



# Presumpscot Regional Land Trust

February 18, 2019

Town Manager's Office  
Town of Windham  
School Street  
Windham, ME 04062

Dear Town Councilors,

Please accept this application from the Presumpscot Regional Land Trust for the Watershed Protection Fund 2019 Grant. Presumpscot Regional Land Trust merged with Windham Land Trust and Presumpscot River Watch in October 2016. We would like to thank the Town of Windham for the past six years of support for water quality monitoring projects.

The land trust's water stewardship project collects water quality data watershed-wide; however for this grant we are applying for funds specifically for work in Windham. The Windham project is titled: Protecting Windham's Rivers and Streams: Water Stewardship Project.

Thank you for your consideration of granting funds to help see that monitoring of water quality happens on all major rivers and streams in Windham. Ongoing water quality monitoring is one of the best ways for early detection, helping to ensure water protection and restoration for Windham's rivers and streams, which are vital for all citizens in order to fish, swim and recreate.

Sincerely,

Rachelle Curran Apse

Attachments:

Grant Application

Project Budget

Map of Potential Water Quality Monitoring Sites in Windham

Board of Directors

Joanne Chessey  
Sebago

Matt Craig  
Cape Elizabeth

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Windham

Executive Director

Rachelle Curran Apse

Contact

info@prlt.org

P.O. Box 33  
Gorham, ME 04038

**TOWN OF WINDHAM - WATERSHED PROTECTION FUND  
2019 GRANT APPLICATION**

**Applicant Contact Information:**

Applicant Name: Presumpscot Regional Land Trust  
Contact Person: Rachelle Curran Apse, Executive Director  
Address: P.O. Box 33  
City: Gorham State: ME Zip Code: 04038  
Phone: 207-839-4633 Fax: n/a  
E-mail: rachelle@prlt.org

**Qualifications and Experience:**

The Presumpscot Regional Land Trust engages with communities to conserve, steward, and provide access to local lands and clean water for current and future generations to enjoy. The land trust is a non-profit organization working within the Presumpscot River watershed and holds conservation lands in the towns of Gorham, Gray, Standish, Westbrook and Windham.

As of 2016 when the Presumpscot Regional Land Trust merged with Presumpscot River Watch and Windham Land Trust, water stewardship has been an ongoing project for the land trust with Windham being a central focus of the project. In 2019, the land trust is continuing this project, building on a decade of close collaboration with the Maine Department of Environmental Protection Volunteer River Monitoring Program. The state program provides a day-long volunteer training each year, approves sites for water quality monitoring, and stores all historical water quality data. As a result, the land trust water stewards program follows best practices in water quality monitoring.

The water stewards project is managed by the land trust Stewardship and Outreach Manager, Toby Jacobs, who works closely with an advisory committee that includes experts in the field. This committee includes former leaders of the Presumpscot River Watch, Fred Dillon and Tamara Lee Pinard, and USM Environmental Science and Policy Professor Karen Wilson.

In addition, Windham Land Trust conducted water quality monitoring on Black Brook and Otter Brook for the four years prior to the merger, thanks in large part to the Windham Watershed Protection Grant. The data and past experience from Windham Land Trust related to water quality monitoring has been incorporated into the new program. The land trust is committed to having water stewardship of the Presumpscot River watershed be an ongoing project.

The project manager, Toby Jacobs, has a master's degree in conservation biology, years of fieldwork experience, and has managed the financial, administrative, and technical aspects of the land trust water quality monitoring program for the past two years. Prior to his current job, Toby worked for the Department of Marine Resources as a Marine Resource Specialist collecting water samples and overseeing volunteers who collected water samples.

While this project is watershed wide, nearly half of the water quality sites are within the town of Windham, making Windham a top priority town for this project.

**Project Name:** Protecting Windham's Rivers and Streams: Water Stewardship Project

**Water Body Names:** Presumpscot River watershed in Windham, including: Baker Brook, Black Brook, Colley Wright Brook, Ditch Brook, Inkhorn Brook, Otter Brook, Pleasant River and the Presumpscot River.

