

I. Project Information

Project Title	#20240008 Vaughan Brook Watershed-Based Management Plan Development Project
Applicant’s Organization	City of Hallowell
Applicant’s UEI#	J87JC43ZEFR3
Project Start Date	October 1, 2024
Project Completion Date	December 31, 2026

II. Waterbody and Watershed Information

a. Background

Waterbody Name	Vaughan Brook
Waterbody Size (e.g., lake acres, stream miles)	3.75 miles (main stem), 15.24 miles (including all tributaries)
Watershed Area (acres or square miles)	3,795 acres or 5.9 square miles
Watershed Location (town(s), county(s))	Hallowell, Farmingdale, and Augusta, Kennebec County
Title and Date of Existing or Past Watershed-based Management Plan	n/a
Public Access to Waterbody	Vaughan Woods: 197 acres Hallowell Recreation Area: 160 acres (headwaters)
Is the Waterbody a public drinking water supply? If yes, is it primary or backup?	No

b. Waterbody and Watershed Physical Characteristics

The main stem of Vaughan Brook is located in the City of Hallowell and Town of Farmingdale. Two major tributaries flow into Vaughan Brook from the north including Bombahook Stream to the east, and a smaller unnamed tributary to the west (see Appendix A for Location Map). These tributaries drain a large portion of the City of Hallowell, a portion of the Town of Farmingdale, and a small area in the City of Augusta, near the Augusta Crossing Mall and Parkwood Drive. Sixty seven percent of the watershed is located in the City of Hallowell, 29% is located in the Town of Farmingdale, and 4% is located in the City of Augusta. Sixty-eight percent of the land area in the City of Hallowell is located within the Vaughan Brook Watershed.

Vaughan Brook flows into the Kennebec River in Hallowell just north of the intersection of Water St (Route 201/27) and Greenville Street. The brook is impounded just over a half mile from the confluence with the Kennebec River, creating 7.4-acre Cascade Pond in Vaughan Woods.

Nearly half the land cover in the Vaughan Brook watershed is forested (46%), but also includes areas of agriculture, with 20% of the watershed used as pasture or hayfields. Developed land encompasses another 20% of the watershed area, with most commercial development

concentrated in Hallowell around Winthrop St, Whitten Rd, and a portion of the Augusta Crossing Mall in Augusta, on the north end of the watershed. The watershed also includes areas of dense residential development throughout, concentrated around major roads including Winthrop St, Central St, and Town Farm Rd. Interstate 95 runs north to south through the watershed, crossing Vaughan Brook and its tributaries four times. Over 50% of the watershed is made up of soils with very slow infiltration, including Scantic silt loam and Lyman loamy glacial till.

c. Description of Waterbody Uses and Value

Vaughan Brook and its watershed provide significant opportunities for year-round public recreation, including swimming, hiking, biking, fishing, birding, as well as snowmobiling and skiing in the winter. The brook is a major component of Hallowell's acreage, scenic beauty, and recreational assets. Protecting Vaughan Brook and its watershed was identified as a community priority in the City of Hallowell's 2020 Comprehensive Plan. Strategies to meet this goal were also specified in the plan, including assessing, restoring, and protecting Vaughan Brook with the goal of removing it from the DEP NPS Priority Watersheds List as a threatened stream. A few public areas provide access to the brook: Vaughan Woods, the Kennebec River Rail Trail, and the Hallowell City Forest and Recreation Area, locally known as "The Res."

The Res, located on Town Farm Road in the northeastern corner of the watershed, also includes a network of trails popularly used for walking, mountain biking, skiing, and snowmobiling, along with a beach, picnic area, and recreation fields. Features enjoyed by visitors include two larger ponds or reservoirs and multiple beaver ponds and wetland areas, all of which are connected to Vaughan Brook through Bombahook Stream. Over five miles of trails allow visitors to view wading and migrating birds, to fish, or to just enjoy views of the water features, wildlife, and the surrounding undeveloped forest.

