



# 2021 FALMOUTH STRATEGIC WATERSHED PLAN

**PUBLIC FORUM**

MARCH 23, 2022

Photo credit: Falmouth Land Trust

# Overview

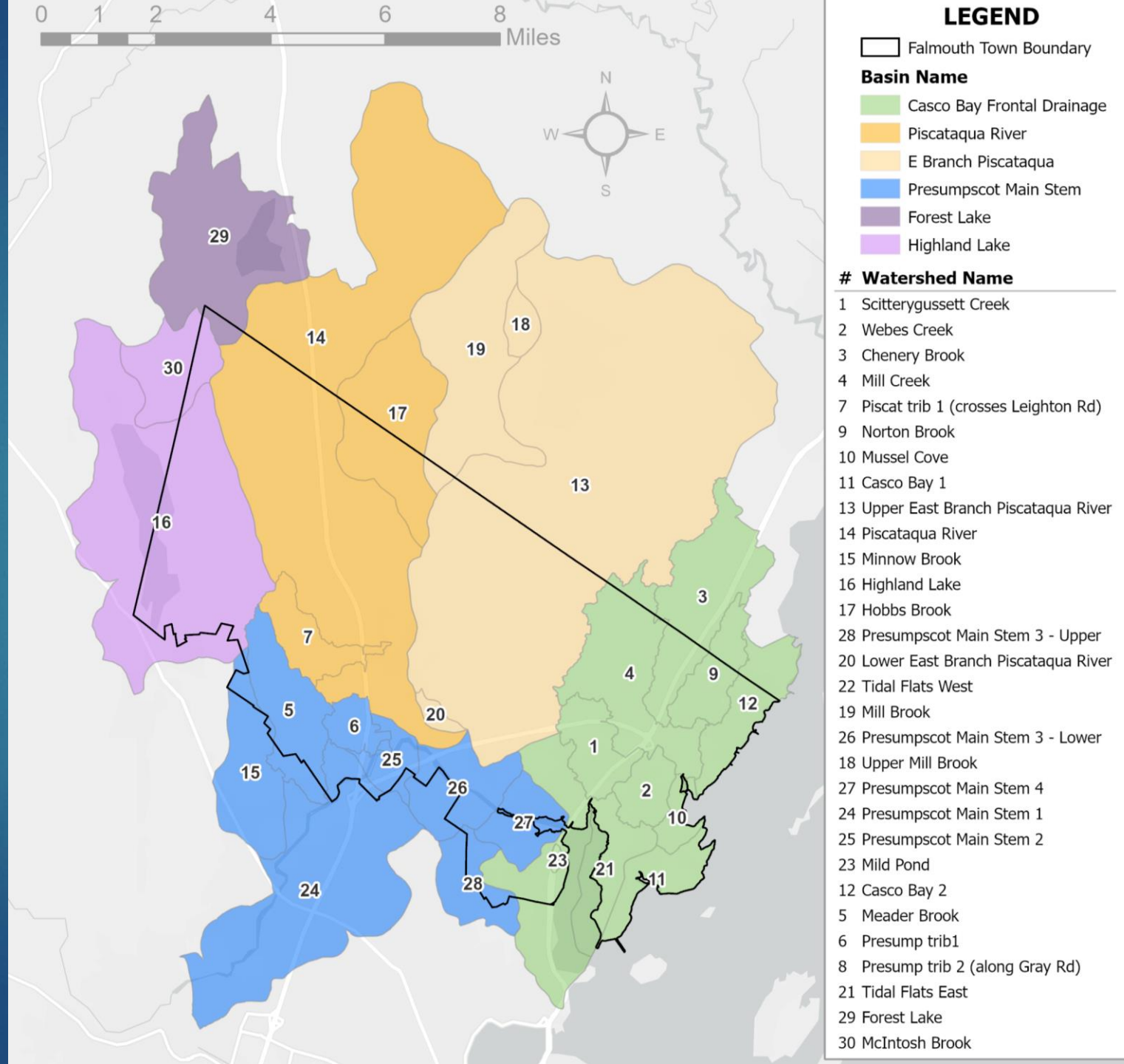
- ▶ Awarded Coastal Communities Grant in January 2019
- ▶ First-in-Maine Strategic, Town-wide Watershed Planning to study *all* watersheds
  - ▶ Develop watershed health assessment framework
  - ▶ Evaluate current watershed health conditions
  - ▶ Prioritize watershed needs
  - ▶ Provide prioritized recommendations to protect watershed health
  - ▶ Develop model for other municipalities
- ▶ Collaborative Effort
  - ▶ GPCOG, Staff, Conservation Commission, Maine DEP, ATTAINING: Sustainable Solutions