**Project Description:** Problem: The Presumpscot River watershed represents the most densely populated region in the state of Maine, and the population continues to grow quickly. The town of Windham is within the Presumpscot River watershed and one of just a few towns that is central to the watershed. Most rivers and streams in Windham are impaired; one of the most important ways to protect these waterways is to regularly test the water quality. The Maine Department of Environmental Protection only tests the water quality once every 4-5 years; this is inadequate to track ongoing water quality. Because the state recognizes they do not have the resources to adequately monitor water quality, they created the Volunteer River Monitoring Program in which they provide technical support and some equipment to local water quality monitoring programs.

Solution: Regular water quality monitoring is vital for early detection and can help keep water protection and restoration efficient and manageable. The Presumpscot Regional Land Trust water stewardship program is now in its third year. The land trust has continued the key aspects of both the Presumpscot River Watch's and Windham Land Trust's past water quality monitoring programs.

The program will have about 40 water quality monitoring sites throughout the watershed; Presumpscot River Watch collected data at many of these for decades prior to the merger. Also included are the sites Windham Land Trust tested on Black Brook and Otter Brook for the four years prior to the merger. Nearly half of the sites will be in Windham because Windham is central to the Presumpscot River watershed.

The program will be managed by Toby Jacobs, the land trust field staff person, and supported by a University of Southern Maine intern. Water quality monitoring data will be collected from May through September every other week by 40 citizen science volunteers who will all attend a day-long training conducted by the State Volunteer River Monitoring Program to ensure high quality data. All data must be collected within a two hour window for each sampling date; as a result each pair of citizen scientists can monitor only two sites.

Each pair of citizen scientists needs a water meter which accurately measures water temperature and dissolved oxygen levels. In addition, water is collected and tested for bacteria (specifically *E. coli*). The bacteria testing will be conducted at the University of Southern Maine labs by the intern with staff supervision.

All water quality monitoring data collected throughout the season will be compiled, analyzed and compared to previous years. Data from 2018 for all sites can currently be viewed in map form on the Water section of the land trust's website. Since the project did not receive full funding last year, historical maps and analysis of averages and trends over 10 years are still in progress and should be released in spring 2019. The land trust will continue to publish annual data to make sure the community knows the current state of water quality related to healthy fishing and swimming in the rivers and streams in Windham.

**Project Benefits:**

Protecting Windham's Rivers and Streams – the water stewardship project will provide annual data on the health of Windham's waterways that can be shared with all citizens of Windham. Fundamental indicators of a healthy community include having fishable and swimmable waters. Windham has some of the premiere stream and river fishing in the region and promotes swimming at Dundee Park along the Presumpscot River.

One of the best ways to ensure Windham's rivers and streams stay swimmable and fishable is to regularly monitor the water quality.

Over the past two years the land trust has monitored the water quality on all major streams and rivers in Windham at about twenty different sites and plans to do the same this year (see map at the end of this packet). This water stewardship project will help the citizens of the town of Windham understand the health of rivers and streams in their town. To ensure the water quality monitoring data is best utilized, we will update our citizen friendly online map/guide to understanding the water quality of the streams and rivers in Windham based on the data collected throughout 2019. The upcoming historical report on water quality averages and trends over the past 10 years will also incorporate the data collected in past years from both Windham Land Trust and Presumpscot River Watch.

This will be an ongoing project, so each year the annual report will compare results to past years, and the citizens of Windham will be able to see trends in the health of the streams and rivers. Trends in water quality are key to early detection in order to further protect and restore waterways to ensure all citizens of Windham can safely fish, swim and recreate in the rivers and streams of Windham into the future.

**Project Schedule and Cost:**

Planned Duration:      Start Date: April 2019      End Date: December 2019

Total Cost of the Project within Windham \$ 14,000

Amount Requested from the Windham Watershed Protection Fund \$ \$3,000

Matching Funds:      Cash: \$ 4,000      Services: \$7,000

Who will provide the matching funds/services?

