

Appendix 1-4

Regionalization of Wastewater Facilities Correspondence



February 18, 2009

Mr. Michael Giggey, P.E.
Wright Pierce
99 Main Street
Topsham, ME 04086

RE: Town of Eastham
Wastewater Needs Input for
CCWPC Funded Project on
Regionalization of Wastewater Facilities

Dear Mr. Giggey:

As we discussed on the phone, Stearns & Wheeler, LLC has recently completed the “Draft Interim Needs Assessment and Alternatives Screening Analysis Report” for the Town of Eastham. With the completion of this report, the Town has a clearer picture of the following items that you have requested for the Cape Cod Water Protection Collaborative (CCWPC) funded project on Regionalization of Wastewater Facilities.

- Tentative sewer service areas in Eastham
- Average-annual wastewater flows for these areas in the future (build-out)
- Potential decentralized wastewater treatment and recharge sites in Eastham

Three (3) watershed areas have been identified in Eastham to meet environmental health standards. These areas are illustrated on the attached Figure ES-1 and are listed below:

- Rock Harbor Watershed Area needing 79% existing wastewater nitrogen removal and 82% future wastewater nitrogen removal
- The combined Town Cove/Nauset Harbor/Salt Pond/ Mill Pond Watershed Area needing 55% existing wastewater nitrogen removal and 61% future wastewater nitrogen removal
- The Freshwater Pond System Watershed Area needing 100% future wastewater phosphorus removal

Figure 2 illustrates the Tentative Sewer Service Areas to meet these future wastewater removals, and these areas are listed below:

- Rock Harbor Tentative Sewer Area
- Combined Town Cove/ Nauset Estuary Tentative Sewer Service Area
- Freshwater Pond Watershed Tentative Sewer Area

The following table summarizes the wastewater flows for these areas:

TENTATIVE SEWER SERVICE AREA	ESTIMATED WASTEWATER FLOWS (MGD ¹)	
	EXISTING ²	FUTURE ²
Rock Harbor	0.01	0.01
Combined Town Cove/Nauset Estuary	0.13	0.15
Freshwater Ponds Watershed	0.08	0.09

Notes:
1. Average Annual Flows in million gallons per day (MGD).
2. Based on 128 gpd per property which is based on draft MEP evaluations. This basis may change with the completion of the MEP evaluations.

Please consider connection of one or more of these areas to the proposed Orleans WWTF with a forcemain from a pump station in Eastham.

Please consider the incremental cost increases for treating the following average-annual flows (in prioritized order) at the proposed Orleans WWTF. (These flows include a 30% allowance for inflow and infiltration to the sewer from surface and groundwater seepage)

- 0.20 mgd for future flow from the Combined Town Cove/Nauset Estuary Tentative Sewer Service Area.
- 0.21 mgd for future flow from the Combined Town Cove/Nauset Estuary with the future flow from the Rock Harbor Tentative Sewer Service Area.
- 0.32 mgd for the future flow from all 3 Tentative Sewer Service areas.

Only one (1) potential decentralized wastewater treatment site has been identified in Eastham at this time. It is the Roach property which is 64 acres in size and located in the north eastern corner of Eastham. This site is identified on Figure 2. Additional sites may be identified in the future.

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The Town of Eastham appreciates your efforts to evaluate the costs and cost-sharing issues as part of the CCWPC funded project. We hope you will share these costs and preliminary findings with us and the Town of Eastham as they are developed. Eastham plans to complete its "Plan Evaluation Report" in late March and we would hope to coordinate the release of that report with the release of your report.

Please call or e-mail if you have any questions on the information provided or on our on-going evaluation.

