

M E M O R A N D U M

 To: Town Council
From: Ashley Krulik, Sustainability Coordinator Theo Holtwijk, Director of Long-Range Planning and Economic Development Justin Early, Assistant Public Works Director and Town Engineer
Date: February 8, 2022

Re: Overview of Draft 2021 Falmouth Strategic Watershed Plan, Staff Recommendations, and Proposed FY 23 Budget

As additional review is pending, this memo and draft plan should <u>**not**</u> be considered final.

This memo describes the key components, recommendations, and next steps for the Draft 2021 Falmouth Strategic Watershed Plan. The memo should be viewed as the <u>primary document</u> for Town Council consideration.

Watershed health is becoming increasingly important indicator for a community's health. This strategic plan points to opportunities to accomplish greater watershed health over the years to come.

The recommendations in this memo are being offered in recognition of the following:

- 1. While Falmouth's population and building stock continues to grow, the community has done a remarkable effort in seeking to balance it with open space preservation.
- 2. It is recognized that the watershed needs are not the only needs that Falmouth is asked to address. There are other needs that may result in competing policies and requests for funds, such as the need to accommodate accessible housing, economic development, transportation, public safety, and education.

The update of the Comprehensive Plan, which is being informed by the current Vision and Values project, as well as annual budget and policy decisions will be an opportunity to reconcile any competing priorities.

To that end, staff modified some of the recommendations in the chart below from the consultant's report to better suit Falmouth's needs. While in some ways this plan can be viewed as a "plan to plan," staff feels that the Town is best served at this time by a three-pronged approach. This could include:

- a) selecting one specific watershed management plan at a time to complete,
- b) preparing appropriate stormwater ordinance amendments to help guide future development, and
- c) making site-specific improvements to existing facilities.



Furthermore, depending on the level of effort that the Council may wish the Town to undertake, staff feels that this work can be overseen by existing staff, notably the Town Engineer and the Sustainability Coordinator.

An average annual investment of \$500,000 in watershed improvement work is likely an appropriate level of funding to accomplish the recommended actions. Please see below for specific budget recommendations for FY 23. While the Route 1 South TIF Plan already has funds reserved for watershed improvement projects, additional funds from local and other sources, such as grants and private sources, will likely be required.

Background and Impetus for the Plan

The Town of Falmouth has a long-standing commitment to land and water. Proactive water quality management measures include the development of:

- Stream Protection Districts (1991),
- Town-wide Watershed Management Plan (1993),
- Route 1 South Commercial District Stormwater Management Plan, a plan that focused on Webes Creek Watershed (2013), and
- the Highland Lake Leadership Team, whose mission is to improve the overall health of Highland Lake (2017).

The 2013 report was used to make stormwater improvements in the Route 1 right-of-way to improve the health of Webes Creek. It also spurred discussion on how Falmouth could proactively assess the health of other Town watersheds. This effort resulted in the submittal and award of a second Maine Coastal Communities Grant.

Scope of the Plan

Rather than studying another watershed (such as Norton Brook) in detail, the Town, in partnership with GPCOG, applied in 2017 for a Coastal Communities Grant, administered through the Department of Agriculture, Conservation and Forestry (DACF) to take community-wide steps in watershed planning. The original project scope included three tasks:

- 1. Stormwater Ordinance Review and Revision
- 2. Best Management Practices Guide and Strategy
- 3. Strategic, Town-wide Watershed Planning to study all watersheds

However, DACF requested that the application be revised and resubmitted for consideration as a more regional effort focused only on task 3 - the Strategic Watershed Planning component - to first learn what might be needed in specific watersheds.

This work was supported by an action item on the annual Council Work Plan and received Council endorsement in April 2017.

In January 2019, a \$15,000 grant was awarded. The grant, supplemented by a local cash and inkind match, provided funding for evaluating existing watershed health data for all of Falmouth's



watersheds (see map below) and proposing metrics that will serve as indicators of watershed health for future planning efforts and prioritization of resources within the Town of Falmouth.



