality Restoration Formula Grant

## Basin 5, Subgrant Application Form, Round 3

Submit this form to Dan Albrecht, B5 CWSP Manager, [dalbrecht@ccrpcvt.org](mailto:dalbrecht@ccrpcvt.org) along with other required documents noted in the amended Call for Applications by 4 p.m., EDT August 4, 2023.

Project Eligibility	
Please Review the following eligibility documents before completing this application: 1) FY23 Clean Water Initiative Program Funding Policy ( <a href="#">click here</a> ) 2) Act 76, Clean Water Service Provider Rule and Guidance & explanatory materials ( <a href="#">click here</a> )	
Is the portion of the project that you are seeking funding for considered non-regulatory and voluntary? i.e., the portion of the phosphorus being treated/reduced is not a required or compelled element of a regulatory permit (e.g. MS4 permit, MRGP, 3-9050 permit, wetland permit, etc.) or a legal settlement. <b>(Answer must be YES to proceed).</b>	Yes
Does your project type meet the applicable definitions and minimum standards as provided in the CWIP Funding Policy <b>(Answer must be YES to proceed).</b>	Yes
Has your organization/municipality submitted a Pre-Application form for this Call for Applications by April 7, 2023. <b>(Answer must be YES to proceed).</b> Pre-Application Form is available at <a href="https://www.ccrpcvt.org/northern-lake-champlain-cwsp/#funding">https://www.ccrpcvt.org/northern-lake-champlain-cwsp/#funding</a>	Yes
Has your organization/municipality been pre-qualified to receive subgrants from the CCRPC / Basin 5 Clean Water Service Provider? If No, please submit a Qualification Materials along with your application to <a href="mailto:dalbrecht@ccrpcvt.org">dalbrecht@ccrpcvt.org</a> . Qualification Materials templates are available at <a href="https://www.ccrpcvt.org/northern-lake-champlain-cwsp/#funding">https://www.ccrpcvt.org/northern-lake-champlain-cwsp/#funding</a>	Yes
<b>1. APPLICANT INFORMATION</b>	
Organization/Municipality Name: Northwest Regional Planning Commission	
Name of Point of Contact: Maddie Yandow Title: Project Manager	
Mailing Address: 75 Fairfield Street, St. Albans VT, 05478	
Phone Number: (802)-524-5958	
E-mail Address: <a href="mailto:myandow@nrpcvt.com">myandow@nrpcvt.com</a>	
<b>2. PROJECT INFORMATION</b>	
Project Title: Project Development - Using a Decision Tree to Categorize and Develop Projects in Grand Isle, Isle La Motte, and North Hero	

Watershed Project Database Number: 11508, 11509, 11510
Project Type (according to <a href="#">Appendix B Project Types Table</a> of the 2023 CWIP Funding Policy) : Development
Project Phase you are seeking funding for (may check more than one box if applicable): <input type="checkbox"/> Identification / Assessment <input checked="" type="checkbox"/> Project Development <input type="checkbox"/> Preliminary Design <input type="checkbox"/> Final Design <input type="checkbox"/> Implementation/Construction
Project Location including watershed/sub-watershed, nearby landmarks, roads, etc.  Our screening of the County Wide analysis led us to believe certain private roads in the Towns of Grand Isle, North Hero, and Isle La Motte are well-suited for phosphorus reducing projects. Potential project locations have been identified using circles on the attached maps. These potential project locations would drain either to the Isle La Motte segment or Northeast Arm of Lake Champlain through direct drainage. The following coordinates are the approximate geographic center of the potential project locations across the three study communities.  Project GPS coordinates (e.g. 44.26278, -72.58054): 44.7707, -73.2938  Project Locator Map: See attached Atlas maps.
<b>3. PROJECT DESCRIPTION</b>
<p><i>PROJECT OVERVIEW Please describe the proposed project in detail, especially the phosphorus reduction practices that will be developed, designed and/or implemented with the grant funds you are seeking. Please all describe the anticipated project schedule assuming a rough start date of August 1, 2023. Submit descriptive documents such as design cost proposals, excerpts from any prior studies, prior conceptual or final designs and other documents that may be useful for application reviewers.</i></p> <p>Project development proposal: NRPC will apply a decision tree to identify priority projects in portions of the Champlain Islands. The decision tree is attached to this proposal. The projects would reduce sediment and phosphorus runoff (AKA loading). The selected areas were preliminarily identified using a GIS-based screening analysis. The Project development work includes confirming presence of erosion, identifying source and next steps towards project development. Conceptual designs are proposed to be drawn up in locations where landholder support is most evident.</p> <p>Per the decision tree, where the source of erosion is runoff from a road, the road segment for the project site may be identified as candidate for a REI to enable prioritization and (therefore comparison with other sites for road project funding). If the source of erosion is the contributing drainage area (i.e., is upslope/upstream of the road) , the process would identify flow-reducing stormwater practices (such as infiltration, sheet flow, or detention) for implementation. Please see the attached decision tree for a visual of the process.</p> <p>If the erosion issues come from the contributing area upstream/upslope and are concentrated at the road, proposed practices could include reducing erosion in a road ditch or around culvert flows such as stone-lined ditches and culvert outlet stabilization). Project types and practices would be context sensitive. Any proposals to address gully restoration would include addressing uphill sources.</p>

Please see the attached Task table for schedule. The Final Report is anticipated to be completed by April 28, 2024.

