



The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

100 Cambridge Street, Suite 900

Boston, MA 02114-2524

MITT ROMNEY
GOVERNOR

KERRY HEALEY
LIEUTENANT GOVERNOR

ELLEN ROY HERZFELDER
SECRETARY

Tel. (617) 626-1000
Fax. (617) 626-1181
<http://www.mass.gov/envir>

May 14, 2004

**CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
SPECIAL PROCEDURE: PHASE III –
COMPREHENSIVE WASTEWATER MANAGEMENT PLAN AND FINAL
ENVIRONMENTAL IMPACT REVIEW**

PROJECT NAME : **Comprehensive Wastewater Management Plan**
PROJECT MUNICIPALITY : **Nantucket**
PROJECT WATERSHED : **Islands**
EOEA NUMBER : **12617**
PROJECT PROPONENT : **Town of Nantucket**
DATE NOTICED IN MONITOR : **April 7, 2004**

As Secretary of Environmental Affairs, I hereby determine that the Phase III Document: Comprehensive Wastewater Management Plan/Final Environmental Impact Report (CWMP/FEIR), submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (G. L., c. 30, ss. 61-62H) and with its implementing regulations (301 CMR 11.00).

OVERVIEW

The Town of Nantucket is developing a Comprehensive Wastewater Management Plan/Environmental Impact Report (CWMP/EIR) to address the short-term and long-term issues relating to the island's wastewater treatment and disposal needs. The goal of the CWMP/EIR is to examine the full range of Nantucket's wastewater management needs, and identify environmentally sustainable treatment and disposal alternatives that respond to the community's needs, and meet water quality and public health standards. The result will be a comprehensive plan outlining how the Town of Nantucket will treat and dispose of its sanitary sewage for the next 20 years.

This project is subject to the Mandatory EIR provisions of the MEPA regulations since it will likely involve construction of more than ten miles of new sewers and may exceed other Mandatory EIR thresholds. The project will require several permits from the Department of Environmental Protection (DEP) for sewer extensions and connections, as well as compliance with revised water quality discharge limits specified in the federal National Pollutant Discharge Elimination System (NPDES) permits issued by the U.S. Environmental Protection Agency (EPA). Because the project will receive funding or financial assistance from DEP under the State Revolving Fund, this project is subject to broad scope jurisdiction under MEPA.

Special Review Procedure

The Secretary's Certificate on the ENF/Phase I (EOEA #12617, November 16, 2001) granted the Town of Nantucket's request for a Special Review Procedure (SRP) for this project to facilitate the Town's development of environmentally sound wastewater management practices. The SRP provided for the filing of three documents: Phase I, including a definition of existing conditions, the Needs Analysis, and the Screening of Alternatives; Phase II, the Draft CWMP and Draft EIR, including the development and screening of wastewater management alternatives to address the needs defined in the Phase I document; and Phase III, the Final CWMP and Final EIR. The Town filed the ENF and Phase I report on October 10, 2001. The Secretary's Certificate on the ENF/Phase I (EOEA #12617, November 16, 2001) found that additional information was needed in the areas of project needs and alternatives before Phase I could be determined to be complete and adequate. In a May 17, 2002 letter to the proponent, the Secretary authorized the proponent to incorporate the requested additional Phase I information, and response to comments received on the ENF and Phase I report, within the Phase II document.

Phase II – Draft CWMP/Draft EIR

In the Phase II document, the proponent evaluated and screened all potential treatment alternatives and groundwater disposal sites that could address the needs and problems identified in the Phase I – Needs Analysis document. The treatment alternatives considered included the full range of options available under Title 5 (conventional and innovative/alternative systems, both for individual properties and for shared and communal facilities to service multiple properties), and a centralized or decentralized satellite wastewater treatment plant with groundwater discharges.

The proponent also developed and applied screening criteria to identify the preferred wastewater management alternative including cost (both to individuals and the community), technical feasibility, environmental and public health protection (including maintenance of water balance in drainage sub-basins), institutional and management issues, and other relevant concerns.

As described in the Phase II document, the proponent's recommended plan involves upgrading and expanding the existing Surfside Wastewater Treatment Facility (WWTF), construction of a new Madaket Wastewater Treatment Facility, and construction of new sewers to service the wastewater flows generated from 5 Needs Areas (Madaket, Monomy, Shimmo, Somerset, and Warrens Landing). Under the proponent's preferred alternative, a new Septage Management Plan (SMP) will be designed for the Town's 5 remaining Needs Areas (Pocomo, Polpis, Quidnet, Wauwinet, and Town WPZ).

Phase III – Final CWMP/FEIR

The Certificate on the DEIR/Phase II document required the proponent to address a number of outstanding issues in the Phase III document including: clarification of cost estimates (both capital and operating) for each component of the proponent's recommended plan; consistency of the recommended plan with local and regional growth management policies; and sewerage in coastal high hazard flood areas.