- Casco Bay Estuary Partnership
  - \$3,500 grant funds
- University of Southern Maine, Environmental Science and Policy Department
  - \$500 towards lab space
- 20 Citizen Scientist volunteers will help collect data for the project
  - \$6,000 volunteer time
- Maine Department of Environmental Protection – Volunteer River Monitoring Program
  - \$500 for training and equipment loan
- Presumpscot Regional Land Trust
  - \$500 indirect costs: insurance

Will there be any other sources of funding?

The full Presumpscot River watershed water stewardship program will cost \$35,000 and the same funders as above will be providing more funds for the full project. For this grant, we just included the expenses and income that will be used within the town of Windham.

**Sustainability:**

The Presumpscot River watershed water stewardship project is an ongoing project of the land trust. We expect to receive annual grant funding from Casco Bay Estuary Partnership, annual in-kind support from the Maine Department of Environmental Protection – Volunteer River Monitoring Program, and annual in-kind support from University of Southern Maine through providing lab space. We have committed our field staff to program management for this program, and the land trust will cover all indirect costs for this program.

The anticipated annual funds for the whole project will vary from \$32,000 - \$42,000 a year depending on equipment needs, with \$13,000-\$17,000 of that going specifically to the Windham project. Through our staff time and our partnerships we have identified nearly 90% of the costs for this program into the future.

We are hopeful that the town of Windham will consider helping to provide the remaining funds needed for this program through the Watershed Protection grant.

**Resource Sharing:**

Equipment: The land trust plans to borrow ten meters from Casco Bay Estuary Partnership and eight meters from Maine Department of Environmental Protection each year. We have reached out to the Highland Lake Association this year to see how we might share resources and collaborate, especially on public outreach. We will also continue reaching out to other lake associations in Windham in the coming year.

It is our intent to work closely with other non-profits who work on water protection and restoration within in the town of Windham partnering whenever possible with such groups as Cumberland County Soil and Water District, Little Sebago Lake Association, Highland Lake Association, Portland Water District, and Trout Unlimited, along with the town of Windham. We recognize that water protection and restoration is most effective when working in partnership.

### **Protecting Windham's Rivers and Streams: Water Stewardship Project 2018**

EXPENSES		Details
Project Management	\$3,000	120 hours of staff expenses specifically for Windham water quality monitoring.
Intern	\$1,500	A USM student intern from the Environmental Science and Policy Department that will help with the project
Equipment and Supplies	\$2,000	1 YSI Dissolved Oxygen and Temperature meters (\$700 each), Bacteria sampling supplies to cover 200 samples (\$1300)
Training	\$500	Provided by Maine Department of Environmental Protection - Volunteer River Monitoring Program
Final Report	\$500	Design and Printing for Annual Report
Citizen Scientists	\$6,000	20 volunteers in Windham each donating about 20 hours = 400 hours of volunteers at the standard volunteer calculation of \$15/hour
Indirect Costs: Insurance	\$500	To cover staff and volunteer insurance
<b>TOTAL</b>	<b>\$14,000</b>	
INCOME		Details
Casco Bay Estuary Partnership Grant	\$4,000	Pending
University of Southern Maine	\$500	Provided in-kind – lab space for bacteria testing
Maine Department of Environmental Protection Training	\$500	Provided in-kind technical assistance and training
Citizen Scientists	\$6,000	Provided In-kind volunteer hours
<b>Windham Watershed Protection Grant</b>	<b>\$3,000</b>	<b>\$1,000 for project management, \$1,000 for intern costs, \$500 for supplies, \$500 for final report</b>
<b>TOTAL</b>	<b>\$14,000</b>	

\*All expenses and income in this budget are specifically for project work in Windham.

### **Proposed Project Water Quality Monitoring Sites in 2019**

The map below shows sites primarily in Windham.