#### 4. Estimated annual average total phosphorus load reduction (kg/yr) & cost-effectiveness

a. Using pollution reduction calculator tools consistent with the methods included in DEC's [Standard Operating Procedures \(SOPs\) for Tracking and Accounting of Phosphorous](#), what is the estimated annual average total phosphorus load reduction in kilograms per year of your proposed project? **Submit a copy of the output from the calculation.** *[If your proposed project consists of project identification/assessment or development, provide your best estimate of the types of projects you hope to investigate and their typical phosphorus reduction benefits.]*

This application seeks funding for a Project Development effort. The assessment performed to date has not generated any site-specific estimates of P removal.

b. Using the following formula, what is the Cost Effectiveness of your project:

Cost effectiveness (\$/kg/yr) = (15 years/design life years of your project) \* (total capital project cost (dollars) for design and construction) / (annual average total phosphorus source load reduction (kg/yr)). Note: we realize final construction costs may not be known with certainty. Use your best estimate. Type in the calculation for your project below. *[If your proposed project consists of project identification/assessment or development, provide your best estimate of the types of projects you hope to investigate and their typical phosphorus reduction benefits.]*

NRPC is mindful of the threshold cost amounts (average cost/kg known by the Basin 5 BWQC), so while we do not have specific projects identified yet, we are bias towards projects that meet the benchmark or better than average performance.

#### 5. APPLICATION REQUEST BUDGET **Attach a sheet showing how sub-totals calculated. Be sure you budget enough time/funds for Project Management/Completion to fully meet the required milestones and deliverables of your project type detailed in the CWIP Funding Policy.**

Expense/Item	Grant Request	Leverage / Match Funds	Sub-Totals
<b>APPLICANT</b>			
Project Management/Completion (including salary/hourly costs and fringe benefits). Be sure to budget for needed staff time for deliverables, preparation and reporting tasks. Include any volunteers or ad hoc employees if applicable.	\$11,814.99		
Mileage Charges (use Federal 2023 rate of 65.5 cents/mile)	\$450		
<b>SUBCONTRACTORS</b>			
Project Identification/Assessment /Development efforts	\$2,000		
Mileage Charges (use Federal 2023 rate of 65.5 cents/mile)	\$110		

<b>Project Completion SUBTOTAL</b>			
Indirect**: NRPC's current audited indirect rate is 81.92% effective July 1, 2023.	\$9,678.84		
<b>Project Completion TOTAL</b> (Project Completion SUBTOTAL + Indirect)	\$24,053		

Procurement of subcontractors: For a pre-application or grant application, provision of prior proof of competitive procurement is not required. However, Subcontractors such as engineers/designers and construction services must be competitively procured either before or during the duration of the grant. Subgrantees will have to demonstrate that engineering/design services were sought from at least three firms prior to attaching a quote from a firm. Applicants are encouraged to competitively procure consultation/engineering/design services prior to submitting a grant application so that their budget request is firm for those services. **Please attach any winning quotes/cost proposals for any services used in your budget above if applicable.** For applications with Implementation/ Construction costs, Implementation/Construction services must be competitively procured but that can be done during the grant duration. If your project is a continuation of a project previously funded by the Basin 5 CWSP you may continue to use that same engineering design firm for subsequent phases.

Please describe your plans for procurement either before or during the grant period.

Engineering/Design Subcontractors will be competitively procured as spelled out in NRPC's Procurement Policy as part of Task 3.

Future costs: if you are only seeking funds for Preliminary (30%) Design or Final (100%) Design, please provide a rough, "ballpark" estimate of anticipated Construction Costs. This information is needed for the Basin 5 CWSP to determine whether it is worth it to fund design services in the first place. For example, you could just provide examples of what other similar projects have cost. Do not put this estimate on the budget table above.

This work will be addressed as part of Task 9.2.

**6. Co-benefits: describe how your project provides any of the following co-benefits**

Flood Resilience: The project could incorporate infrastructure improvements designed to enhance flood resilience. For instance, it could propose creation of swales that absorb and divert runoff. These actions would help to slow down and capture stormwater, reducing the risk of flash flooding and flood-related damage.

Hazard Mitigation (other than flood resilience): By stabilizing erodible soils and reducing runoff, the project could reduce the risk of landslides and soil slumping which are associated with areas of steep slopes and highly erodible soils.

Education: In the future, as individual projects are designed, the project sponsor could develop educational programs for the community and local schools regarding the importance of watershed protection, erosion prevention, and stormwater management.