Vaughan Woods and the associated historic Vaughan Homestead (VW&HH) are listed on the National Register of Historic Places and are visited by an estimated 40,000 people per year. The woods are a popular recreation site with approximately three miles of public hiking trails that crisscross the cascading Vaughan Brook via 100-year-old historic stone bridges.¹ The highly traveled Kennebec River Rail Trail also provides access to Vaughan Brook as it meanders between the eastern side of Vaughan Woods and the Kennebec River. The rail trail crosses a high bridge that gives riders and walkers a fantastic view of the cascading stream as it enters the Kennebec. The Kennebec Land Trust (KLT) has held the conservation easement on the 197-acre Vaughan Woods since 1991 including its picturesque Vaughan Brook.

Vaughan Brook also provides valuable wildlife habitat. There are 504 acres of freshwater wetlands within the Vaughan Brook watershed, including a few very large areas, which provide additional habitat for wildlife, including many migrating birds who use the watershed as a resting and feeding area. Sensitive areas including a state-listed inland wading bird and wildlife habitat, one area of deer-wintering habitat, and multiple large undeveloped habitat blocks. Tidewater mucket, a state-listed threatened species of freshwater mussel, has been observed in the

¹ <https://vaughanhomestead.org/>

Kennebec River just north of the Vaughan Brook outlet.² Vaughan Brook and its tributaries provide approximately 15 miles of stream habitat, along with associated riparian areas. The stream is known to support a population of native brook trout in the upper watershed that provides an important recreational asset to the community. The watershed is also home to several bird species listed by the U.S. Fish and Wildlife Service as “priority trust species,” including Eastern meadowlark and grasshopper sparrows. Over 20 other bird species listed as priority either breed or feed within the watershed, including Northern harrier, Northern goshawk, many warblers, and common snipe. Bombahook Point, where Vaughan Brook meets the Kennebec River is mapped as Essential Habitat by Maine Department of Inland Fisheries and Wildlife for bald eagles, which nest and feed in the area. Although the point may be considered to be in the Kennebec River watershed, Vaughan Brook greatly contributes to the geomorphology of the confluence, including supplying an ice free area where eagles can access prey.

III. Water Quality Problem or Threat

a. Water Quality Listing Status

Is water quality listed as impaired?	No
If impaired, what is the listed cause(s) and/or impaired use?	n/a
Name and date of any DEP TMDL report(s) for the waterbody.	n/a

b. Water Quality Overview

Vaughan Brook is a Class B stream and is listed as “Threatened” on Maine DEP’s Nonpoint Source (NPS) Priority Watersheds List due to threats from development in the watershed. Based on monitoring results from the DEP’s Biomonitoring Unit, Vaughan Brook has failed to meet Class B water quality standards in recent years. The stream was sampled at two stations downstream of Cascade Pond in Vaughan Woods in 2007, 2012, 2017, and 2022, and at one station in The Res in 2017. Since 2012, Vaughan Brook has not attained the requirements for aquatic life in Class B streams at any station except at the wetland station located in The Res which attained Class B standards for algae but not for macroinvertebrates when sampled in 2017. Total phosphorus grabs collected during biomonitoring sampling events ranged from 8.3 µg/L (mainstem, 2017) to 35 µg/L (mainstem, 2022).

Portions of Vaughan Brook also regularly fail to meet Class B standards for dissolved oxygen (DO) based on data collected by volunteers for the DEP’s Volunteer River Monitoring Program (VRMP), which has been collecting data in Vaughan Brook since 2021. There are nine VRMP sites on Vaughan Brook, two of which are located on the main stem, three on Bombahook Stream and its tributaries, two on the unnamed tributary in the western watershed, and one on a tributary on the southern end of the watershed (see Location Map in Appendix A for VRMP monitoring sites). All of the sites located on Bombahook Stream experienced DO levels below state standards at least some of the time, with two sites not attaining standards at any sampling event (WS-1 and OC-2). Average DO at these two sites in 2023 was 4.8 mg/L and 4.0 mg/L. DO levels also failed to attain Class B standards at more than half the sampling events at the southern tributary (LF-1),

² [Beginning with Habitat Map Viewer](#)

and on the mainstem upstream of Cascade Pond (LL-1).