# Watershed Priorities

1. Casco Bay Frontal Drainage
2. Hobbs Brook
3. Presumpscot River

Highland Lake is dealt with separately from this Study



# Highland Lake

- ▶ Highland Lake Leadership Team
- ▶ 2020-2029 Watershed Management Plan adopted in 2020
- ▶ Ongoing
  - ▶ WMP implementation
  - ▶ Water quality testing
  - ▶ Education and outreach





# What We Learned

- ▶ There is still a lot more to learn!
  - ▶ Extensive data collection process
- ▶ There are some areas of concern
- ▶ We should aim for a multi-pronged approach:
  - ▶ **Understanding:**  
Continue to Study
  - ▶ **Improving:**  
Make Specific Improvements
  - ▶ **Managing:**  
Develop Up-to-Date Policies/Ordinances and BMP Guidelines



Photo credit: Carrie Aube

# Threatened and Impaired Streams

## Threatened:

Still meet DEP water quality standards

- ▶ Webes Creek: High chloride, habitat concerns, stormwater runoff, natural flow disrupted in 1950s/60s
- ▶ Norton Brook: Stormwater runoff disturbs sandy bottom resulting in habitat loss, toxicity issues (chloride), Route 1 limits migration

## Impaired:

- ▶ Hobbs Brook: Lack of shade and high nutrient levels resulting in algae growth and lack of habitat diversity

Webes Creek and Norton Brook require additional assessment data.

They are both at risk of being classified in near future as “Urban Impaired Streams.”



# Implications of Urban Impaired Streams

- ▶ Increased difficulty, cost, and time required to restore watershed health
- ▶ Stricter State of Maine development permitting requirements and additional oversight
- ▶ More Town oversight and management of development permitting process





# Project Deliverables

1. Staff Memo: Project Recommendations and FY 2023 Budget Recommendations
2. Project Methodology and Key Findings Memo
3. Draft 2021 Falmouth Strategic Watershed Plan (Attaining)



# Recommendations: *Understanding*

Recommendation	Priority	Estimated Cost
Update watershed data + analysis annually	H1	\$0 - \$20,000
Gather geomorphic data and assessment	H1	\$50,000
Prepare Casco Bay Frontal Drainage WMP	H1	\$100,000 - \$250,000
Prepare Hobbs Brook WMP in partnership with Cumberland	H2	\$75,000 - \$100,000
Prepare Presumpscot River WMP	M	\$100,000 - \$200,000
Updates to existing WMPs or WPPs	L	\$25,000/year



# Current Watershed Information Sharing

Maine Water  
Environment  
Association  
(MEWEA)

- Stormwater  
Committee

Maine DEP  
Watershed  
Managers  
Roundtable

Annual Maine  
Stormwater  
Conference  
(CCSWCD)

Interlocal  
Stormwater  
Working Group  
(MS4 permit,  
Cumberland  
County)





# Comparison of Watershed Plans

<b>EPA Nine Elements for WMPs</b>	<b><i>2013 Route 1 South Commercial District Stormwater Management Plan</i></b>	<b><i>2021 Falmouth Strategic Watershed Plan</i></b>	<b><i>Recommended Casco Bay Frontal Drainage WMP</i></b>
Watershed size	341 acres	19,119 acres	8,000 acres
1. Identify causes and sources of pollution	✓	✓	✓
2. Determine pollution reduction needed to improve water quality			✓
3. Develop strategies to achieve goals	✓	✓	✓
4. Identify technical and financial assistance needed	✓	✓	✓
5. Develop information/ education plan			✓
6. Develop implementation schedule	✓		✓
7. Develop milestones to track progress			✓
8. Develop criteria to measure progress			✓
9. Develop water quality monitoring component			✓