Ecosystem Improvement (recreation/tourism, water supply, carbon sequestration, pollutant filtration)  
Note: water quality improvement is a given: Through improving water quality and reducing erosion,

the project could contribute to the health of the local ecosystem. This could enhance recreational opportunities like hiking, bird-watching, and fishing,

Local Pollution Prevention: (nitrogen, metals/pathogens, other contaminant): By reducing erosion and runoff, the project could prevent local pollution from nitrogen, metals, pathogens, and other contaminants that might otherwise enter the water supply. Implementing best management practices (BMPs) on private roads could also reduce the amount of contaminants that runoff into the water system.

Habitat Improvement (restores habitat and/or connectivity, promotes native species and/or removes native species, protects RTE species, protects significant natural communities): Future phases of the project could involve restoration efforts that improve habitats for native species and promote biodiversity. For instance, restoring native vegetation could improve habitats, promote native species, and prevent the introduction and spread of invasive species.

Other Environmental Benefit not noted above: N/A

Part of a project that also addresses a Permit Requirement of a Public or Non-Profit Entity: N/A

Community Support: Addresses concerns raised by Regional Commissioner regarding impact of private roads on water quality.

Environmental Justice (engagement, honors knowledge, access to clean water & food, protects sacred resources) for Vulnerable communities: N/A

Services to Public such as aesthetics, recreation, mental health, etc.: Potential practices could capture and infiltrate stormwater runoff, reducing ponding and puddling along private roads which are a nuisance. The proposed design could incorporate plantings that provide aesthetic benefits.

## 7. OTHER CONSIDERATIONS

LEVEL OF UNCERTAINTY: Please describe the level of uncertainty of any elements of your budget.

We feel we have accurately estimated NRPC's time necessary to scope and develop these projects.

BARRIERS: Please let us know any potential barriers/complications to completing this project and how you plan to manage those challenges during the duration of the grant.

As these are projects that will ultimately be on private property, success hinges on landowner cooperation. We believe we have steps in place to effectively reach landowners to explain the project, gain trust and ultimately landowners support and willingness to be an Operations and Maintenance Responsible Party.

LANDOWNER COOPERATION: Please submit any letters or email from the landowner indicating their support for the project and awareness of their required commitment. Note date of letter/email and sender below.

This is a premature consideration in project development but landowner outreach will occur in Task 1.2 and identification of responsible party and draft O&M plans will be developed as part of Task 7 and 8.

OPERATIONS & MAINTENANCE: Please provide quantitative estimates of operation and maintenance costs on an annual basis where available. If not available, please provide qualitative estimates.

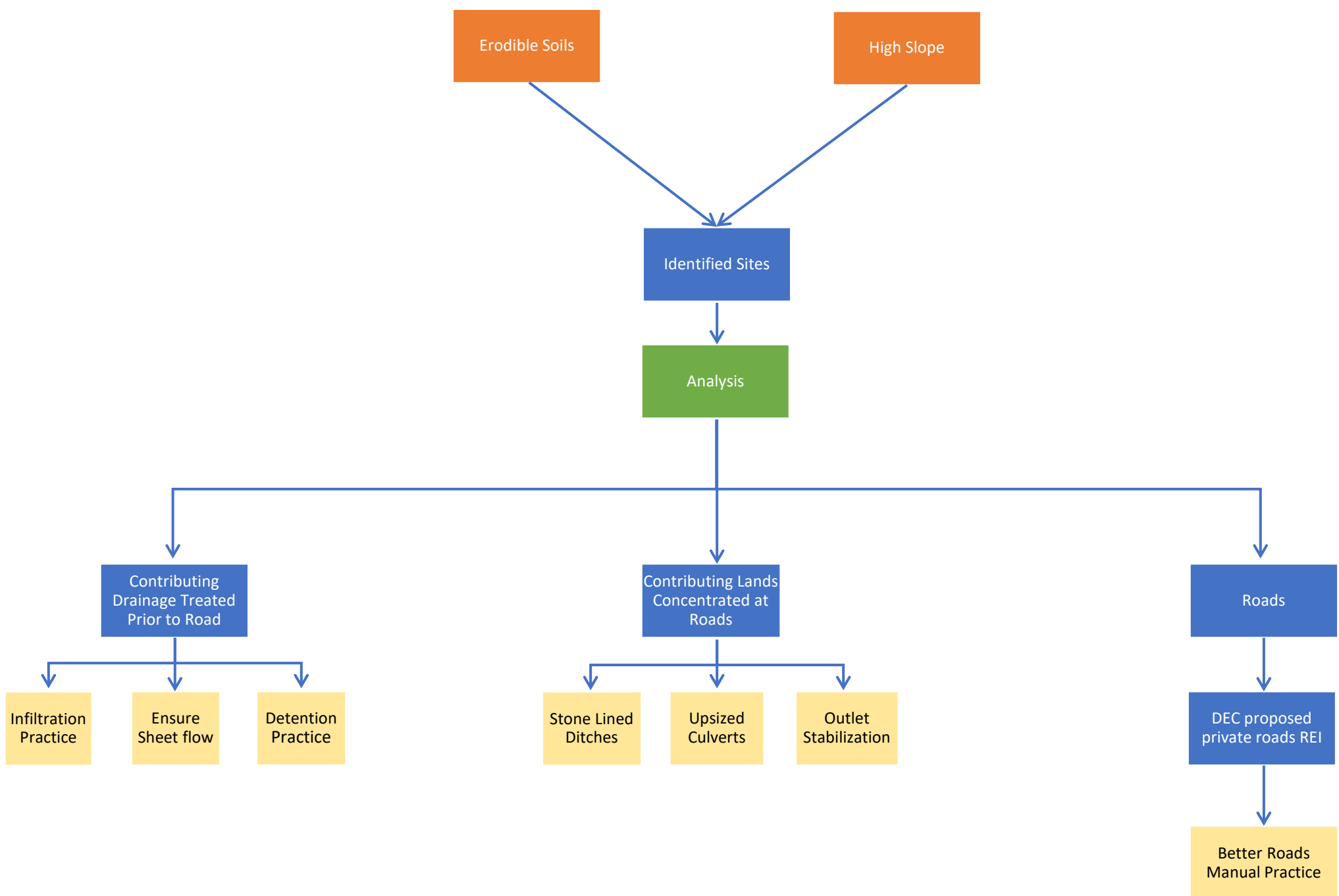
Once projects are identified as part of this project, NRPC will have a better understanding of the estimated costs of operation and maintenance. This will be considered in Task 9.2. NRPC will make every consideration to choose practices that have low operation and maintenance costs.