Data collected through the VRMP also indicate that in certain sections of the brook temperature is a concern for fish habitat. Average water temperature at the 9 sites monitored in Water temperatures in Vaughan Brook range from 14.7°C (OC-1) to 20.8°C (TF-1). Two sites (TF-1 and VW-1) had average water temperatures greater than 19°C, the reported maximum weekly average temperature required for brook trout growth. These sites each also had at least one temperature observation greater than 24°C, considered the short-term maximum temperature for juvenile brook trout survival. Two other sites (LL-1 and OC-2) had average temperatures of 18°C or greater. Together these data indicate the importance of maintaining riparian cover in these areas. Water temperature is directly affected by riparian cover. The better the shading, the cooler the water temperature and vice versa.

Volunteers have also measured specific conductivity (SPC) as part of the VRMP program. SPC was especially elevated in the northernmost sampling site (WS-1), located south of I-95 and the Augusta Crossing Mall, with an average SPC of 811 µs/cm.

IV. Watershed Nonpoint Pollution Sources and NPS Mitigation Activities

a. Summary of Watershed Assessments and Priority Nonpoint Pollution Sources

Volunteer River Monitoring Program (VRMP) (2021-Present)- In 2021, the Hallowell Conservation Commission, in coordination with Maine DEP began a volunteer monitoring program on Vaughan Brook to begin assessing conditions in the main stem and several upstream tributaries. Approximately 10 HCC trained volunteers have consistently gathered six to eight sets of data for three consecutive years with plans to continue this program in 2024 and beyond.

Stream Explorers (2022 - Present)- In 2022, the Hallowell Conservation Commission, in coordination with Maine Audubon, started a Stream Explorers program on Vaughan Brook to: assess the biological community in the brook, to augment biomonitoring efforts by Maine DEP; and raise awareness about water quality in the stream. HCC has plans to continue this program in 2024 and beyond. A total of 20 volunteers have participated in the program to date.

There are no records of watershed assessments in the Vaughan Brook watershed. However, monitoring data collected by Maine DEP and VRMP volunteers indicate that an assessment of the riparian corridor and greater watershed area (with a focus on roads and agriculture) is needed in order to protect and improve the water quality in Vaughan Brook.

b. Description of Watershed Activities to Address NPS Pollution

There have been no 604(b) or 319-grant funded projects in the Vaughan Brook watershed. However, the City of Hallowell has taken actions to improve conditions at the Hallowell Recreational area and recently passed an ordinance in 2023 to restrict the use of any pesticides, organic or synthetic, within 75 feet of waterbodies (see Land Care & Management Ordinance below).

Vaughan Woods & Historic Homestead Stewardship- The Vaughan Woods & Historic Homestead is a nature preserve and non-traditional house museum built in 1794 that includes Vaughan Woods and Vaughan Brook. Projects within the preserve have included management of

stormwater runoff, monitoring and controlling invasive species, creating educational signage, and monitoring water quality in Vaughan Brook.

National Park Service Rivers, Trails and Conservation Assistance Program (2017)- In 2017, HCC received technical assistance through the National Park Service's Rivers, Trails, and Conservation Assistance Program. The assistance focused on the use and maintenance of the Hollowell Recreation Area Park consisting of 160 acres, 5 miles of multi-use trails, two freshwater ponds (part of watershed), beach area, recreational amenities, and historic granite quarries. Project partners established a foot-only path along the shoreline of largest pond. The project results included a documented trail maintenance process to deter erosion; memos of understanding and annual trail assessments between clubs/associations/HCC on specific trail responsibilities and conditions; trail map and trail signs; and a user information guide. Future planning included support of Manchester's new 4-mile multi-use trail system connecting to the Park's existing trails.

Land Care & Management Ordinance (2023)- Between 2021 and 2023, HCC supported the Grow Green & Healthy Hollowell initiative as an HCC subproject to limit the use of synthetic pesticides and fertilizers within the City on both private and public land. A completely grassroots effort with HCC support through City Administration and Ordinance approval processes was successful in collaborating with the Mayor and City Council for over a year to engage and educate city residents and approve the Land Care Management Ordinance in September 2023. The Ordinance restricts the use of synthetic pesticides in the city and ALL pesticides (organic & synthetic) within 75 feet from water bodies. The current roll-out of ordinance includes resident and business education, reference document updates, informational sessions, Q&A, etc.