Figure 1: Falmouth watershed map created by GPCOG

This project has been a collaborative effort between:

- GPCOG
- Town of Falmouth Staff and Conservation Commission
- Maine Department of Environmental Protection's ("DEP") Environmental Assessment Unit
- Project consultant Robyn Saunders, Principal/Owner of ATTAINING: Sustainable Solutions LLC ("ATTAINING")

Town staff is appreciative of the guidance provided by all the project partners.



Plan Tasks

The Falmouth Strategic Watershed Plan tasks included:

- a. Developing watershed health assessment framework for each watershed (referred to in the plan as *Watershed Health Metrics*),
- b. Evaluating the current municipal-wide watershed health conditions,
- c. Prioritizing the needs of each watershed, and
- d. Providing prioritized recommendations on actions and resources needed to protect the health of each watershed.

Developing a replicable strategic watershed planning process that can be utilized by other municipalities in Maine was another goal of the project.

This memo focuses on the project's recommendations (task d). An attachment summarizes the project's methodology and findings (tasks a-c). The draft report contains all projects details as well as a description how the project can be potentially replicable for other communities.

On February 7, 2022 the draft plan and staff memos were reviewed by Falmouth Conservation Commission. The Commission voted unanimously to support the budget recommendations by staff for FY 23 (see below).

Next Steps

Several steps are required before this plan should be considered final. They are as follows:

- 1. Review of draft plan by the public,
- 2. Finalization of the draft plan and recommendations, as necessary,
- 3. Review and vote of acceptance of final draft plan through a resolution by Town Council,
- 4. Review and vote on FY 23 budget to begin implementing the plan.

Additional steps may include incorporating the recommendations in the annual Council Work Plan, prioritizing them, and including them in subsequent capital and operational budgets, as applicable.

Organizing the Action Recommendations

The plan's recommendations are organized by theme, priority, and geographic tier of intervention. These include:

Four main themes:

- 1. Understanding Falmouth's watersheds,
- 2. Improving the watersheds,
- 3. Managing the watersheds, and
- 4. Funding the recommendations.

Three Priority Levels:



- 1. HIGH (H1 and H2): To be implemented within 1-3 years
- 2. MODERATE (M): To be implemented within 4-5 years
- 3. LOW (L): To be implemented within 6-10 years

Recommendations apply to three Geographic Tiers:

- 1. <u>Watershed-specific (W):</u> Recommendations pertaining predominantly to a specific watershed area and may be aggregated to protect or improve a specific watershed.
- 2. <u>Townwide (T)</u>: Recommendations applicable throughout the town (e.g., update data and analysis annually).
- 3. <u>Regional (R)</u>: Recommendations pertaining to an area larger than the town and/or multiple municipalities (e.g., budget for watershed management plans).

A Key Thing to Remember

Land and stormwater management rules are constantly evolving. It is important to ensure that the most current standards are being implemented to protect water quality. Past rules were typically designed to transport water as quickly as possible downstream. There is now a known benefit in slowing down the transport of water, retaining it, and allowing for infiltration. Past stormwater drainage practices sometime compromised channel stabilization and stream habitat. These actions explore and implement new strategies that focus on the broader impact of stormwater on the environment.