DESIGN LIFE: What is the design life of the project once constructed?

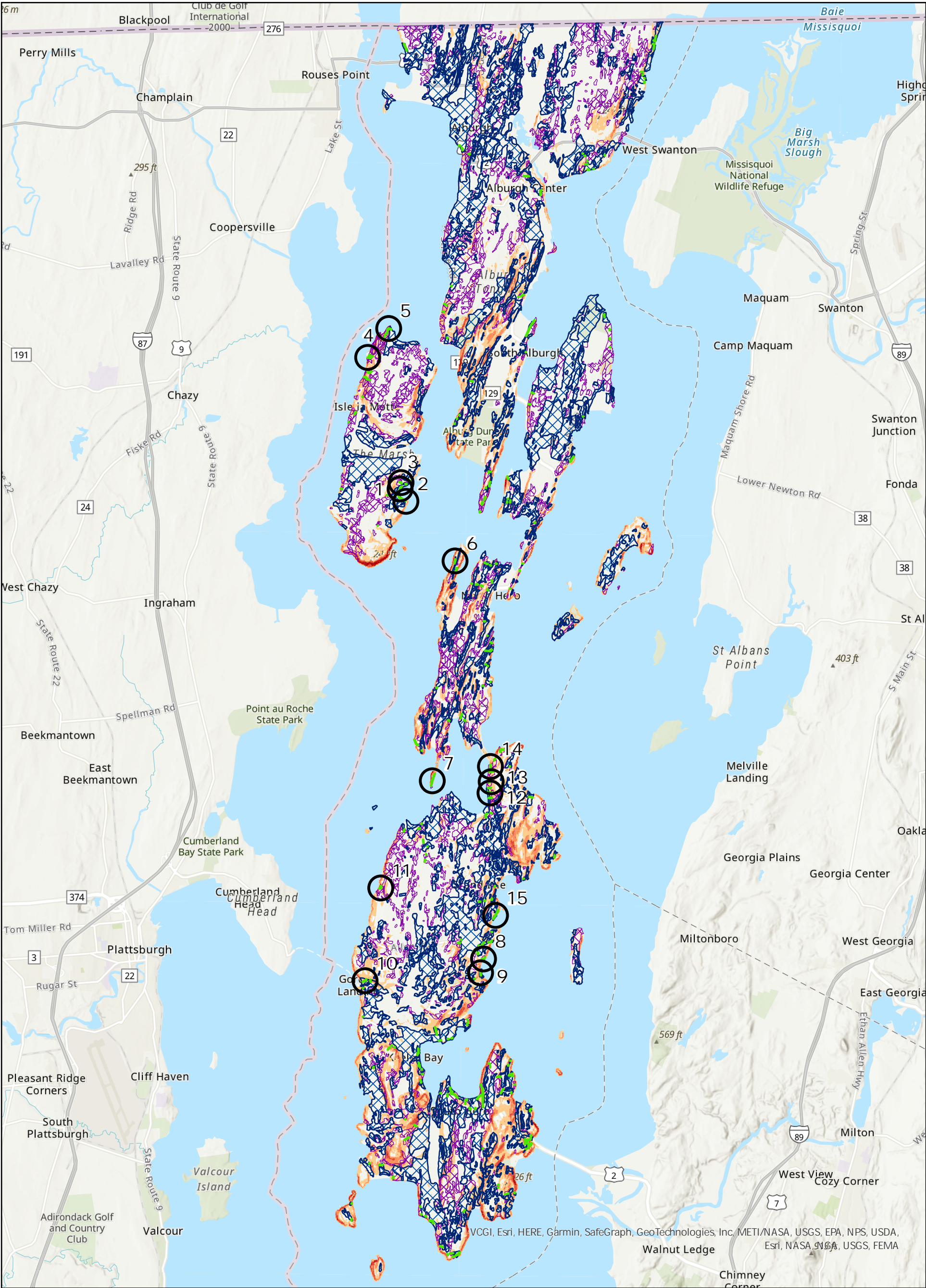
This will be determined as project development occurs. A better estimate will be included in the Final Report.