Rare Species

According to the comments received from the Natural Heritage and Endangered Species Program (NHESP), the project site contains rare species habitat. NHESP has identified at least eight state-listed plant and animal species that may be located in the vicinity of the proposed Madaket WWTF including; Short-eared Owl (*Asio flammeus*), Northern Harrier (*Circus cyaneus*), Pied-billed Grebe (*Podilymbus podiceps*), Nantucket Shadbush (*Amelanchier nantucketensis*), New England Blazing Star (*Liatris borealis*), Sandplain Flax (*Linum intercursum*), Lion's Foot (*Prenanthes serpentaria*), and the Sandplain Blue-eyed Grass (*Sisyrinchium arenicola*). NHESP has also identified four state-listed plant and animal species that may be located in the vicinity of the proposed Surfside WWTF sites; Short-eared Owl (*Asio flammeus*), Northern Harrier (*Circus cyaneus*), Piping Plover (*Charadrius melodus*), and the Bushy Rockrose (*Helianthemum dumosum*). In their comments, NHESP has indicated that the proposed project may experience severe MESA permitting constraints particularly at the Madaket WWTF site. I ask that the Town of Nantucket file a Notice of Project Change (NPC) when planning for the project has progressed further. I recommend that the Town arrange a pre-filing meeting with the MEPA Office before finalizing and submitting the NPC.

Cost Estimates and Funding Options

As designed, the Town of Nantucket's recommended plan will be constructed in seven phases over a twelve-year period. The estimated capital costs for the recommend plan are \$92.1 million dollars. As described in the Phase III/FEIR document, the proponent intends to seek public financing for the proposed project's eligible capitol costs through the State Revolving Fund loan program (SRF). According to the information contained in the Phase III document, the proponent's recommended comprehensive wastewater management plan may also include additional construction activities, recommended in the Town of Nantucket's ongoing Evaluation and Mapping Project, involving the rehabilitation of the Town's existing wastewater and stormwater infrastructure to eliminate excessive infiltration and inflow (I/I), and stormwater flooding from being discharged into Nantucket Harbor. As described by the proponent, the estimated capital costs for the wastewater and stormwater infrastructure projects recommend in the Evaluation and Mapping Project are \$83.4 million dollars.

In their comments DEP has indicated that SRF program regulations and CWMP planning guidelines require the proponent's final recommended plan include a financial analysis and presentation of average household costs.

I ask that the Town submit a copy of the financial analysis and presentation of average household costs for the proponent's final recommended plan to the MEPA Office for the project file. The financial analysis should include a presentation of cost estimates and funding options that includes the average household costs (capital and O&M) for: households located within a Sewer Overlay District and connected to the sewer system; households located within a Sewer Overlay District and not connected to the municipal sewer system; and households located in a Septic Overlay District who will continue to be serviced by on-site Title 5 septic systems and a Septage Management Plan. The financial analysis should also clearly identify those components (and capitol cost estimates) of the Town's Evaluation and Mapping Project that are proposed for inclusion in the proponent's recommended comprehensive wastewater management plan.

Planning for Growth (Executive Order 385)

Many comments received on the proponent's Phase II and Phase III documents concern growth management. Executive Order #385 requires that state and local agencies engage in protective and coordinated planning oriented towards both resource protection and sustainable economic development.

For reasons of both environmental protection and fiscal prudence, investments in public infrastructure should be carefully targeted toward those areas for which clear existing needs have been established and for areas where denser development is appropriate, thereby relieving development pressures on open space, agricultural lands, and other valuable natural resources.

According to the information contained in the Phase III document, the proposed Madaket sewer collection system and WWTF have been designed with low-pressure sewers and sized to service only those areas identified by the proponent as Needs Areas to be sewered. In their comments, CZM has indicated that the Town of Nantucket proposed and recently voted to adopt "Sewer" and "Septic" Overlay Districts to control the potential secondary growth impacts that may be induced by public sewers in Nantucket. Creation of the Sewer Overlay District will allow only those properties currently deemed developable by State Land Use Codes and local zoning to be part of the proposed sewer district.

I commend the Town for their initial efforts to work on this important and difficult issue, and anticipate the discussions and deliberations in public forums throughout the Town of Nantucket will help to ensure that acceptable growth control measures are implemented. Additional growth control measures can be discussed during the design and permit review process leading to the issuance of Sewer Extension Permits. I encourage the proponent to consult with the Nantucket Planning and Economic Development Commission (NP&EDC), and the Growth Management Policy staff at the Executive Office of Environmental Affairs as it continues to develop its growth management strategy.

Land Alteration in High Hazard Areas

As described in the Phase III document, the Town of Nantucket has prepared emergency response plans in response to the concerns identified by CZM in their comments on the Phase II document pertaining to naturally occurring erosion near the Siasconset and Surfside WWTFs. In their comments, CZM has recommended that the proponent identify and map emergency response trigger points as part of DEP's permitting process for the proposed project. I ask that the proponent work closely with CZM to design appropriate emergency response trigger points. The proponent should submit a copy of the final emergency response plan to the MEPA Office.

Historical / Archeological Resources

According to comments received by the Massachusetts Historical Commission (MHC), the proposed project areas contain archaeological sites associated with Native American occupation of Nantucket. MHC has requested that the proponent conduct an intensive archaeological survey of the project site.

The proponent has committed to working with MHC as project design progresses, and will conduct an intensive (locational) archaeological study of the project site. A copy of MHC's comments on the archaeological study should be forwarded to the MEPA Office for the project file along with a final Section 61 Findings for any state agency actions.