Theme	Recommendation	Description	Geography	Priority	Cost
Underst	anding				
1	Update watershed data + analysis annually	Collect additional data as needed. Consider coordinating with an anchor organization, like GPCOG or CCSWCD, to keep and maintain this intermunicipal watershed-based GIS data and the State and Federal databases. This will allow towns that share watersheds an opportunity to share costs, and to more readily collaborate on watershed efforts that require multidiscipline expertise within the watershed(s).	T/R	H1	\$0 - \$20,000
2	Gather geomorphic data and assessment	There is very limited geomorphic data available for the watersheds. Geomorphic data is important to assess channel stabilization, floodplain accessibility, erosion and deposition, and other important watershed health factors, like habitat. Pursue access agreements along the selected stream sections to obtain data. Focus on Norton Brook, Webes Creek, Chenery Brook, and Hobbs Brook. This work will inform the focus for watershed management plans.	T, W	H1	\$50,000
3	Prepare Casco Bay Frontal Drainage Watershed Management Plan (WMP)	Highest priority WMP. This WMP should include the four (4) watersheds contributing to Mussel Cove, collectively known as the Casco Bay Frontal Drainage basin, as defined by USEPA: Webes Creek; Norton Brook; Chenery Brook; and Mill Creek. Scitterygussett Creek should also be included in this plan as a "nested" watershed or in a separate stand-alone plan.	Т	H1	\$100,000 - \$250,000
4	Prepare Hobbs Brook WMP in partnership with the Town of Cumberland	Hobbs Brook is not meeting Class B water quality standards and is considered impaired. Because this watershed is shared with Cumberland, consider sharing the responsibility to develop and implement a WMP in this watershed.	R	H2	\$75,000 - \$100,000
5	Prepare Presumpscot River WMP	Several stakeholders currently conduct monitoring/reporting this river. Consider organizing a Presumpscot River	R	Μ	\$100,000 - \$200,000



Theme	Recommendation	Description	Geography	Priority	Cost
		Leadership Team to guide development of the WMP.			
6	Updates to existing WMPs or WPPs	Updating existing watershed plans is recommended every 5-10 years. It involves conducting a watershed survey or project (which is required after plan is prepared/approved). Participate in existing watershed efforts, such as: Highland Lake WPP.	T, W	L	\$25,000 per year to be earmarked for updating an existing watershed plan
Improvi	ing				
7	Evaluate culvert replacement needs	Conduct a Town-wide culvert assessment to evaluate failure potential, erosion impacts, fish passage, and capacity analysis for potential climate adaptation.	Т	H1	TBD
8	Disconnect large spans of contiguous, connected impervious areas	Assess Norton Brook, Webes Creek, Chenery Brook, Mill Creek, Hobbs Brook for opportunities to reroute concentrated stormwater flows to ample buffer areas or other structural BMPs to attenuate flows and pollutants (i.e., water quality and quantity). This can be done via channel protection and storage BMPs to reduce "flashy" flows, level lip spreaders to convert channelized flow to sheet flow over protected buffers, and roof line drip trenches to infiltrate roof runoff. Groundwater salt contamination should be considered when rerouting stormwater.	W	H2	TBD
9	Make instream and riparian enhancements	Assess Norton Brook, Webes Creek, Chenery Brook, Mill Creek, Hobbs Brook for opportunities to make instream + riparian enhancements to achieve water quality standards.	W	Μ	TBD
Manaai	ina				



Theme	Recommendation	Description	Geography	Priority	Cost
10	Assign watershed manager responsibilities	Watershed manager responsibilities will be shared between the Town Engineer and the Sustainability Coordinator and could include: collecting, updating, synthesizing watershed data within municipal boundaries, and providing recommendations for prioritization of resources to implement recommendations, as well as watershed restoration and protection projects; communicating across municipal boundaries to coordinate shared watershed responsibilities. These responsibilities could be shared with another community, like Cumberland to	R, T	H1	Propose to use existing staff
11	Develop model ordinance language	help address shared watersheds Model ordinance language will promote resiliency and stormwater improvements. A tiered ordinance is envisioned to serve the three types of community in Falmouth: commercial, residential, and rural districts. Overlay districts can be created to protect each watershed and promote specific best management practices (BMPs) in land use ordinances. Consider engaging a regional group, like MMA or GPCOG, to assist with ordinance revision and drafting new language to encourage other municipalities to participate, especially those that share watersheds with Falmouth.		H1	TBD
12	Create a menu or selection guide of Best Management Practices (BMPs)	A menu or selection guide of BMPs will be used as a Reference Guide in the development process. It would provide clear guidance for all parties to reference throughout the planning, pre- construction, construction, and long- term maintenance phases of land use development. The BMP selection guide would provide concrete examples of structural and non-structural BMPs.	T, W	H1	TBD
13	Minimize the use of fertilizers and pesticides	Norton Brook, Webes Creek, Chenery Brook, Mill Creek, Hobbs Brook: Monitor the effectiveness of Falmouth's fertilizer and pesticide use ordinance to minimize	W	H1	TBD