Sincerely,

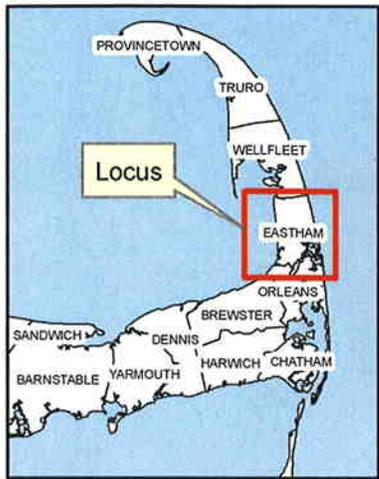
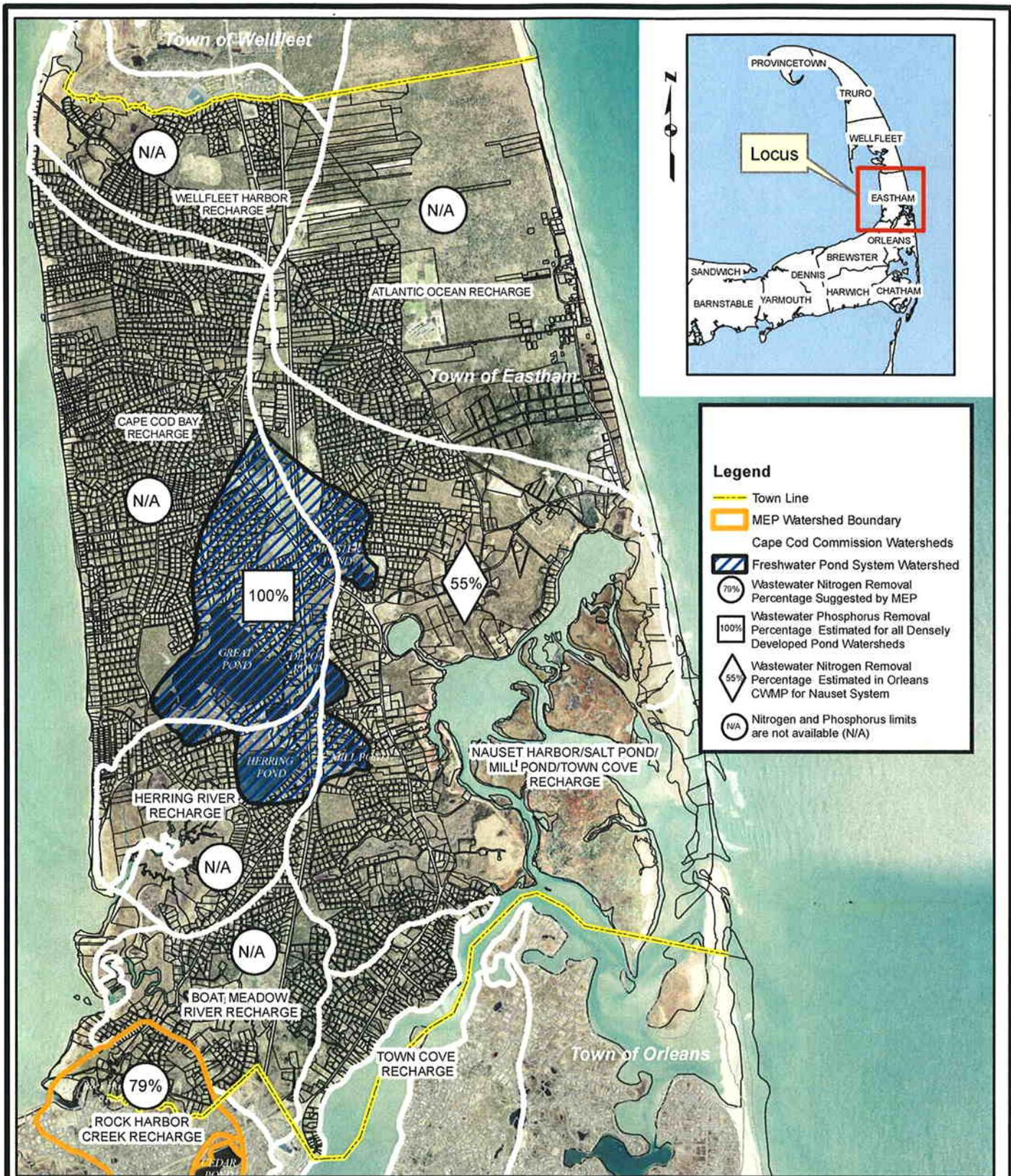
STEARNS & WHEELER, LLC



Nathan C. Weeks, P.E.
Senior Associate

NCW/lm

cc: Jane Crowley, Eastham Health Department
George Meservey, Orleans Town Planner
Tom Cambareri, CCC Coordinator
Andrew Gottlieb, CCWPC Director



Legend

- Town Line
- MEP Watershed Boundary
- Cape Cod Commission Watersheds
- Freshwater Pond System Watershed
- Wastewater Nitrogen Removal Percentage Suggested by MEP (79%)
- Wastewater Phosphorus Removal Percentage Estimated for all Densely Developed Pond Watersheds (100%)
- Wastewater Nitrogen Removal Percentage Estimated in Orleans CWMP for Nauset System (55%)
- Nitrogen and Phosphorus limits are not available (N/A)