In addition to submitting the Subgrant Application Form, complete & submit the **following documents, combined in the following order, into one PDF:**

- Project Locator Map
- Descriptive documents as noted in Project Description section of this application.
- Completed DEC [Interim Phosphorus Reduction Calculator Tool v1.0](#) (if applicable);
- Winning quotes/cost proposals from subcontractors proposed in budget (if applicable);
- Letters/emails from landowner(s) indicating support and awareness of required commitment
- Completed [DEC screening form](#); (only required for Preliminary Design, Final Design and/or Implementation projects)







# Champlain Islands Low Volume Road Project Development Initiative

## Grand Isle County, Vermont

Potential Project Locations  
(1 - 2 locations to be selected per town)

Legend

Slope

Percent

- 2 - 5
- 6 - 8
- 9 - 12
- 13 - 20
- 21 - 36

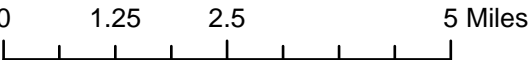
Erodeable Soils

Kfact/WS

- .37
- .49

Potential Project Locations

Selected Private Roads







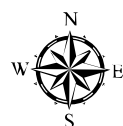


# Town of North Hero

Potential Project Locations  
 Low Volume Road  
 Project Development Initiative  
 (1 - 2 locations to be selected)