Theme	Recommendation	Description	Geography	Priority	Cost
14	Adopt resource protection and restoration efforts for eelgrass	nutrients and toxic pollutants that reduce watershed health. Consider best methods to limit recreational vessels from anchoring or dragging fishing gear within or near eelgrass beds. Offer outreach materials on pump-out restrictions on dumping human waste and protecting marsh habitat from human activity		H2	TBD
15	Consider a salt management program to limit toxic chlorides from entering streams	Norton Brook, Webes Creek, Chenery Brook, Mill Creek, Hobbs Brook: Adopt standards for new and existing development that provide(s) detention and storage of runoff from heavily salted areas (e.g., commercial, institutional, office, multi-family subdivisions, etc.). Encourage design practices and principles that limit salt applications, such as heated sidewalks and driveways, under-business parking, etc. Infiltrate roof runoff.	W	Μ	TBD
16	Rezone stream corridors	Chenery Brook, Mill Creek, Mussel Cove, Hobbs Brook: Consider limits on uses that contribute to pollutants, such as agriculture, high-density residential areas, and concentrated impervious areas. Require nutrient-reducing BMPs (e.g., ban fertilizer, etc.).	W	Μ	TBD
Funding	7	, , ,			
18	Develop an annual capital and operational funding plan	Prepare cost estimates and develop a multi-year funding plan	Т	H1	TBD



Staff prepared the following budget recommendation for FY 2023 (starting July 1, 2022):

FY 2023 BUDGET RECOMMENDATIONS Draft: January 5, 2022					
Action # from					
above table	All Selected Recommended Actions Below are H1 Priorities	1/5/2022 Estimate	Proposed Funding Source		
Underst	anding				
1	Update watershed data + analysis annually	\$20,000	Route 1 South TIF, Route 1 North TIF, OV-gas TIF, WFC TIF		
2	Gather geomorphic data and assessment	\$50,000	Route 1 South TIF, Route 1 North TIF, OV-gas TIF, WFC TIF		
3	Prepare Casco Bay Frontal Drainage Watershed Management Plan (WMP)	\$250,000	Route 1 South TIF		
Improvir	ng				
7	Evaluate culvert replacement needs	\$15,000	Route 1 South TIF, Route 1 North TIF, OV-gas TIF, WFC TIF		
Managir	ng				
10	Assign watershed manager responsibilities	\$0			
11	Develop model ordinance language	\$20,000	Route 1 South TIF, Route 1 North TIF, OV-gas TIF, WFC TIF		
12	Create a menu or selection guide of Best Management Practices (BMPs)	\$15,000	Route 1 South TIF, Route 1 North TIF, OV-gas TIF, WFC TIF		
13	Minimize the use of fertilizers and pesticides	\$10,809	Sustainability Coordinator Operations Budget		
Funding					
18	Develop an annual capital and operational funding plan	\$0			
	Total Budget Request FY 2023	\$380,809			

Two aspects of the above recommendations deserve further discussion. First, what is the typical scope of the recommended Watershed Management Plans and how does that differ from the plans that the Town has already completed? Second, what is the implication of possible future "impaired streams" in Falmouth?

Scope of Geographic-specific Watershed Management Plan(s)

Geographic-specific Watershed Management Plans (WMP) identify site-specific problems and threats to water resources and are important tools to protect and improve water quality. For communities to be eligible for the highly competitive improvement grant funding known as "Section 319" that is administered by Maine DEP, the U.S. Environmental Protection Agency (EPA) requires WMPs be developed and updated every ten years.



The EPA developed a "nine element plan ¹" standard to address some of the most common obstacles seen in WMPs. These include lack of available data for estimated pollution amounts and pollution reductions needed to achieve water quality standards. The goal of a nine element plan is to provide a measurable context for the planning process needed to achieve water quality attainment.