Reduction of Wastewater Flows

Reductions in wastewater flow should also play a significant role in meeting Nantucket's long-term wastewater treatment and disposal needs. The reduction of wastewater flows can be achieved by implementing aggressive water conservation programs, increasing wastewater reuse (i.e., for irrigation purposes), and reducing infiltration/inflow (I/I) levels. I continue to encourage the proponent to propose tools to improve water conservation. The Town of Nantucket should give serious consideration to implementing any number of additional tools to improve water conservation, including, but not limited to: enactment of a bylaw regulating automatic sprinklers and/or clearing of land for grass lawns, outdoor water use restrictions and water use rates; retrofitting of municipal buildings with low flow devices; enactment of a bylaw regulating automatic sprinklers and/or clearing of land for grass lawns; promotion of the use of cisterns for outdoor watering; the use of a water bank; and the promotion of the use of new grey-water systems.

May 14, 2004

DATE


 Ellen Roy Herzfelder, Secretary

Comments received: continued on next page

04/22/04	Earth Tech
05/04/04	Massachusetts Historic Commission (MHC)
05/05/04	Earth Tech
05/06/04	Nantucket Planning and Economic Development Commission
05/07/04	Natural Heritage and Endangered Species Program (NHESP)
05/07/04	Massachusetts Coastal Zone Management (CZM)
05/07/04	Massachusetts Department of Environmental Protection – SERO
05/07/04	Nantucket Land Council, Inc.
05/10/04	Earth Tech

SRP/CWMP FEIR #12617
 ERH/NCZ/ncz



Nantucket Land Council, Inc.

Six Ash Lane
Post Office Box 502
Nantucket, Massachusetts 02554

508 228-2818

FAX 508 228-6456

nlc@nantucket.net

www.nantucketlandcouncil.org

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May 7, 2004

Ellen Roy Herzfelder, Secretary
Executive Office of Environmental Affairs
Attn: MEPA Office
EOEA No. 12617, Nicholas Zavolas
251 Causeway Street, Suite 900
Boston MA 02114

Dear Ms. Herzfelder:

The Nantucket Land Council, Inc. is a non-profit, environmental organization, which is supported by more than 1700 members. We have reviewed the Phase III – Comprehensive Wastewater Management Plan and Final Environmental Impact Report for Nantucket, Massachusetts. We would like to take the opportunity to make the following comments.

Madaket Treatment Plant

The Nantucket Land Council still has serious concerns about the wastewater treatment facility planned for the Madaket area. We agree that the current on-site wastewater disposal systems are, for the most part, causing degradation to water quality and aquatic resources. We urge caution, however, on proceeding down an extremely expensive and perhaps unnecessary path for wastewater treatment.

In response to the Land Council's comments on the DEIR, the Phase III report states on page 1-17 Volume III that: "Proceeding with the current CWMP/EIR schedule allows further coordination with the Massachusetts Estuaries Project TMDLs. This may mean changing treatment technologies or prioritization. The CWMP/EIR is a dynamic and evolving process." We are pleased to see this statement and urge further coordination between The Madaket Area Plan Work Group, The Madaket Watershed Work Group, The Septic System Advisory Committee, The Town of Nantucket, The Massachusetts Estuaries Project, and any other concerned citizens or groups.



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The phase III report states on page 1-19 that "the proposed CWMP requires significant legal, planning and analysis. Identifying and establishing "sewer overlay districts", by local bylaw changes or with the filing of special legislation, such as the 'checkerboard systems' approved in Provincetown, MA are options currently being reviewed. Town officials have pledged to have the necessary rules and regulations in place before the implementation of the CWMP." The town should explain within the public hearing process what rules and regulations are necessary so that all interested parties could provide comments and concerns. The town officials of today have pledged to ensure that these regulations are in place, how can we ensure that future town officials will feel the same way? ✓

Septage Management Plan (SMP)

This document is perhaps the most important item in alleviating wastewater pollution. However, the plan is not included in the CWMP. The SMP is still in draft form. It is extremely difficult to agree with the assumptions made in the CWMP that references the benefits of the SMP without the document being before us. The contents and implementation of the SMP should be discussed in the public arena. We anticipate that public comment could be received when the Board of Selectmen and or Board of Health will be adopting the plan's various components. However, there should be a multi-step process whereby the public can voice their thoughts and concerns during the drafting phase, not right before a vote of action. The Board of Selectmen has intimated that they would be holding a series of workshops and or public hearings to discuss this plan. We urge them to continue on this path. ✓

Recharge Impacts on Sub-basins

The potential impact on groundwater recharge in particular sub-basins is an issue that should be evaluated more closely. As our community grows, groundwater in certain basins may be impacted by increased pumping rates. Groundwater recharge will be affected when the wastewater will be transported out of the basin to the Surfside and Madaket plants. The Phase II and Phase III report states that water conservation education will be the primary focus to address this concern. The Nantucket Land Council would be willing to help develop an in-depth monitoring program that analyzes any potential impacts on ground water and wetland ecosystems. However, most importantly, if there are quantitative impacts, will there be any governmental oversight to ensure that beneficial solutions are put into place? ✓

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Recommended Plan (Section 5.0) for Study Area 6 – Surfside (p.5-6)

In accordance with an Administrative Consent Order between the Commonwealth and the Town of Nantucket the Surfside treatment plant must be designed and constructed by 2008.

