

Comprehensive Plan to Provide Municipal Water for the Town of Eastham Phase 1 – Availability of a Water Supply

We seek the Board of Selectmen's assent to formulate a warrant article for the May 2009 Town Meeting that seeks funding for Phase 1 as outlined below and, subsequently, the Board's endorsement of this article.

This proposal, an amended version of the one presented to the Board of Selectmen on November 5, 2008, presents a new approach to Municipal Water for the Town of Eastham. Its key features are (1) to proceed in phases that are funded individually and (2) to initiate the project with the assessment of the availability of water from sources within Eastham and in neighboring towns.

Phase 1 would entail two elements – (1) production-level pumping tests and associated actions at the three sites identified as potential sources by Environmental Partners in a study completed in 2007, and (2) a feasibility study of obtaining 500,000 or more gallons per day of water from the Town of Orleans.

The advantages of the proposed approach are:

(1) The flexibility (experience gained in one phase will inform subsequent phases) and community involvement (regular public review to ensure voter understanding and control) provided by phased funding of Municipal Water.

(2) The security of timely access to water from reliable, already operating supply sources in Orleans.

BACKGROUND

Although favored by a majority of those voting at two Town Meetings in 2007, the plan for full funding of a town-wide municipal water supply system failed, by a narrow margin, to attain the required two-thirds vote. Since then, the on-going annual water quality monitoring program has confirmed that groundwater nitrate concentrations are at undesirable levels. The volatile organic compounds (VOC) contamination in the area near the landfill still lacks a permanent solution. In response to public concern, the Town has activated efforts to explore wastewater management solutions and develop a comprehensive Wastewater Management Plan. Notwithstanding the considerable public support expressed at the Town Meetings, the ultimate need for town water remains to be addressed.

The possibility of purchasing water from the Town of Orleans has been considered for a number of years. A meeting held with Orleans representatives on December 9, 2008 strongly reinforced the viability of this source and persuaded us that a feasibility study is an appropriate component of the water availability assessment.

PHASED FUNDING APPROACH

Phase 1 is designed to establish the quantity and quality water available for a municipal water supply from internal and external sources. Clearly, the outcome of this initial phase will provide crucial information about the further development of the Municipal Water project.

PHASE 1

This phase is contemplated to last two years and, based on information provided by Environmental Partners, is estimated to cost \$3,150,000 as shown in the table below. It remains to be determined whether or not the Debt Exclusion already approved by voters in May 2007 is applicable to the proposed funding scheme.

WATER AVAILABILITY ASSESSMENT

<u>ACTIVITY</u>	<u>COST</u>	
<u>Eastham Sites</u>		
Field Studies/Evaluation	\$ 500,000	
DEP Site Screening/Examination	150,000	
Pumping Tests	1,350,000	
Source Data Analysis/Final Report	600,000	
DEP/MEPA/CCC Reviews & Permitting	<u>500,000</u>	
	3,100,000	3,100,000
<u>Orleans Supply</u>		
Supply Line Configuration		
Max. Volume Determination		
Infrastructure Requirements	<u>50,000</u>	<u>50,000</u>
<u>Total</u>		\$3,150,000 =====

In Eastham, production-level pumping tests and water quality analyses will be performed for supply wells in Water Protection Districts G and H, and at the Nauset Regional High School (the wells in District H and at the High School are already permitted for operation at 100,000 gallons per day). The results of the field investigations and planning efforts will be summarized in a report that provides projected yield data and recommendations for subsequent actions.

The Orleans feasibility study will involve the identification in Eastham of potential areas to be supplied with water from Orleans, the design of supply lines, the establishment of the maximum volume of water that can be provided and the determination of needed infrastructure adaptations in Orleans. An important part of the study will be a comparative cost-benefit analysis of Eastham and Orleans supply models for potential demand scenarios.

The outcome of Phase 1 is expected to be a realistic portrayal of water supply possibilities from Eastham and/or Orleans sources for a variety of demand situations.

SUBSEQUENT PHASES

With favorable outcomes of the pumping tests in Eastham, the immediate next phases would involve the design and construction of supply wells as indicated by anticipated needs to provide water to selected areas of the Town. Concurrent planning efforts would define system structure and operating procedures including governance. The costs will depend on the number and sizes of wells required to accommodate the planned connections. For areas where cost-benefit analyses indicate Orleans to be the more effective source, connections to this system and supply lines would be designed and constructed. The implementation of further phases would be governed by infrastructure requirements (e.g., water towers, pumping stations) and needs-based criteria for connections to the system.

There will invariably be multiple choices available in moving from one phase to the next one.

REQUEST FOR ACTION

We request the Board's approval of the phased funding approach and exploration of the feasibility of Orleans as a water supply source, and the Board's assent to draft a warrant article for the May 2009 Town Meeting which (1) envisions the ultimate creation of a partial or town-wide municipal water supply system and (2) requests approval of funds to implement Phase 1 of the project as specified, with the understanding that further funding for subsequent phases will require future Town Meeting approval. We also seek the Board's subsequent endorsement of such an article.

Respectfully submitted by the Water Management Committee:

Sandy Bayne
 Marcel Boelitz
 Muriel Lightfoot (Alternate)
 Donald Nuendel
 William Nugent

Meint Olthof (Acting Co-Chair)
 Daniel Schwebach
 Joan Sullivan
 Stephen Wasby
 Karl Weiss (Acting Co-Chair)

December 22, 2008