

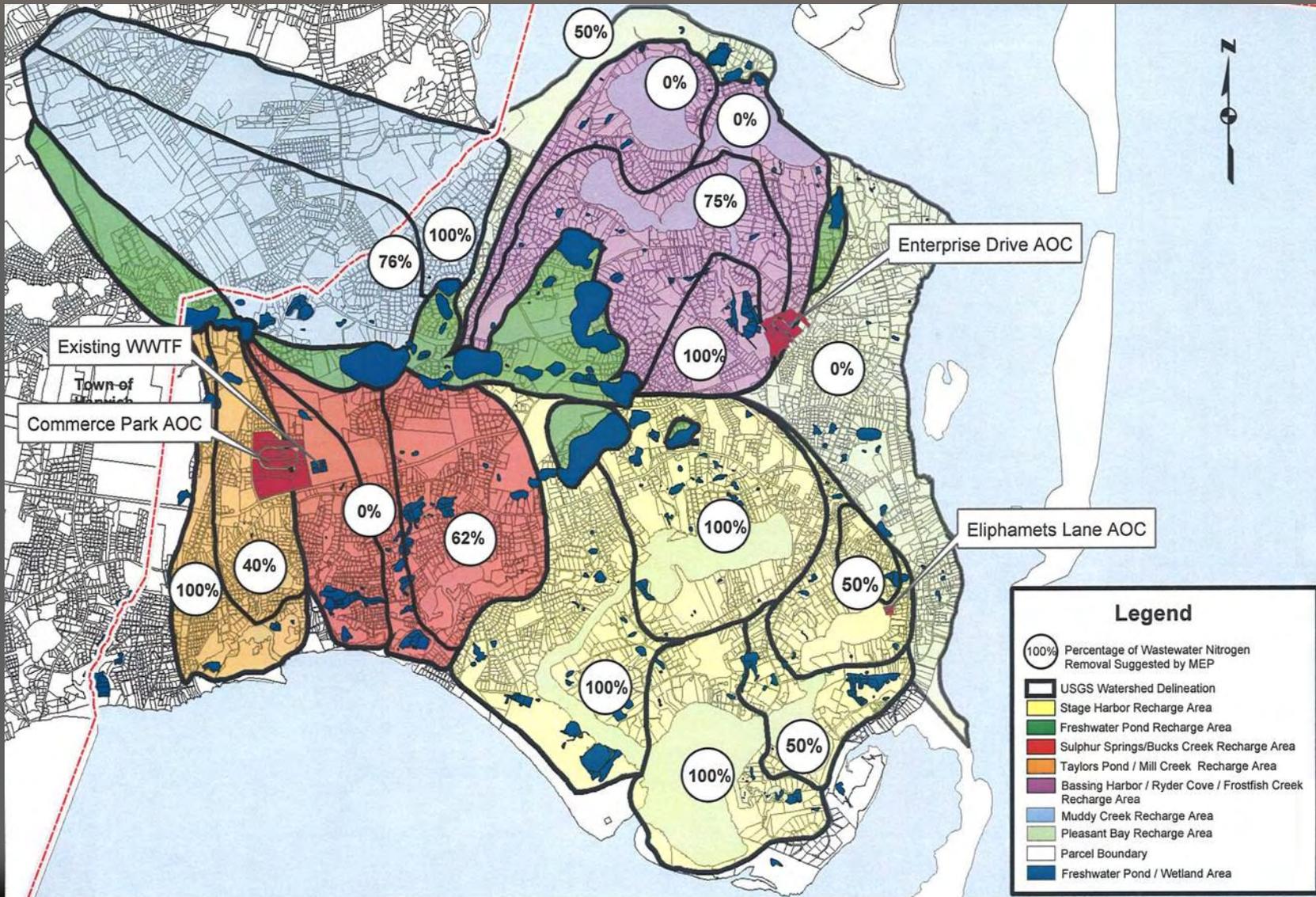


TOWN OF CHATHAM

Summary of
Comprehensive Wastewater Management Plan/
Final Environmental Impact Report
(CWMP/FEIR)

Presentation to the
Summer Residents Advisory Committee
Annual Summer Town Meeting
August 4, 2009

Alternatives Evaluation Summary: Areas of Concern



Alternatives Evaluation Summary: Technology Evaluations



Summary of Typical Nitrogen Removals for the Wastewater Management Options

Technology	Typical Nitrogen Concentration in the Effluent	Typical Percent Removal
Title 5 Septic System	20 to 40 mg/l	23%
Individual Nitrogen Removal Septic System	15 to 25 mg/l	50%
Community/Cluster System	5 to 15 mg/l	75%
Upgraded Chatham WWTF	3 mg/l	93%

Alternatives Evaluation Summary

Summary of Findings:

- ⇒ Large areas of Chatham need to remove > 50% of the wastewater nitrogen to remediate embayment water quality and the related water resources
- ⇒ This nitrogen removal performance is best met with collection and treatment at an Upgraded Chatham WWTF
- ⇒ The WWTF site can accommodate an expansion to 1.9 mgd with no adverse impacts
- ⇒ The recharge will not adversely impact the capped landfill or the groundwater at the landfill site

Alternative Plan Formation and Evaluation

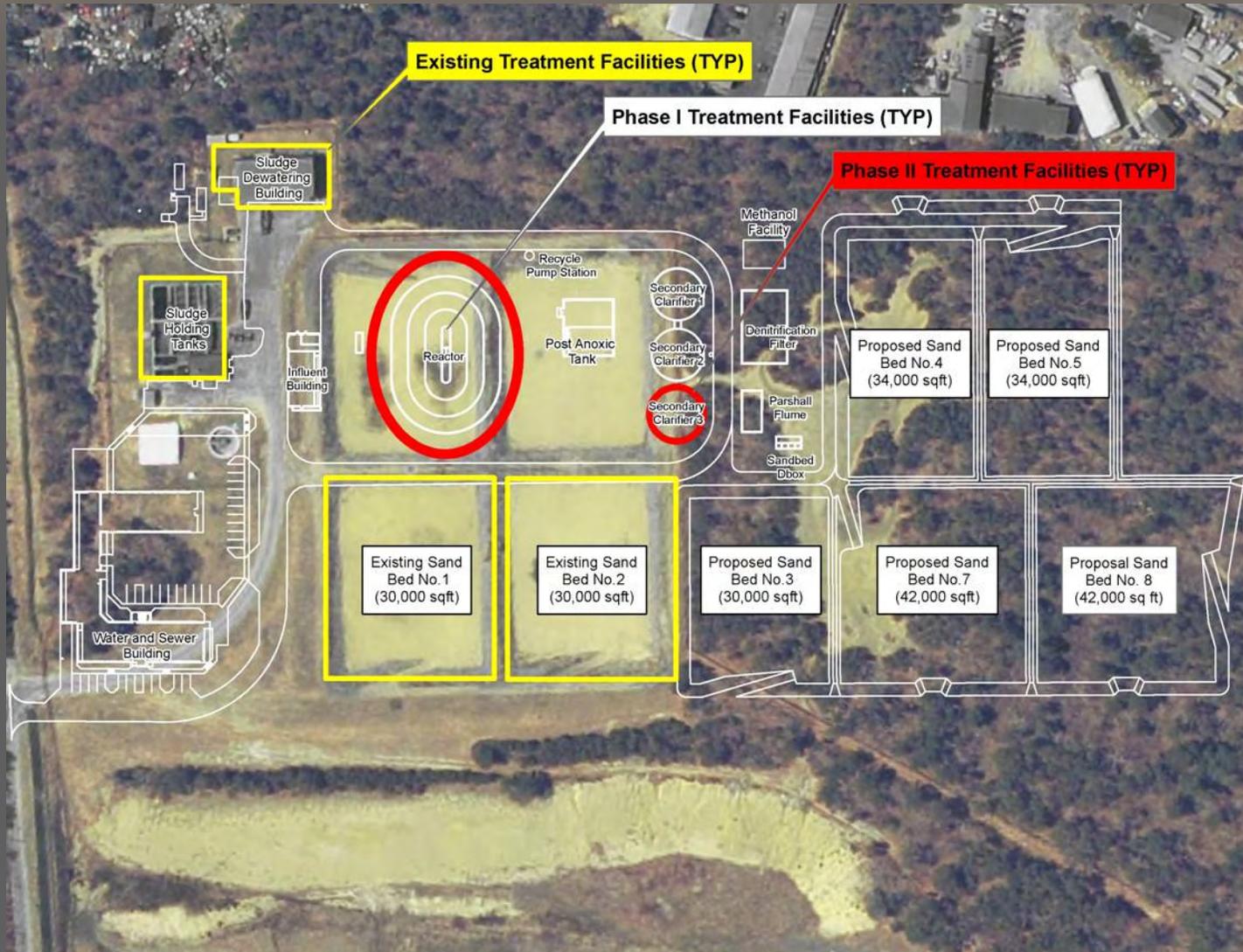
Plan No. 1: No Action Alternative

Plan No. 2: Combination of Sewers and I/A Technology in Selected Watersheds

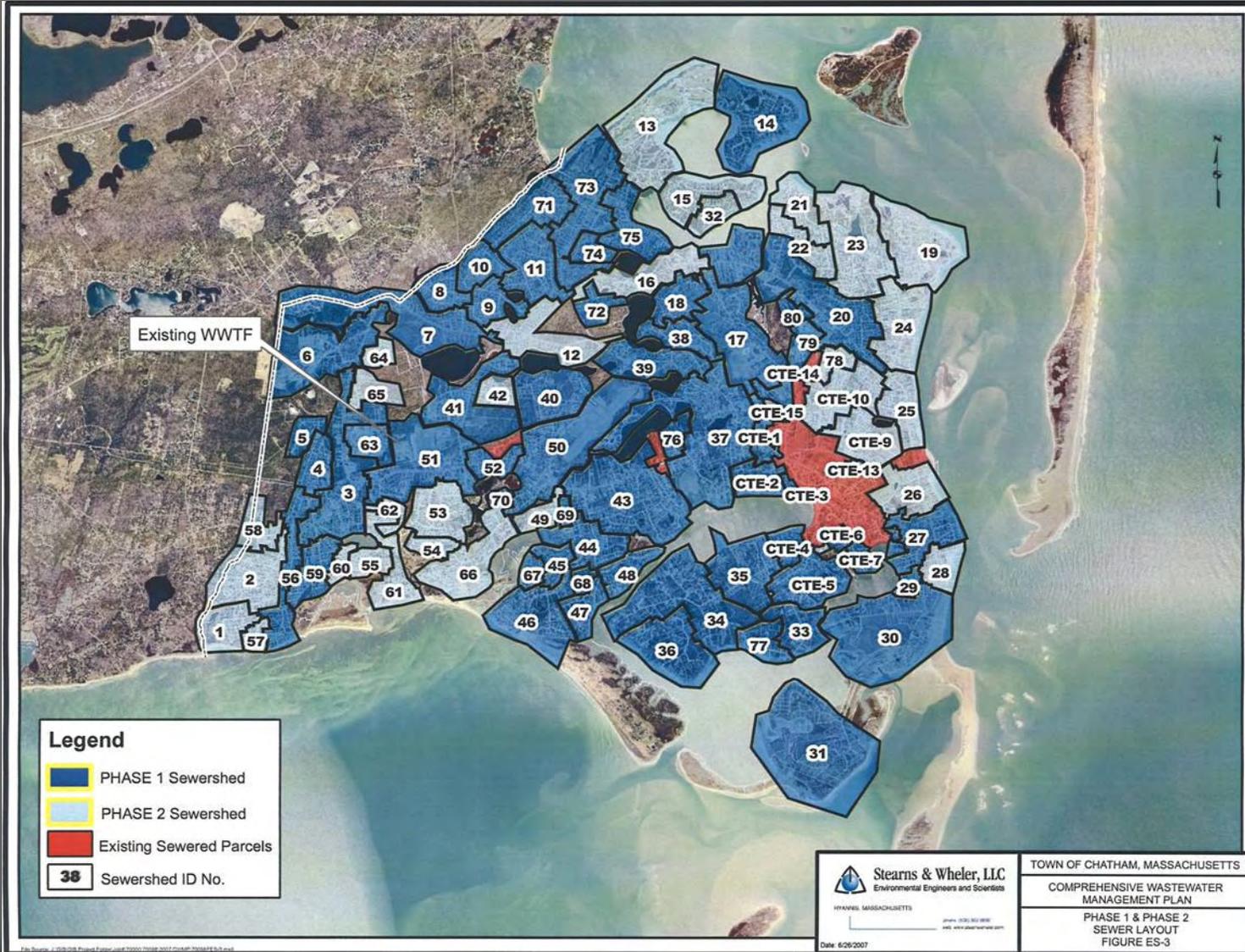
Plan No. 3: Sewer Extension to Meet Nitrogen TMDLs

Plan No. 4: Town-Wide Sewer Extension

The Recommended Plan: Phase 1 and 2 WWTF Upgrades



The Recommended Plan: Phase 1 and 2 Sewer Extension Areas



The Recommended Plan: Costs

Total Phase 1 and 2 Cost Summary (in Millions of Dollars)			
Component	Capital Costs Phase 1 ⁽¹⁾	Capital Costs Phase 2 ⁽¹⁾	Capital Costs Total ⁽¹⁾
WWTF upgrade and expansion			
Construction Costs	\$28	\$7.0	\$35
Contingencies	\$5.7	\$1.3	\$7.0
Fiscal, Legal, and Engineering	<u>\$5.9</u>	<u>\$1.5</u>	<u>\$7.4</u>
Total	\$40	\$10	\$50
Collection System Expansion			
Construction Costs	\$110	\$60	\$170
Contingencies	\$28	\$14	\$42
Fiscal, Legal, and Engineering	<u>\$28</u>	<u>\$14</u>	<u>\$42</u>
Total	\$170	\$88	\$250

⁽¹⁾ All costs are rounded to two significant digits and are referenced to a date of June 2007.