The plant is designed with a number of project goals in mind listed on page 5-18. These include: Low maintenance, operate without the use or with a limited use of chemicals, meet high discharge limits. The project goals and rationale are not well defined we offer the following comments and questions:

Low Maintenance

The FEIR identifies O&M costs for only one, the SBR (Table 5-10, p.5-54), of the four biological unit process alternatives reviewed (e.g., MLE, SBRs, Trickling filters, or RBCs). The report does not describe how these four alternatives came to be identified for engineering evaluation. We believe that other biological alternatives should have been reviewed and that the four that have been reviewed are not representative of the treatment technology choices which are appropriate to Nantucket for the Surfside facility upgrade. For instance, at a minimum, the existing Surfside WWTF treatment system which uses chemically enhanced primary treatment (CEPT) during the six month peak flow season should have been included as an option which in our opinion would significantly reduce the cost of upgrading with one or more new biological unit process alternatives. Cost comparisons addressing both the initial capital cost and the annual O&M costs need to be developed to describe the most efficient and cost effective treatment plan. Additionally, O&M costs are not provided for the odor control system alternatives (Packed Bed Scrubbers, Mist Chamber Scrubbers, or Bio-filters). A cost comparison addressing both the initial capital cost and the annual O&M costs needs to be developed to describe the most cost effective plan. Therefore, without O&M costs presented, we question how this project goal was addressed.

Operation without the use or with a limited use of chemicals - It is not at all clear what the basis for this goal is. The Surfside WWTF has operated, as a six month/year CEPT plant, for nine years using a non-toxic aluminum chloride compound (no more toxic than ordinary table salt.) To our knowledge, this chemical has not caused disruptions in treatment capability due to delivery nor have there been hazardous situations to plant staff or the public as a result of their use at the plant or transport to the plant. This goal is arbitrary as it only serves to restrict viable treatment alternatives from being considered for the Surfside upgrade.

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Meet High Discharge Limits - High in relation to what? Does this mean higher than permit limitations? What are the permit limits for which this facility is being designed? How were they agreed on? It is not clear what the permit limits for the new plant will be. This is of great concern since the permit limits will significantly impact the treatment level required and the cost of such treatment. The plant's discharge limits must be based on sound science. This is an essential starting point and only after that is clearly documented, then treatment alternatives should be thoroughly investigated.

Existing Surfside WWTF Performance

CEPT is a wastewater treatment process in which a very small amount (less than 50 parts per million) of a chemical, such as aluminum chloride, is added to the raw sewage influent to promote coagulation of wastewater particles. Rapid settling of the large flocs that are created increases pollutant removal efficiency in the existing primary settling tanks.

The same chemical is routinely used in potable water treatment plants. Advances in the efficiency of CEPT technology in the past 20 years have led to its widespread adoption as a first stage wastewater treatment process in Southern California.

The FEIR on the existing Surfside plant does not discuss the fact that it has operated as a very efficient CEPT plant during the six-month high load period from 15 May to 15 October. Originally built in 1991 for conventional primary treatment, it was upgraded for seasonal use of CEPT in 1995.

It is never explicitly stated but it is clear that **the use of CEPT will be discontinued in the new Earth Tech upgrade facility.**

The two most important pollutant indicators that must be met in an effluent permit for domestic wastewater are the organic concentration measured as BOD (biochemical oxygen demand) and TSS (total suspended solids.) During the six-month summer CEPT period the average removal of BOD at Surfside is about 60% or three times that during the no CEPT winter period. The corresponding average removal of TSS in the CEPT period is over 80% or about twice that during the winter period. These seasonal CEPT removals are close to that obtained by conventional biological secondary treatment such as the SBR proposed by in the FEIR.

The NLC would like to thank Mr. Eric Schultz, Manager of the Surfside plant, for providing detailed data on plant operation in 2003 and to congratulate him for using the innovative CEPT technology and for running a very efficient treatment plant.

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Design Flows & Loadings

The design flows and loads for year 2025 (Table 5-4.p.5-26) are significantly higher than the existing flows and loads to the Surfside plant. In 2003 the maximum monthly flow in August is about 2 MGD and the future design summer flow in the FEIR is 3.5 MGD. An amount 1.75 times greater. The projected values in terms of both flow peaking factors and waste strengths appear to be based on text book data and not on a historical review of existing system growth data. These values and the implications for growth in the historical area should be thoroughly reviewed by the Town.

Review of Biological Treatment Upgrade Alternatives

As stated above, the four biological treatment alternatives evaluated for the Surfside plant do not represent the full array of treatment choices to Nantucket and, on this basis, the FEIR does not represent a comprehensive technical review. Additional treatment processes should have been evaluated for this prominent and expensive part of the new plant. Two of the processes evaluated, Trickling Filters and RBCs should not be considered state-of-the-art treatment technologies for new or expanded plants. Two processes (MLE and SBRs) were carried forward for further analysis. As stated above, the existing CEPT plant should have been considered as part of the entire treatment train. CEPT allows loadings to the secondary treatment processes to be reduced, thereby reducing the size and cost of secondary treatment systems. The benefits would be lower capital costs for the new facilities and lower O&M related electric power costs because of the reduced need for blowers in the aeration tank.

A potentially viable treatment technology following the CEPT plant that is not considered in the FEIR would be biological aerated filters (BAF). These units occupy a relatively small area and can be set up to perform tertiary level treatment, including nitrogen reduction.