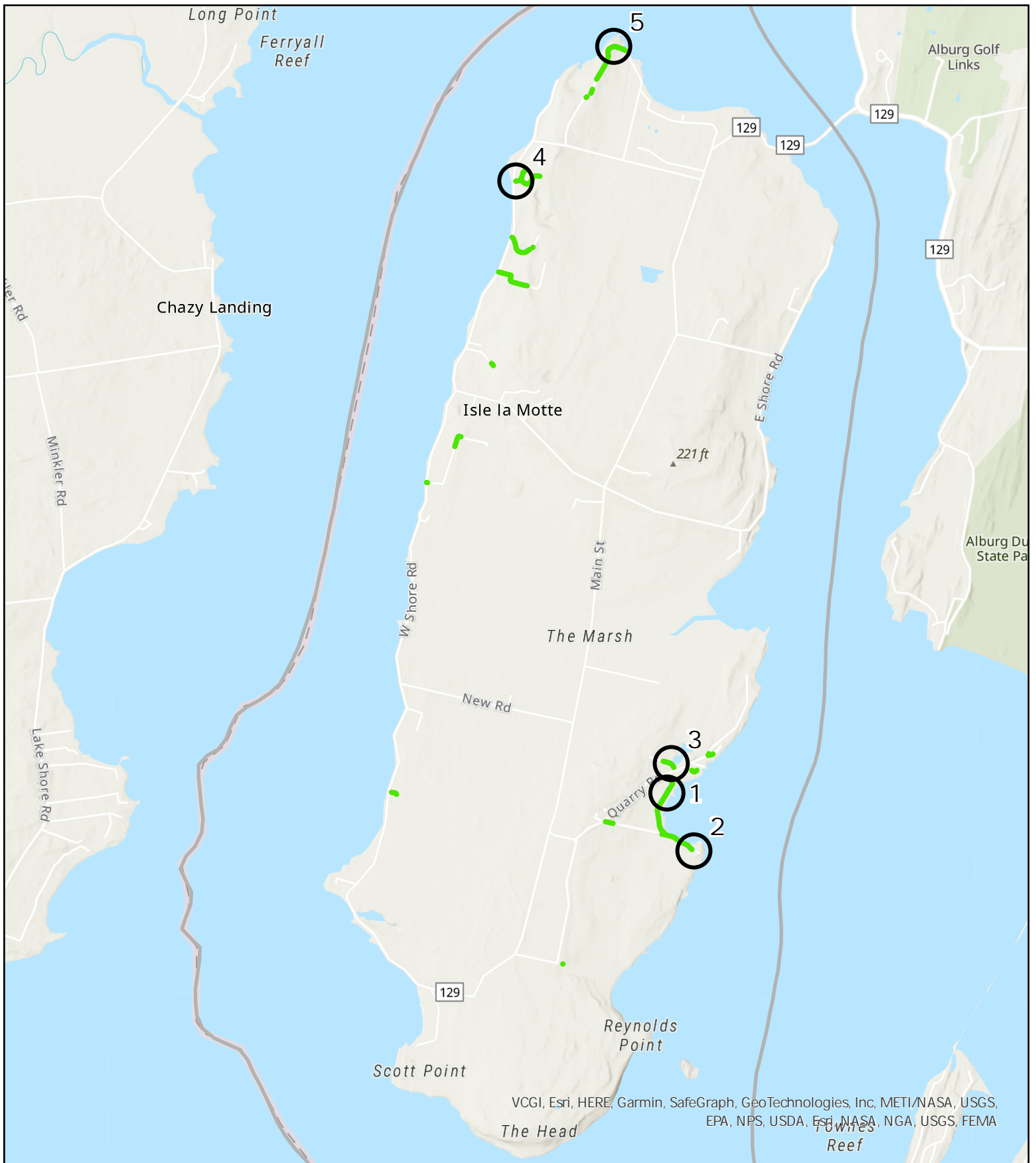
## Legend

-  Potential Project Locations
-  Selected Private Roads



0 0.25 0.5 1 Miles

VCGI, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS, FEMA



# Town of Isle La Motte

Potential Project Locations

Low Volume Road

Project Development Initiative  
(1 - 2 locations to be selected)

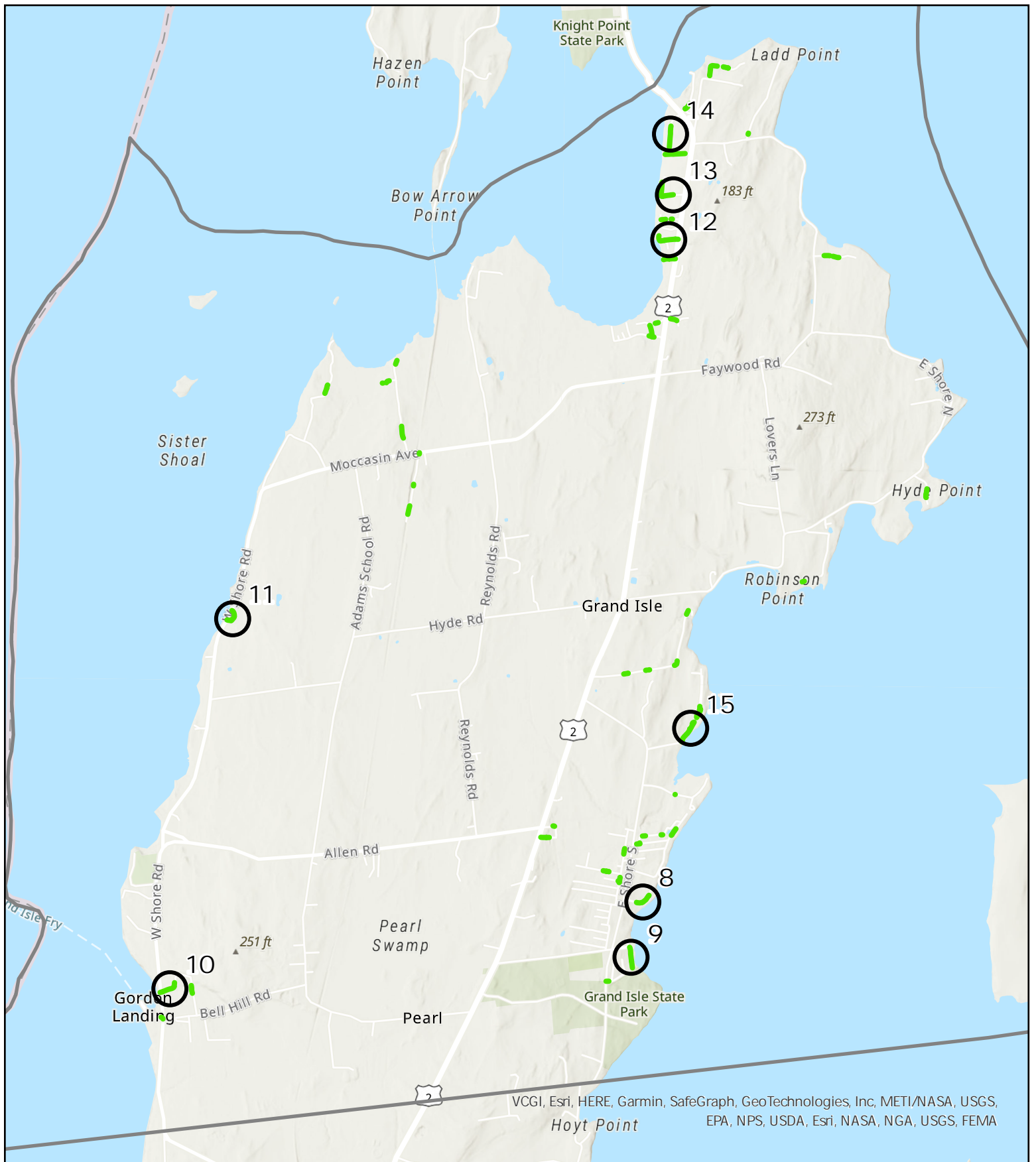
## Legend

○

Potential Project Locations

Selected Private Roads



0 0.25 0.5 1 Miles



# Town of Grand Isle

Potential Project Locations  
 Low Volume Road  
 Project Development Initiative  
 (1 - 2 locations to be selected)