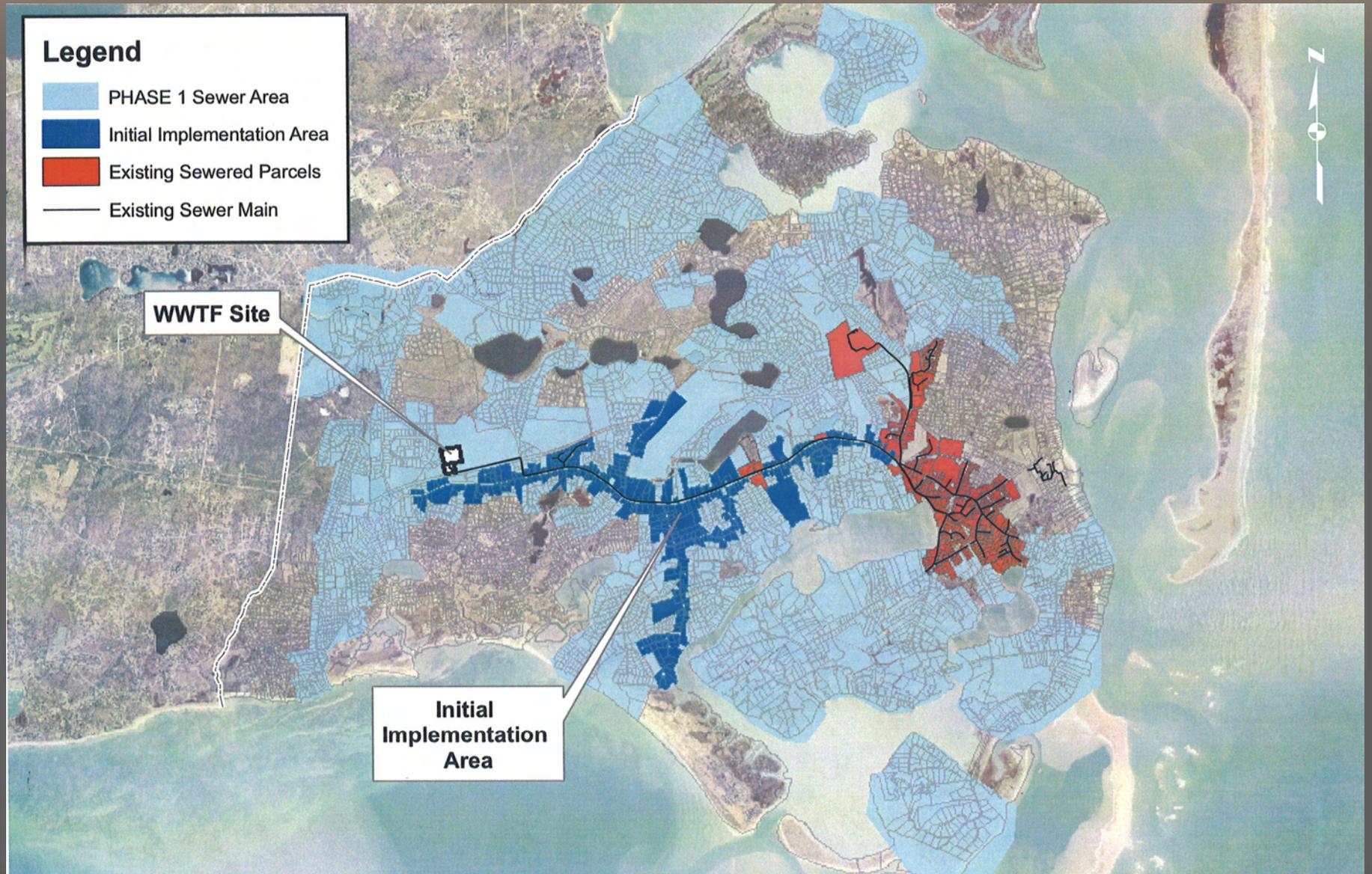
Initial Implementation

WWTF Upgrade and Expansion and Collection System “Backbone”

- ⇒ May 2009 \$59.5M Town Meeting Appropriation
- ⇒ March 2009 through February 2010:
 - Design
 - MassDEP review
 - Bidding and award
- ⇒ February 2010 through July 2012: Construction
- ⇒ Federal Stimulus Funding



Initial Implementation



The Recommended Plan: Implementation Schedule

Remaining Phase 1 Collection System Expansion
from 2012 through 2030

Phase 2 Collection System and WWTF
Expansion 2030 through 2040





QUESTIONS AND DISCUSSION

The complete FCWMP/FEIR are located on the Town Web Site:

http://www.chatham-ma.gov/public_documents/ChathamMa_CWMPPlan/CWMP