The Integrated Fixed Film Activated Sludge (IFAS) process, membrane bioreactors (MBRs) and the four stage Bardenpho process, among others, should all have been reviewed and compared for applicability at Surfside.

The PDR recommends SBRs over MLE for Surfside, without any documented analysis of O&M costs and life cycle cost analysis. Only capital costs are documented in the PDR. O&M and life cycle cost analyses are expected at this level of engineering study to fully evaluate the alternatives and to support recommendations. The report states that SBRs are recommended at Surfside since an SBR facility is under construction at Siasconset and one is proposed at Madaket. We question the significance of this to support what is being recommended at Surfside. It is noted that both Siasconset and Madaket will be

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significantly smaller plants than the one planned at Surfside, therefore, due to scale, what may be appropriate at Siasconset and Madaket should not be assumed to be applicable at Surfside. Additionally, while the plant being constructed at Siasconset is an SBR facility, Nantucket does not yet have experience with an SBR facility and only real operating time will enable Nantucket to determine whether the SBR process is satisfactory.

Sludge Dewatering

An evaluation of BFPs, centrifuges and rotary presses resulted in a recommendation for centrifuges at the Surfside plant. While a life cycle analysis was performed, the details of the costs were not included. While mass balance calculations are presented in the report, there are no reported estimates of sludge quantities utilized to size the equipment in Section IV. Yet the sludge dewatering equipment costs are based on three 2-meter BFP units, three centrifuges and six rotary presses. Based on a 1.78 - 3.01 mgd plant, it appears that the number of dewatering equipment units identified in the PDR is significantly overstated. Additionally, we are concerned that not all of the costs have been identified and reflected in the analysis - for instance, it is not clear what modifications or additions will need to be made to the dewatering building to accommodate the units of the three technology options. We are also concerned that the PDR recommends the existing grit removal facilities at the plant headworks be decommissioned and not replaced as part of the new plant. This will result in grit load with the primary and secondary sludge. The grit in the sludge will cause the high speed centrifuge components to be subject to potentially excessive wear, decreasing the life of the equipment. This has been well documented at other locations throughout the country.

Odor Control - The Odor Control evaluation included three technologies (Packed bed scrubbers, Mist chamber scrubbers and bio-filters). However, similar to the evaluation for the biological treatment systems, the odor control recommendation is made without any documented analysis of O&M costs and life cycle costing. Again, we note that O&M and life cycle cost analyses are expected at this level of engineering study to fully evaluate the alternatives and to support recommendations. Additionally, the Odor Control System selected, (Packed Bed Scrubbers) utilizes chemicals. This again is in contradiction to the first project goal discussed above. It is also noted that a biological treatment alternative involving CEPT utilizing ferric salts will assist in tying up hydrogen sulfides, thus serving to mitigate odor generation. Additionally, a treatment train that incorporates CEPT will involve much smaller treatment tanks, again minimizing odor emissions.

In summary, the selected treatment option for the Surfside plant should be superior in a number of technical areas, including treatment capability, reliability, flexibility, cost (both capital & O&M), and neighborhood and environmental resources protection (noise, odors and land encroachment).

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Section V - RECOMMENDED PLAN -

Effluent Disinfection - A new UV system is identified for effluent disinfection. Why is a new system required? Why can't the existing disinfection system be utilized? Was an engineering evaluation conducted to support this recommendation? Are the plant's effluent limits requiring the UV system?

Effluent Filtration - Why is effluent filtration required when the plant discharges to rapid sand infiltration basins?

Rapid Infiltration Basins (RIBs) - What is the treatment capacity of the RIBs? These units can provide valuable pollutant removal capacity for the Surfside plant, potentially decreasing the sizing of upstream treatment systems.

Cost

It is our opinion that the projected cost of the order of \$30 million for the Surfside upgrade is far in excess of recent upgrade experiences in towns of comparable size.

Final Environmental Impact Report (FEIR)

The FEIR explains on page 6-7 that "while the introduction of sewer infrastructure in itself does not serve to promote or deny growth, the local zoning and by-laws will." The town must enact special legislation and the development of new zoning sewer overlay districts in order to preserve the integrity of the Nantucket Comprehensive Community Plan and uphold Executive Order 385/Planning for Growth. Unfortunately the approval of such legislation at the local or state level is not always guaranteed. The town is presenting and promoting a town planning template for which the measures to protect against unwanted growth are not already in place and perhaps never will be.

On page 6-8 the FEIR states that "A well managed Septage Management Plan (SMP) has the potential to provide the means with which to prevent areas on the island from overdevelopment due to the construction of infrastructure and utilities in areas previously not serviced by such as well as preserving the community structure that originally attracts (sic) to the island." We agree that the SMP will be of benefit, however, we again urge that the drafting process be done within the public hearing process.

There unfortunately is no information on endangered species impacts that will occur at the Madaket and Surfside treatment plant sites. We assume that the town will have to obtain all necessary approvals for the "take" of a state listed endangered species, and that the approval of the FEIR will not supercede this requirement.

ENDANGERED SPECIES

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We hope that the formulation and implementation of the CWMP is a dynamic and evolving process, subject to change and revision, as is stated throughout the Phase III and FEIR document. We understand the urgency to comply with the Administrative Consent Order, however, we hope that our comments regarding the Surfside upgrade are taken into consideration and implemented accordingly. We also hope that the recommended plans for Madaket and areas under the Septage Management Plan will be adaptable documents that can and will change if further environmental and cost analysis proves that such revisions are warranted.