## Legend

-  Potential Project Locations
-  Selected Private Roads



0 0.25 0.5 1 Miles

VCGI, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS, FEMA





LEGEND

- Wetland - VSWI**
- Class 1 Wetland
  - Class 2 Wetland
  - Wetland Buffer
- Roads**
- Interstate
  - US Highway; 1
  - State Highway

NOTES

Map created using ANR GIS mapping technology.

1: 82,860

July 28, 2023



4,209.0 0 2,104.00 4,209.0 Meters

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
© Vermont Agency of Natural Resources

1" = 6905 Ft. 1cm = 829 Meters  
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

### Wetland - VSWI

- Class 1 Wetland
- Class 2 Wetland
- Wetland Buffer

### Roads

- Interstate
- US Highway; 1
- State Highway
- Town Highway (Class 1)
- Town Highway (Class 2,3)
- Town Highway (Class 4)
- State Forest Trail
- National Forest Trail
- Legal Trail
- Private Road/Driveway
- Proposed Roads

- Town Boundary



1: 77,913

July 28, 2023



## NOTES

Map created using ANR's Natural Resources Atlas

3,958.0 0 1,979.00 3,958.0 Meters

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

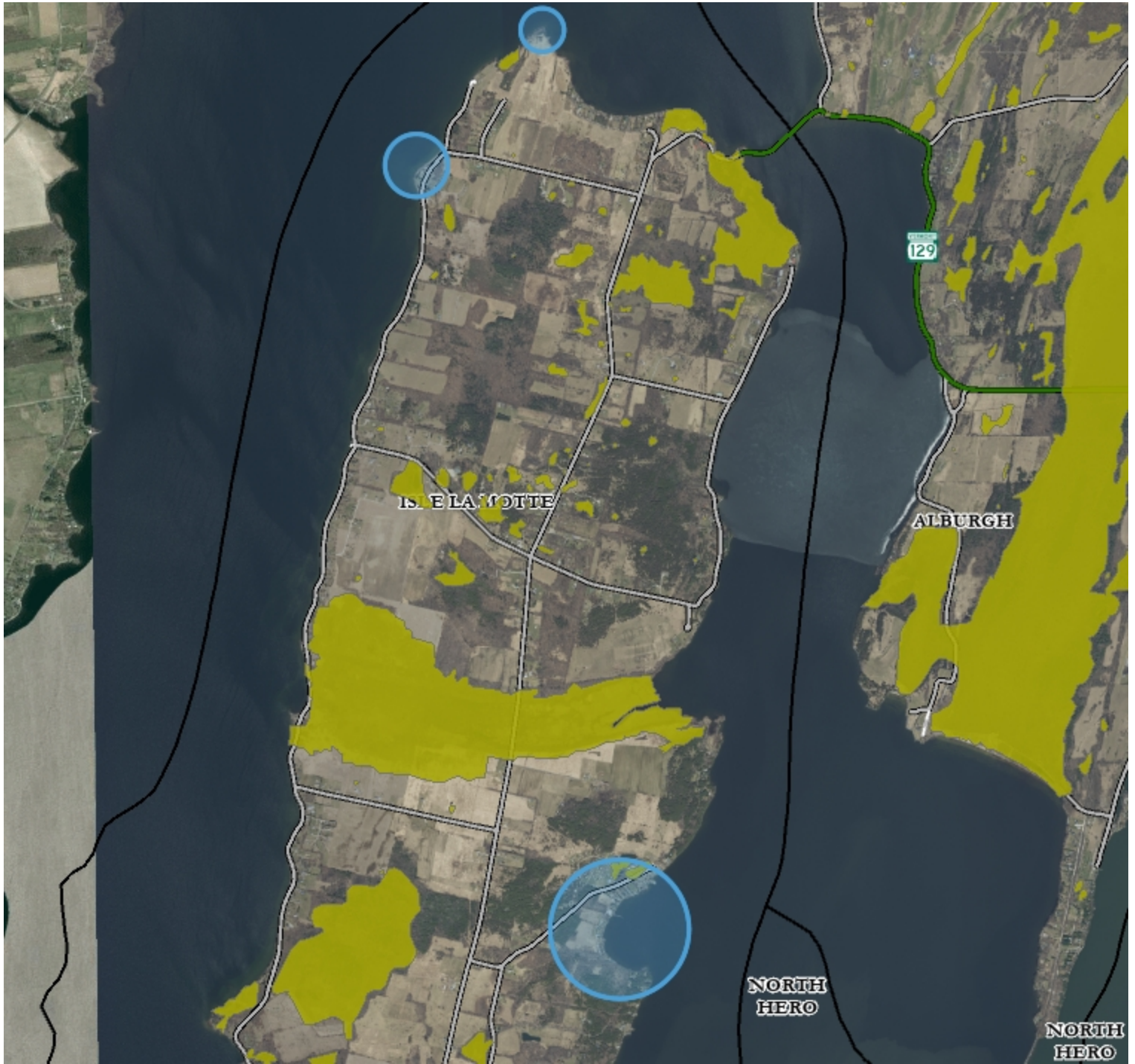
© Vermont Agency of Natural Resources

1" = 6493 Ft. 1cm = 779 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

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LEGEND

- Wetland - VSWI
- Class 1 Wetland
  - Class 2 Wetland
  - Wetland Buffer
- Roads
- Interstate
  - US Highway; 1
  - State Highway

NOTES

Map created using ANR GIS mapping technology.

1: 41,430

July 28, 2023



2,105.0 0 1,052.00 2,105.0 Meters

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1" = 3452 Ft. 1cm = 414 Meters  
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	Task Item	NRPC staff	Engineering	TOTAL
		Total NRPC Hours	Engineer	
		rate varies	\$ 125	
<b>1 Outreach</b>	<b>1.1</b> Outreach to commissioners	6		6
	<b>1.2</b> Landowner Outreach	36		36
	<b>1.3</b> Social Media Outreach	8		8
	<b>1.4</b> Attend Selectboard Meetings	18		18
<b>2 Site Visits</b>	Preliminary site visits	25		25
<b>3 Contractor Procurement</b>	Contractor Procurement	10		10
<b>4 DEC Coordination</b>	Meeting with DEC staff	7		7
<b>5 Engineering/ Design</b>	<b>5.1</b> Document existing conditions	24		24
	<b>5. 2</b> Site Survey	12		12
	<b>5.3</b> Concept Design	24	8	32
	<b>5. 4</b> NRPC site visit with engineer/designer	16	8	24
<b>6 Desktop</b>	<b>6. 1</b> Hydrologic Connectivity Screening	8		8
	<b>6.2</b> Determining potential practices	7		7