In 2022, the City updated their comprehensive plan. The plan includes a goal of removing Vaughan Brook from the Maine DEPs NPS Priority Watersheds List by identifying and mitigating pollutants, and increasing awareness of NPS pollution in the watershed. This goal, along with recent water quality data that shows both aquatic life and DO impairments, as well as the brook's public visibility and recreational access makes development of the Vaughan Brook WBMP a high priority for the City, project partners, landowners, City residents, and visitors alike.

The HCC is led by a committed group of pro-active, conservation-minded individuals with depth of experience, and strong backing from the City of Hollowell and local watershed partners. The HCC commitment to volunteer monitoring, helping pass the 2023 pesticide ordinance, and other local initiatives is a demonstrates the level of support available to successfully develop and oversee the implementation of a 10-year WBMP with clear actions needed to remove Vaughan Brook from the threatened streams list.

V. Purpose

The purpose of the Vaughan Brook Watershed-Based Management Plan (WBMP) Development Project is to develop a comprehensive WBMP in order to restore Vaughan Brook so that it meets or exceeds Class B State water quality standards. The plan will include EPA's nine minimum elements of watershed-based plans, including locally-supported water quality goals, and best management practices to control current sources of NPS. Major project accomplishments and outputs will include: stream monitoring and a stream corridor assessment, watershed and agricultural surveys, stressor analysis, land-cover assessment, watershed and pollutant load

modeling, four steering committee meetings, and a wide range of public outreach including one public meeting.

VI. Partner Coordination, Roles and Responsibility

The City of Hallowell will serve as the grantee, providing financial management of the project including set up and review of subgrants and sub-agreements, processing all receipts and payments and responding to DEP questions and audits (Task 1), as well as provide project assistance for copying, preparing mailing lists, providing property records (Task 4), offering meeting space for the public workshop, and posting project information on the City website (Task 7). The City will provide **\$10,000 cash match and \$1,862 in-kind match** to the project.

Hallowell Conservation Commission (HCC) will serve as the lead point of contact for the grant. HCC members will serve on the Steering Committee and subcommittees, recruit volunteers to participate in watershed assessments, serve as the liaison between the City and landowners for field assessments, assist DEP with selection of new biomonitoring sites, continue VRMP monitoring and Stream Explorer data collection, provide content for newsletters, social media, websites, and the Hallowell Champion (distribution to 1,700 Hallowell residents), help coordinate and provide outreach for the public forum, provide input for and review the draft WBMP, and keep City officials and the public informed about WBMP progress. HCC will provide **\$11,033 in-kind match** to the project (Attachment 2). HCC will be the lead entity in charge of implementing the WBMP over the next 10 years.

Kennebec Land Trust (KLT) will serve on the Steering Committee (Task 2), publish project updates in their two KLT newsletters (distribution of approximately 1,300) (Task 7), and provide input and review of the WBMP (Task 8). KLT has pledged **\$896 in-kind match** to the project.

Vaughan Woods & Historic Homestead (VW&HH) will serve on the project Steering Committee (Task 2), public project information in two VWHH newsletters (distribution of 450 regionally) (Task 7), and provide input and review of the WBMP (Task 8). VW&HH will provide **\$382 in-kind match** to the project.

An Environmental Consultant will be hired by the City of Hallowell to help manage the project and oversee all project tasks to completion. In addition to experience managing 604(b) grants, the firm must have experience in developing EPA's 9-element watershed-based plans, and specifically have experience with: water quality monitoring and analysis, watershed surveys, watershed modeling, GIS mapping, public outreach, and technical writing. The City will follow all applicable procurement procedures as outlined in the DEP's NPS Grant Administrative Guidelines.

Maine Department of Environmental Protection will administer project funding, serve as the project advisor, serve on the Steering Committee, and provide project and technical support including assistance with stream monitoring, and technical support for VRMP volunteers.

US Environmental Protection Agency will provide work plan guidance and project funding, pending acceptability of final workplan and availability of federal funds.