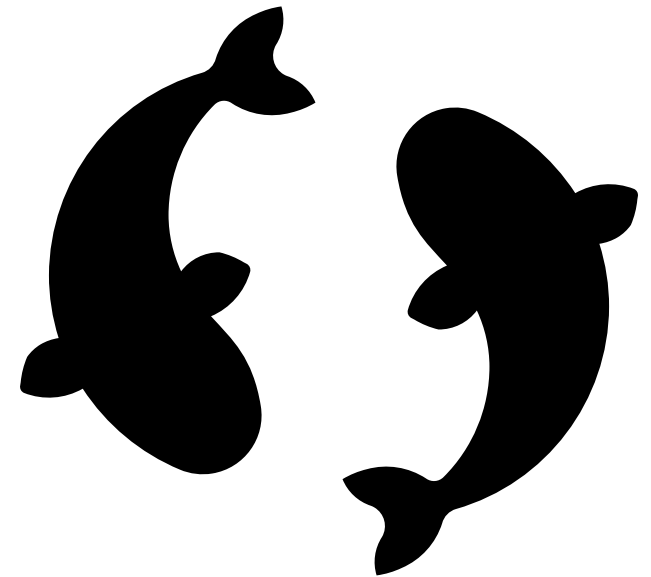


# Casco Bay WMP

## What does \$250K get us?

- Webes Creek
- Norton Brook
- Chenery Brook
- Mill Creek
- Scitterygussett Creek

- ❖ - Site-specific pollution locations and extent
- ❖ - Specific pollution causes and origination locations
- ❖ - Quantified amounts of pollution reduction needed
- ❖ - Specific methods to reduce the pollution
- ❖ - Estimated cost of recommended actions
- ❖ - Priorities of recommended measures
- ❖ - Public education program
- ❖ - Measuring pollution improvement



# Recommendations: *Improving*

Recommendation	Priority	Estimated Cost
Evaluate town-wide culvert replacement needs and priorities	H1	\$15,000
Disconnect large spans of contiguous, connected impervious areas	H2	TBD
Make instream and riparian enhancements	M	TBD



# Improvement Projects

## RECENTLY COMPLETED

- ▶ Biofilters - Routes 1 and 100
- ▶ Erosion control – Underwood Road

## PLANNED

- ▶ Culverts/Storm Drainage – Northbrook Drive, Mast Road, Lunt Road, Johnson Road
- ▶ Erosion control – Shoreline Drive
- ▶ Various Stormwater Quality Improvement Projects listed in all 4 TIFs
  - ❖ Specific locations will be identified in WMP's



# Recommendations: *Managing*

Recommendation	Priority	Estimated Cost
Assign watershed manager responsibilities	H1	Propose using existing staff
Develop model ordinance language	H1	\$20,000
Create a menu or selection guide of Best Management Practices (BMPs)	H1	\$15,000
Minimize the use of fertilizers and pesticides	H1	TBD
Adopt resource protection and restoration efforts for eelgrass	H2	TBD
Consider a salt management program to limit toxic chlorides from entering streams	M	TBD
Rezone stream corridors	M	TBD



# Recommendations: *Funding*

Recommendation	Priority	Estimated Cost
Develop an annual capital and operational funding plan	H1	TBD

# FY23 Budget Recommendation

<b>Recommendation: Understanding</b>	<b>Priority</b>	<b>Estimated Cost</b>
Update watershed data + analysis annually	H1	\$20,000
Gather geomorphic data and assessment	H1	\$50,000
Prepare Casco Bay Frontal Drainage WMP	H1	\$250,000
<b>Recommendation: Improving</b>	<b>Priority</b>	<b>Estimated Cost</b>
Evaluate culvert replacement needs	H1	\$15,000
<b>Recommendation: Managing</b>	<b>Priority</b>	<b>Estimated Cost</b>
Assign watershed manager responsibilities	H1	\$0
Develop model ordinance language	H1	\$20,000
Create a BMP menu or selection guide	H1	\$15,000
Minimize the use of fertilizer and pesticides	H1	\$10,809
<b>Recommendation: Funding</b>	<b>Priority</b>	<b>Estimated Cost</b>
Develop an annual capital and operational funding plan	H1	\$0
<b>Total Budget Request FY23</b>		<b>\$380,809</b>



# Recent & Next Steps

- ❖ Conservation Commission Review of Draft Plan, February 7, 2022
  - Voted to endorse Plan and support FY 23 Budget Recommendations
- ❖ Strategic Watershed Plan presentation to Town Council – February 14, 2022
- ▶ Public Review of Draft Plan (today)
- ▶ Consideration of Resolution regarding Plan Acceptance by Town Council
- ▶ FY23 Budget Review & Approval by Town Council



# For More Information

- ▶ Contact Ashley Krulik, [akrulik@falmouthme.org](mailto:akrulik@falmouthme.org)

Photo credit: Falmouth Land Trust