Thank you for taking the time to review our comments

Sincerely,

A handwritten signature in cursive script that reads "Cormac Collier".

Cormac Collier
Ecologist

MEMORANDUM

TO: Nicholas Zavolas, Environmental Reviewer, MEPA Unit

THROUGH: David Johnston, Deputy Regional Director
David DeLorenzo, Deputy Regional Director
Millie Garcia-Surette, Deputy Regional Director

CC: DEP/SERO David Burns, Municipal Facilities
Jeffrey Gould, Chief, Water Pollution Control
Frank Mezzacappa, Water Pollution Control
Tena Davies, Team Leader, Ten Mile River and Islands Watershed
Richard Keith, Chief, Municipal Services
Brian Dudley, Chief, Water and Nutrient Management

CC: DEP/Boston Ronald Lyberger, Municipal Facilities
Thomas Mahin, Deputy Director, BRP
John O'Brien, BRP
Alan Slater, BRP
Jack Hamm, BRP
Sharon Pelosi, Legal
Leena McQuaid, Commissioner's Office

FROM: Sharon Stone, SERO MEPA Coordinator

DATE: May 7, 2004

RE: Phase III/FEIR
EOEA #12617 – NANTUCKET – Comprehensive Wastewater
Management Plan (CWMP)

"For Use in Intra-Agency Policy Deliberations"

The Southeast Regional Office and the Boston Office of the Department of Environmental Protection have reviewed the Final Environmental Impact Report (FEIR/Phase III) for the proposed Comprehensive Wastewater Management Plan (CWMP) to be located on the Island of Nantucket, Massachusetts (EOEA #12617). The project proponent provides the following information for the project:

“This document provides the basis for the design and ultimate implementation of the approved plan. The FEIR contains the results of evaluation of the available options for improving the existing on-site wastewater disposal systems. This Phase III Report is the final result of all comments received on the Phase II Report through the MEPA process as well as comments received during multiple public informational meetings and workshops held on the island and incorporates the

provisions contained in the Surfside ACO.”

The Department has reviewed the Final CWMP/EIR and supports its conclusions and recommendations. The Final CWMP/EIR did not respond, however, to the Department's comment #4 on the Draft CWMP/EIR. The SRF regulations and CWMP planning guidelines require that a financial analysis and presentation of average household costs be presented in the final plan, and it does not contain any analysis that meets that requirement. This information is also important to present at the public hearing on the recommended plan required by the SRF regulations. The Town and Earth Tech must develop, at a minimum, a set of possible financial mechanisms for funding the proposed plan and present the average household costs for the plan for each scenario. The CWMP/EIR cannot be approved for SRF funding purposes until that information is developed and submitted to the Department. The Department recommends that the MEPA Certificate for the Final EIR require that this information and analysis be developed and submitted to the Department.

COSTS
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The DEP Southeast Regional Office appreciates the opportunity to comment on this proposed project. If you have any questions regarding these comments, please contact Sharon Stone at (508) 946-2846.



The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

100 Cambridge Street, Suite 900

Boston, MA 02114-2524

MEMORANDUM

Tel. (617) 626-1000

Fax. (617) 626-1181

http://www.mass.gov/envir

MITT ROMNEY
GOVERNOR

KERRO HEALEY
LIEUTENANT GOVERNOR

ELLEN ROY HERZFELDER
SECRETARY

Ellen Roy Herzfelder, Secretary, EOEA

Nick Zavalas, MEPA Unit

Tom Skinner, Director, CZM

DATE: May 7, 2004

RE: EOEA 12617 – Nantucket CWMP/FEIR; Nantucket

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Comprehensive Wastewater Management Plan (CWMP) and Final Environmental Impact Report (FEIR) and offers the following comments.

The CWMP reflects the Town of Nantucket's admirable and successful efforts to address in its infrastructure planning, the potential impacts of siting new facilities and infrastructure in coastal high hazards areas.

The CWMP proposes to use a combination of approaches to meet Nantucket's current and future wastewater disposal needs. Under the plan, a new wastewater treatment facility is currently under construction at Siasconset and another will be built in Madaket. The current facility located at Surfside will be upgraded and expanded. The two new facilities and most of the new collection system will be outside of the floodplain. In response to concerns about erosion near the Siasconset and Surfside facilities, the Town prepared emergency response plans triggered by specific thresholds. CZM believes that these plans are sufficient, and recommends that emergency response trigger points be identified and mapped as part of the DEP permitting process. The new collection systems will be predominantly low pressure sewers, although some gravity sewers will connect to the Surfside collection system. The construction of new pump houses will not be necessary under the proposed CWMP.

EROSION ISSUES

CZM understands that the Town of Nantucket voted at Town Meeting to create an overlay district that will allow only those lots currently deemed as developable by State Land Use Codes to be part of the sewer district. CZM applauds the Town of Nantucket for being proactive in limiting growth associated with the proposed new collection system.

GROWTH

The proposed project may be subject to CZM federal consistency review. For further information on this process, please contact Alex Stryksy, Project Review Coordinator, at 617-626-1219.