VII. Tasks, Schedules and Estimated Costs

All press releases, outreach materials, project signs, and plans will acknowledge that the project is funded in part by the United States Environmental Protection Agency under Section 604(b) of the Clean Water Act. Project staff will consult with DEP on EPA’s public awareness terms and conditions for Section 604(b) grants before the project commences. In addition, project staff will consult with DEP and EPA before project signs are designed. Refer to the Service Contract, Rider A. Section III. D. Acknowledgement.

Task 1 – Project Administration

The City of Hallowell will administer the project according to the service contract with DEP. The City will work in collaboration with HCC, who will provide project coordination with support of an environmental consultant to oversee project progress, expenses, matching funds, and submit reports (semi-annual progress reports and final project report) and other deliverables (including an NPS Site Tracker, per Task 4).

Start and Completion Dates	October 2024 – December 2026	
Grant Cost: \$2,547	Match Cost: \$2,112	Total Cost: \$4,659
Breakdown of Grant by Cost Category: \$2,547 (contractual)		
Breakdown of Match by Cost Category: \$881 (salary & fringe), \$1,000 (contractual), \$231 (donated services-labor)		

Task 2 – Steering Committee Meetings

The watershed plan development project will be led by a Steering Committee which will include representatives from HCC, KLT, VWHH, Maine DEP, and project consultants. The Steering Committee will meet four times to review the water quality monitoring and analysis, modeling results, action plan, and help with water quality goals. Subcommittees may be formed to discuss water quality monitoring results, planning for the stream/watershed surveys, or public outreach.

Start and Completion Dates	October 2024 – November 2025	
Grant Cost: \$3,933	Match Cost: \$2,587	Total Cost: \$6,520
Breakdown of Grant Cost by Cost Category: \$3,933 (contractual)		
Breakdown of Match by Cost Category: \$1,000 (contractual), \$1,587 (donated services-labor)		

Task 3 – Water Quality Monitoring & Analysis

Project staff will compile and analyze existing water quality data. Before using pre-existing data, project staff will evaluate the data to determine if the data is acceptable to use for this project. Staff will prepare a brief Secondary Data Quality Assurance Table describing how the data will be evaluated. Project staff will document evaluations in a table: data type; data source (originating organization, report title, date); how data will be used for the project; and limitations on data use, if any. HCC volunteers will continue monitoring the brook as a part of the Volunteer River Monitoring Program and Stream Explorers program, providing more data to be used in the stream stressor analysis.

To follow-up on results from DEP Watershed Unit monitoring planned for summer 2024, project staff will conduct additional monitoring in 2025. Project staff, with consultation from DEP Watershed Unit staff, will prepare a Sampling and Analysis Plan (SAP) and future monitoring plan. This task budgets for nutrient sampling at four monitoring stations (TP & Ortho TP), but exact monitoring will be subject to results of the 2024 DEP sampling and SAP discussions. Project staff will create a water quality summary report, including future monitoring plan, to document monitoring and assist with the stressor analysis. Water quality data collected will be submitted in MS Excel or similar electronic format so that it can be uploaded into the DEP database (EGAD).

Start and Completion Dates	January 2025 – August 2026	
Grant Cost: \$7,047	Match Cost: \$3,528	Total Cost: \$10,575
Breakdown of Grant Cost by Cost Category: \$5,687 (contractual), \$1,360 (supplies)		
Breakdown of Match by Cost Category: \$3,409 (donated services-labor), \$119 (travel)		

Task 4 – Stream & Watershed Assessments

Stream and watershed assessments will be outlined in a Survey Implementation Plan (SIP) to describe methods for a) a stream corridor survey, b) watershed survey, and 3) agricultural survey.

The stream corridor survey will include assessment of approximately 9.4 miles of Vaughan Brook and high priority tributaries to assess geomorphic conditions, riparian habitat, fish barriers, and notable features that may be resulting in the aquatic life impairment. HCC will notify the approximately 50 abutting landowners about the stream corridor survey by US mail.

The watershed survey will follow-on the stream corridor survey with a focus on stream crossings (including fish barriers and culvert sizing for climate resilience), and areas of high-intensity development. The surveys will determine impact, cost, and feasibility of recommended Best Management Practices.