The table below shows the nine elements and the extent to which Falmouth's existing WMPs incorporated some of these elements and what, instead, the recommended Casco Bay Frontal Drainage WMP is intended to accomplish

EPA Nine Elements for WMPs	2013 Route 1 South Commercial District Stormwater Management Plan	2021 Falmouth Strategic Watershed Plan	Recommended Casco Bay Frontal Drainage WMP
1. Identify causes and sources of pollution	\checkmark	\checkmark	\checkmark
2. Determine pollution reduction needed			
to improve water quality			
3. Develop strategies to achieve goals		\checkmark	\checkmark
4. Identify technical and financial			
assistance needed	•		
5. Develop information/ education plan			
6. Develop implementation schedule	\checkmark		\checkmark
7. Develop milestones to track progress			\checkmark
8. Develop criteria to measure progress			
9. Develop water quality monitoring			
component			

To further explain, the 2021 Falmouth Strategic Watershed Plan is not an EPA or Maine DEPapproved nine element WMP. Instead, this plan studied current health conditions, prioritized needs, and identified key recommendations for <u>all</u> watersheds in Falmouth.

Similarly, the 2013 Route 1 South Commercial District Stormwater Management Plan did not follow the nine element criteria either. Instead, it was done in conjunction with the 2011 Route 1 Infrastructure Plan that examined traffic, utilities, drainage and streetscape for the Route 1 South corridor. The goal of this WMP was to examine private and public stormwater partnerships, green infrastructure opportunities, and initial measures to address stormwater

¹ For a detailed description see <u>https://www.epa.gov/sites/default/files/2015-</u> <u>12/documents/watershed mgmnt quick guide.pdf</u>



quality in Mussel Cove. Furthermore, it was also done in 2013, the same time the nine element criteria were being finalized by the EPA.

In summary, the nine element plan criteria will be used to develop the recommended watershed-specific plans identified above and will provide the specific implementation actions necessary to position the Town for possible future Section 319 Funding applications.

Implications of Possible Future Impaired Streams

Maine DEP may in the future designate one or more streams in Falmouth as "impaired," meaning that the waterbody does not meet certain water quality criteria or standards. Impaired streams have stricter stormwater discharge requirements, which are regulated by the Maine DEP. In addition, the Municipal Separate Storm Sewer Systems (MS4) permit that covers Falmouth also has specific requirements for "Urban Impaired Streams," waterbodies that are impaired because of urban development and the amount of impervious cover.

Webes Creek and Norton Brook, which are located within Falmouth's Growth Area, are at the highest risk of being listed as Urban Impaired Streams in the future. Implications of these waterbodies being considered Urban Impaired Streams include:

- Increased difficulty, cost, and time needed to restore water quality health;
- Stricter permitting requirements by the State of Maine:
 - Review of the Site Location of Development Law ("Site Law") would apply to projects 3 acres and above; if no impaired waterbody, Site Law applies to projects with 20+ acres;
 - Stormwater permit threshold for meeting the general standard would be 20,000 sq. ft. of new impervious surface, rather than 1 acre, resulting in additional fees and regulations for smaller developments to meet Urban Impaired Stream standard;
- More State oversight of development projects, resulting in longer timelines and more regulatory fees;
- More Town oversight, including the potential establishment and implementation of a "Compensation Fund" for developers to contribute to in order to offset new impervious area. These funds would be used by the Town to help finance specific improvement projects.

Based on this, it is highly advised by the Maine DEP to address these threatened waterbodies <u>before</u> they become impaired by developing and implementing a nine element watershed management plan (WMP) for the Casco Bay Frontal Drainage Area as discussed above.

Please refer to the Project Methodology and Findings attachment for further information on impaired streams, permitting, and implications.

Next Steps

As noted above, this draft plan is not yet final. Several steps remain. They include, but are not limited to:

1. Review of draft plan by the public,



- 2. Finalization of the draft plan and recommendations, as necessary,
- 3. Review and vote of acceptance of final draft plan through a resolution by Town Council,
- 4. Review and vote on FY 23 budget to begin implementing the plan.

Associated Documents

- Draft Summary of Project Methodology and Key Findings, November 18, 2021
- Draft 2021 Falmouth Strategic Watershed Plan, Attaining, September 30, 2021