TWS/th/rh/tpc

- cc: Truman Henson,
CZM Cape Cod and Islands Regional Coordinator
- Elizabeth Kouloheras, Section Chief
Southeast Regional Office, MA DEP
- Ben Lynch, Acting Section Chief
Waterways Program, MA DEP



MassWildlife

Commonwealth of Massachusetts

Division of Fisheries & Wildlife

NZ

7 May 2004

Ellen Roy Herzfelder, Secretary
Executive Office of Environmental Affairs
Attention: MEPA Office
Nicholas Zavalas, EOEA No. 12617
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

RECEIVED

Wayne F. MacCallum, Director

MAY 12 2004

MEPA

Project Name: Nantucket Comprehensive Wastewater Management Plan
Proponent: Nantucket Department of Public Works
Location: Nantucket
Document Reviewed: Phase III/Final EIR
NHESP File Number: 01-9335

Dear Secretary Roy Herzfelder,

The Natural Heritage & Endangered Species Program (NHESP) of the MA Division of Fisheries & Wildlife has reviewed the Phase III/FEIR for the Nantucket Comprehensive Wastewater Management Plan and would like to offer the following comments. We have enclosed a copy of recent correspondence with Earth Tech which includes the list of rare species that occur within or in the vicinity of the Madaket FAA and Surfside sites, which both fall within Priority Habitat of Rare Species. The Madaket FAA site is significant in that at least 8 state-listed plant and animal species inhabit the area, within two ecologically significant natural communities. These species are protected from "take" pursuant to the MA Endangered Species Act (MESA)(G.L. c.131A) and its implementing regulations (321 CME 10.00). Due to the sensitive habitat at this site we question the FEIR preliminary screening results which indicate (see Table 3-3) that there is "no constraint" at this site from the occurrence of "sensitive habitat." On the contrary, the project could experience severe MESA permitting constraints at the Madaket FAA site particularly since other seemingly viable alternatives exist. We recommend that site ranking be adjusted accordingly to guide the Nantucket Department of Public Works planning process.

If you have any questions regarding this review please contact Patricia Huckery, NHESP Endangered Species Project Analyst, at 508-792-7270 x 151.

We appreciate the opportunity to comment on this project.

Sincerely,

Thomas W. French
Assistant Director

www.masswildlife.org

Division of Fisheries and Wildlife
Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275
An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

Copies to:

Nantucket Department of Public Works
188 Madaket Road
Nantucket, MA 02554-2623

Earth Tech
196 Baker Avenue
Concord, MA 01742-2167

Nantucket Board of Selectmen
16 Broad Street
Nantucket, MA 02554

Nantucket Conservation Commission
16 Broad Street
Nantucket, MA 02554

Nantucket Planning Board
16 Broad Street
Nantucket, MA 02554

Cormac Collier
Nantucket Land Council, Inc.
Six Ash Lane
P.O. Box 502
Nantucket, MA 02554



MassWildlife

Commonwealth of Massachusetts

Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

January 14, 2004

Timothy Sullivan
Earth Tech
196 Baker Avenue
Concord, MA 01742

Re: Surfside and FAA Wastewater Management Sites
Nantucket, MA
NHESP File: 01-9335

Dear Mr. Sullivan,

Thank you for contacting the Natural Heritage and Endangered Species Program ("NHESP") of the MA Division of Fisheries & Wildlife for information regarding state-protected rare species in the vicinity of the above referenced site. I have reviewed the site and would like to offer the following comments.

Please see the attached species list for Priority Habitat 1737 (formerly PH 1792) and Estimated Habitat 688 as indicated in the 11th Edition of the Massachusetts Natural Heritage Atlas. Our database indicates that the following protected rare species occur within or in the vicinity of the following sites:

FFA site

Scientific name	Common Name	Taxonomic Group	State Status
<i>Asio flammeus</i>	Short-eared Owl	Bird	Endangered
<i>Circus cyaneus</i>	Northern Harrier	Bird	Threatened
<i>Podilymbus podiceps</i>	Fried-billed Grebe	Bird	Endangered
<i>Amelanchier nantucketensis</i>	Nantucket Shadbush	Plant	Special Concern
<i>Liatris borealis</i>	New England Blazing Star	Plant	Special Concern
<i>Linum intercursum</i>	Sandplain Flax	Plant	Special Concern
<i>Prenanthes serpentaria</i>	Lion's Foot	Plant	Endangered
<i>Sisyrinchium arenicola</i>	Sandplain Blue-eyed Grass	Plant	Special Concern

Surfside Site

Scientific name	Common Name	Taxonomic Group	State Status
<i>Asio flammeus</i>	Short-eared Owl	Bird	Endangered
<i>Circus cyaneus</i>	Northern Harrier	Bird	Threatened
<i>Charadrius melodus</i>	Piping Plover	Bird	Threatened
<i>Helianthemum dumosum</i>	Eushy Rockrose	Plant	Special Concern

www.masswildlife.org

Division of Fisheries and Wildlife

Field Headquarters, One Rabbit Hill Road, Westborough, MA 01581 (508) 792-7270 Fax (508) 792-7275

An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

These species are protected under the Massachusetts Endangered Species Act (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.37 and 10.59). Fact sheets for most of these species can be found on our website at: www.state.ma.us/dfwele/dfw/nhesp/nhfact.htm.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. Should your site plans change, or new rare species information become available, this evaluation may be reconsidered.