A separate agricultural survey will include a desktop assessment, ground-truthing agricultural land-cover data, and documentation of active farmland and hobby farms in the watershed. Field assessments will generally follow methods outlined in the Maine Stream Corridor Survey Generic Quality Assurance Project Plan (2018) and Maine Lake and Stream Watershed Survey Generic Quality Assurance Project Plan (2020).

An NPS Site Tracker spreadsheet will be created to efficiently accumulate and record information about NPS sites in the watershed to enable continued activity in future years to address sites, document fixes and record new sites. A stream corridor survey memo, watershed survey memo, and agricultural survey memo will be provided as project deliverables along with the SIP, and an NPS Site Tracker.

Start and Completion Dates	January 2025 – December 2025	
Grant Cost: \$14,892	Match Cost: \$8,132	Total Cost: \$23,024
Breakdown of Grant Cost by Cost Category: \$14,767 (contractual), \$125 (supplies)		
Breakdown of Match by Cost Category: \$176 (salary & fringe), \$5,000 (contractual), \$2,956 (donated services-labor)		

Task 5 – Stressor Analysis

A water quality stressor analysis will be completed to identify stressors that are resulting in non-attainment of aquatic life criteria and dissolved oxygen in the brook. Methods for this task will be guided by recommendations in Maine DEP’s Stream Stressor Guide (2019) to identify primary stressors associated with the changes in water quality in Vaughan Brook. Input on the stressor analysis will be provided by the Steering Committee.

Start and Completion Dates	January 2025 – March 2026	
Grant Cost: \$3,036	Match Cost: \$231	Total Cost: \$3,267
Breakdown of Grant Cost by Cost Category: \$3,036 (contractual)		
Breakdown of Match by Cost Category: \$231 (donated services-labor)		

Task 6 – Watershed Modeling

Watershed modeling will include a land-cover assessment, delineating subwatersheds, nutrient modeling using an appropriate watershed model (such as the US EPA’s MapShed/Model My Watershed), and conducting pollutant load reduction estimates for NPS sites. The model will include estimates of sub-basin pollutant loading and climate change scenarios, and will result in recommended water quality targets for improving water quality in Vaughan Brook. Modeling results will be presented to the Steering Committee. A modeling memo and spreadsheet will be provided as a project deliverable.

Start and Completion Dates	November 2025 – April 2026	
Grant Cost: \$3,671	Match Cost: \$173	Total Cost: \$3,844
Breakdown of Grant Cost by Cost Category: \$3,671 (contractual)		
Breakdown of Match by Cost Category: \$173 (donated services-labor)		

Task 7 – Public Outreach

The City of Hallowell and its partners, HCC, KLT, and VW&HHH will work collaboratively to raise awareness about the development of the Vaughan Brook WBMP. A public workshop will be held to present project information and gather input from the watershed community. In addition, the City will distribute two press releases, post project information on the City website and through Facebook and prepare articles for two issues of the Hallowell Champion (distribution to 1,700 Hallowell residents). KLT (1,300 distribution) and VW&HH (450 distribution) will include project information in two of their newsletters, respectively.

Start and Completion Dates	October 2024 – November 2026	
Grant Cost: \$3,121	Match Cost: \$3,292	Total Cost: \$6,413
Breakdown of Grant Cost by Cost Category: \$3,121 (contractual)		
Breakdown of Match by Cost Category: \$529 (salary & fringe), \$2,663 (donated services-labor), \$100 (other)		

Task 8 – Watershed-Based Management Plan

The Vaughan Brook WBMP will be completed using information developed in Tasks 2-8 (above). The plan will contain US EPAs required 9-elements including a detailed, stakeholder-driven 10-year Action Plan to improve water quality in Vaughan Brook and its watershed. High quality maps will be developed to highlight important natural resources, and NPS sites. A draft Action Plan and WBMP will be reviewed by the Steering Committee. A draft plan will be provided to DEP and EPA for review at least two months prior to the project end date. DEP and EPA will provide comments on the draft and comments need to be addressed for the plan to be accepted as an approved EPA 9-element watershed plan.