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TOWN OF EASTHAM, MASSACHUSETTS

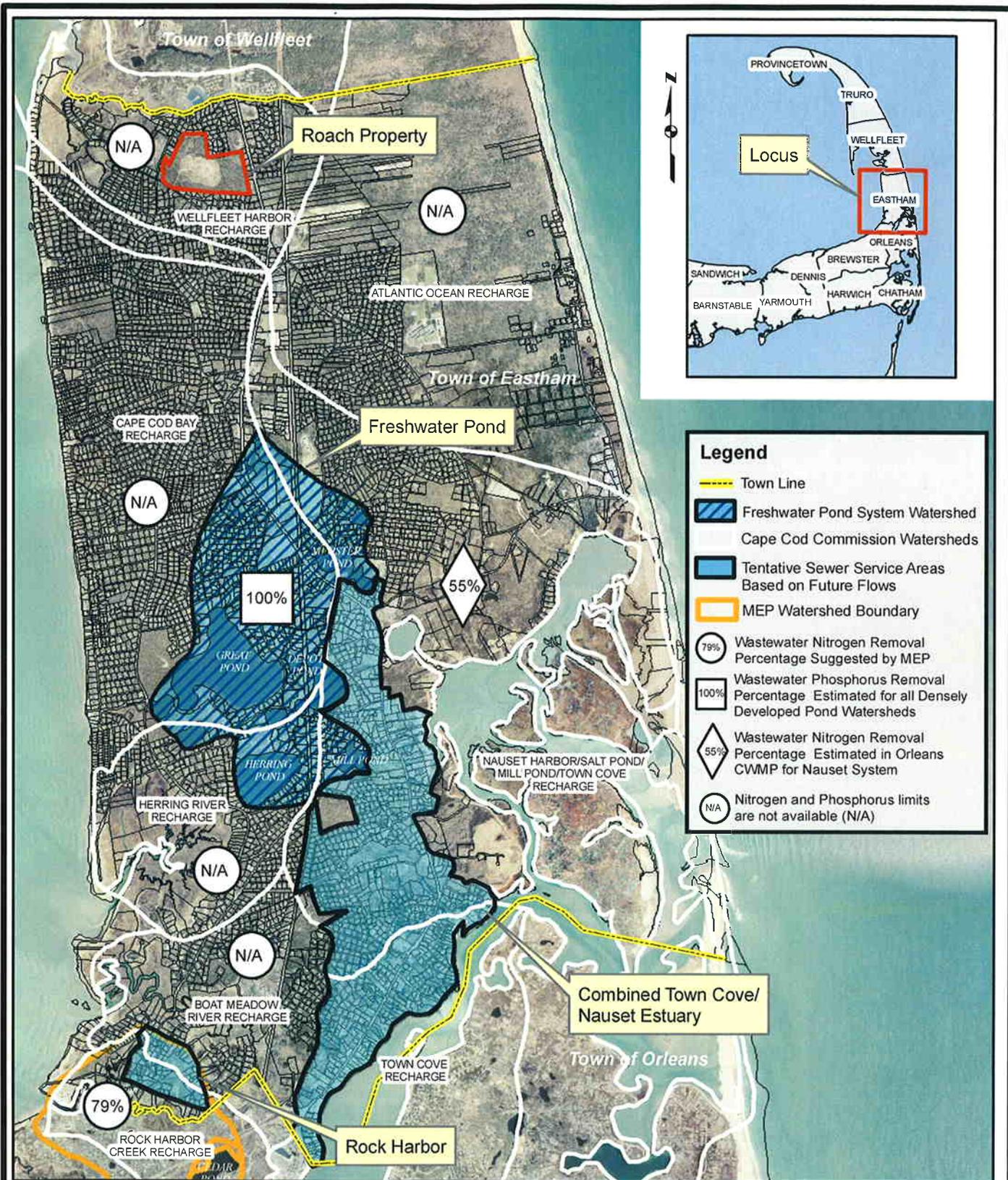
WATERSHED DELINEATIONS AND
 ESTIMATED % NUTRIENT REMOVAL

FIGURE ES-1

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Job No.: 61204

Date: 12/08



STEARNS & WHEELER^{INC}
Environmental Engineers & Scientists

TOWN OF EASTHAM, MASSACHUSETTS

TENTATIVE SEWER SERVICE AREAS

FIGURE 2

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Date: 2/09