	<b>6.3</b> Preparing plan/ sketch template	26		26
	<b>6.4</b> Permitting Research	6		6
<b>7 Draft O&amp;M Plan</b>	Draft Maintenance Plan and O&M Agreement	5		5
<b>8 Landowner Responsible Party</b>	Identification of supportive Operation and Maintenance Responsible Party	4		4
<b>9 Final Reporting</b>	<b>9.1</b> Estimating Phosphorous Reduction benefits	5		5
	<b>9.2</b> Cost Estimation for Determined Practices	6		6
	<b>9.3</b> Natural and Cultural Resource Constraints	4		4
	<b>9.4</b> Determining Co-benefits	3		3
	<b>9.5</b> Final Report	36		36
	Total Hours	296	16	312
	Labor Cost	\$ 21,493	\$ 2,000	\$ 23,493
	Mileage	\$ 450	\$ 110	\$ 560
	Grand Total	\$ 21,943	\$ 2,110	\$ 24,053



Task	Task Item	Schedule	Milestones
1 Outreach	1.1 Outreach to commissioners	September to October 2023	Ownership of site(s) identified and contacted
	1.2 Landowner Outreach	September to November	
	1.3 Social Media Outreach	September to November	
	1.4 Attend Selectboard Meetings	September to October 2023	
2 Site Visits	Preliminary site visits	October to November 2023	Site visit(s) complete
3 Contractor Procurement	Contractor Procurement	September to October 2023	
4 DEC Coordination	Meeting with DEC staff	December to January 2023	DEC staff consultations
5 Engineering/ Design	5.1 Document existing conditions	October to November 2023	
	5.2 Site Survey	October to November 2023	
	5.3 Concept Design	November to December 2023	
	5.4 NRPC site visit with engineer/designer	November 2023	
6 Desktop	6.1 Hydrologic Connectivity Screening	September to October 2023	List of proposed projects to be developed
			(1 of 2) Identified site/design considerations and permitting needs
	6.2 Determining potential practices	December 2023 to January 2024	
	6.3 Preparing plan/ sketch template	December 2023 to February 2024	
			(2 of 2) Identified site/design considerations and permitting needs
	6.4 Permitting Research	December 2023 to January 2024	
7 Draft O&M Plan	Draft Maintenance Plan and O&M Agreement	January to February 2024	Identification of supportive operation and maintenance (O&M) responsible party
8 Landowner Responsible Party	Identification of supportive Operation and Maintenance Responsible Party	February to March 2024	
9 Final Reporting	9.1 Estimating Phosphorous Reduction benefits	March 2024	
	9.2 Cost Estimation for Determined Practices	March 2024	
	9.3 Natural and Cultural Resource Constraints	March 2024	
	9.4 Determining Co-benefits	March 2024	
	9.5 Final Report	April 28, 2024	Project Complete