Start and Completion Dates	April 2026 – December 2026	
Grant Cost: \$2,640	Match Cost: \$4,017	Total Cost: \$6,657
Breakdown of Grant Cost by Cost Category: \$2,640 (contractual)		
Breakdown of Match by Cost Category: \$176 (salary & fringe), \$3,000 (contractual) \$840 (donated services-labor)		

VIII. Deliverables

An electronic copy of each deliverable will be provided to the DEP Contract Administrator. Each deliverable will be labeled according to procedures described in DEP document *Nonpoint Source Grant Administrative Guidelines*, <http://www.maine.gov/dep/water/grants/319-documents/2016GrantAdminGuidelinesFinal2.docx>.

1. Contracts, semi-annual progress reports, final project report (Task 1)
2. Sampling and Analysis Plan, secondary data quality assurance table, water quality data in MS Excel or similar electronic format, and water quality summary report including future monitoring summary (Task 3)
3. Survey Implementation Plan, watershed survey memo, agricultural survey memo, stream corridor survey memo, NPS Site Tracker (Task 4)
4. Stressor analysis summary memo (Task 5)
5. Land-cover assessment, watershed modeling summary memo (Task 6)
6. Copies of press releases, City, KLT, and VW&HH newsletters, public workshop sign-in sheet, screen shots of City & partner website & Facebook posts (Task 7)
7. Watershed maps, final WBMP (Task 8)

IX. Project Coordinator

Name	Rosemary Presnar
Organization	Hallowell Conservation Commission
Mailing Address	1 Winthrop Street, Hallowell, ME 04347
Telephone Number	(207) 512-0311
Email Address	hallowellconservation@gmail.com

X. Project Budget

Federal Funds (604(b) or 319):	\$40,887
Non-Federal Match:	\$24,073
Proposed Total Cost:	\$64,960

Part 1. Estimated Personnel Expenses: (Grantee staff only)

Position Name & Title	Hourly Rate	Number of Hours	Salary & Fringe	Total Applicant Personnel Expenses
City of Hallowell Clerk	\$33.12	20	\$44.05	\$881
City of Hallowell Treasurer	\$33.12	20	\$44.05	\$881
Totals		40		\$1,762

Part 2. Budget Estimates by Cost Category

Cost Category	Federal Funds (EPA) CWA 604(b) or 319	Non-Federal Match	Total Cost
Salary & Fringe (from Part 1)		\$1,762	\$1,762
Contractual	\$39,402	\$10,000	\$49,402
Donated Services – Labor		\$12,092	\$12,092
Travel		\$119	\$119
Supplies	\$1,485		\$1,485
Other		\$100	\$100
Indirect Costs			
Totals	\$40,887	\$24,073	\$64,960

Part 2 Notes:

Contractual/Contractual Match- For all tasks in work plan: Project Manager (234 hrs @ \$85/hr), Project Scientist (396 hrs @ \$72/hr), Travel (1,400 miles @ \$0.5/mile); Supplies, printing (\$300); (**Contractual Match-** City of Hallowell \$10,000 cash match toward contractual costs)

Donated Services-Labor- HCC Volunteers (374 hrs @ \$28.89/hr), KLT Volunteers (31 hrs @ \$28.89), VWHH Volunteers (11 hrs @ \$30.15/hr and 1.2 hr @ \$50/hr)

Travel Match- HCC volunteers (238 miles @ \$0.5/mile)

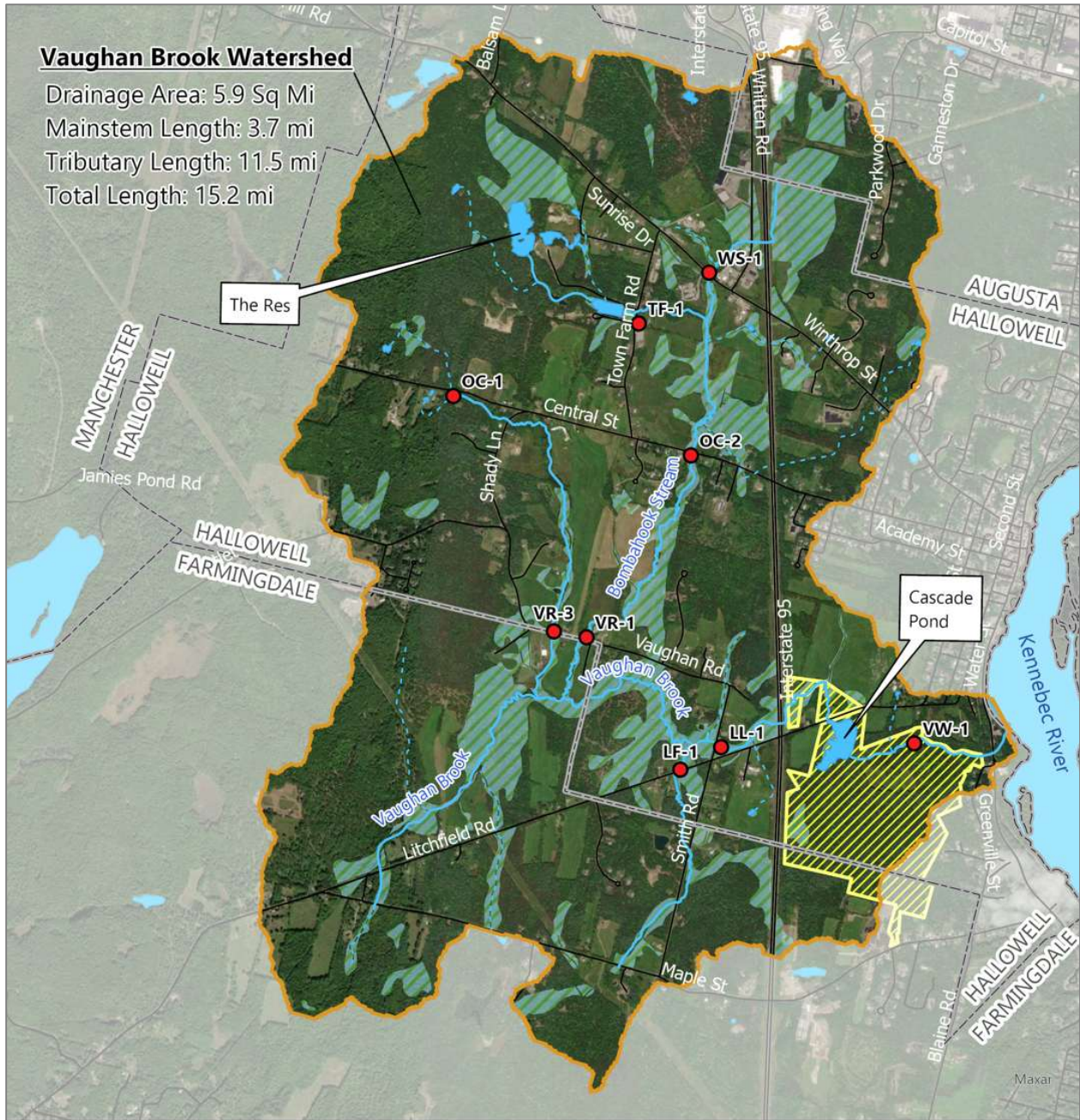
Supplies Grant- Lab fees for nutrient monitoring (4 sites x 4 samples x \$45/sample TP & \$40/sample ortho P); Abutter's letters (50 letters x \$2.50 for printing, paper, envelopes and postage)

Supplies Match- City of Hallowell (\$100 City Hall rental for public workshop)

Part 3. Sources of Non-federal Match and Estimated Amounts

Sources of Non-federal Match	Amount
City of Hallowell (cash match)	\$10,000
City of Hallowell (in-kind match)	\$1,762
Hallowell Conservation Commission (in-kind match)	\$11,033
Other (KLT, VWHH) (in-kind match)	\$1,278
Total	\$24,073

APPENDIX A: LOCATION MAP



Vaughan Brook Watershed

Drainage Area: 5.9 Sq Mi
 Mainstem Length: 3.7 mi
 Tributary Length: 11.5 mi
 Total Length: 15.2 mi

Vaughan Brook Watershed - Base Map