MA Endangered Species Act (G.L. c. 131A)

Using the list of rare species provided above, we recommend that rare wildlife and/or plant surveys and assessments be conducted by qualified individuals within suitable habitats on and near the site according to scientifically accepted survey methodologies. A Rare Animal/Plant Observation Form, available at our website www.nhesp.org, should be submitted for each species encountered. If during this site evaluation rare species are found on or near the site, then site plans and a project description should be sent to NHESP Environmental Review to determine whether a probable "take" under the MA Endangered Species Act would occur (321 CMR 10.04).

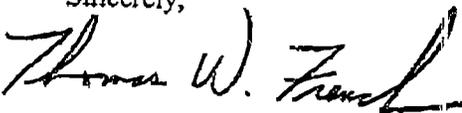
If NHESP determines that the proposed project would "take" a rare species, and the site is greater than two acres, and within a Priority Habitat site, an Environmental Notification Form should be submitted pursuant to the MA Environmental Policy Act regulations (301 CMR 11.03(2)(b)(2)). If the project site does not occur within a Priority Habitat, but rare species have recently been found on or near the site, then site plans and a site description should be submitted for MESA review. A Conservation & Management Permit (301 CMR 10.04 (3)(b)) may be required for work in rare species habitat.

Wetlands Protection Act

If the project site is within Estimated Habitat for Rare Wildlife and a Notice of Intent (NOI) is required, then a copy of the NOI must be submitted to the NHESP in a timely manner, so that it is received at the same time as the local conservation commission. Using the species list provided above, the Resource Areas on the site should be evaluated as important wildlife habitat for state-protected species, focusing on those areas that provide feeding, breeding, over-wintering, shelter and migration functions. The project should be evaluated for compliance with the rare species performance standard, which is that there shall be no short or long-term adverse affects to the habitat (within Resource Areas) (310 CMR 10.37 and 10.59).

The NHESP is of the opinion that the FAA site in Madaket has far greater ecological significance than the Surfside WWTF site. If you have any questions regarding this review, please call Patricia Huckery, Endangered Species Analyst, at ext. 151.

Sincerely,



Thomas W. French, Ph.D
Assistant Director

cc: Nantucket Planning Board
Nantucket Conservation Commission

Nantucket Planning & Economic Development Commission
1 East Chestnut Street
Nantucket, MA 02554

May 6, 2004

Ellen Roy Herzfelder
Executive Office of Environmental Affairs
Attention: MEPA Office
251 Causeway Street, Suite 900
Boston, MA 02114
EOEA No. 12617

Subject: EOEA No 12617, Comprehensive Management
Wastewater Plan, Nantucket, MA
Phase III, FEIR

Dear Secretary Hertzfelder:

The Nantucket Planning & Economic Development Commission ("NP&EDC") submits the following comments in connection with Phase III of the Nantucket Comprehensive Wastewater Management Plan ("CWMP") and Final Environmental Impact Report ("FEIR"). The NP&EDC previously submitted comments concerning Phase I (letter dated November 8, 2001) and Phase II (letter dated November 5, 2003).

We regret that the comments submitted by the NP&EDC are not as thorough and well articulated as we would have liked. The filing of Phase III regrettably fell within one of the busiest time periods of the year for Island residents, involving preparations for Town Meeting, and school vacations. Given the statutory constraints governing the granting of extensions, we, and other parties in interest, have had to operate within a narrow window already made narrower by these other commitments.

In consideration of the above, the NP&EDC will focus on issues raised previously, and further addressed by the Town in Phase III:

Comprehensive Community Plan

We are pleased to report that since our Phase II comments, significant progress has been made in further considering the objectives of the Comprehensive Community Plan, and measures taken to implement those objectives. Foremost among these is the consideration of the Town Overlay District, established through passage of Article 37, 2002 Annual Town Meeting. That Overlay District, among other things, is meant to serve as a growth

boundary which could serve as a policy basis for limiting the extension of utilities. The NP&EDC participated in the creation of a current buildout estimate based on existing service areas, and possible service area alternatives being considered for the establishment of sewer districts. One of the three scenarios was based on the limits of the Town Overlay District. The estimated buildout of all three generally confirmed the reasonableness of the buildout assumptions made by Earth Tech as a basis for the design of the expansion of the Surfside Wastewater Treatment Facility. Subsequent to the production of the buildout analysis, the Annual Town Meeting embraced a sewer district plan with a boundary substantially within the confines of the Town Overlay District.

Growth Assumptions

As a result of the buildout analysis for the Town Overlay District, the NP&EDC has greater confidence in the wastewater flow calculations for the Town, Somerset, Monomoy, Shimmo, and Town WPZ priority areas, which are the basis for the Surfside plant design. Similar confirmation of buildout potential for the remaining priority areas is outstanding and should be done.

✓ The NP&EDC does not mean to imply that, because the buildout assumptions are an accurate basis for plant design, it feels that the growth that could occur as a consequence of those assumptions is acceptable. The preparers of the CWMP have acknowledged that an analysis and mitigation of growth impacts is beyond the scope of the CWMP. Consequently, the NP&EDC has convened a CWMP Growth Committee and allocated funds for the purpose of examining and recommending potential growth mitigation measures.

Comments on Specific Priority Areas

Our comments on areas 2 through 12, 14, 16, and 17 as contained in our letter of November 8, 2003 remain unchanged in connection with this Phase III document. The following are further comments on the remaining areas:

Madaket

growth impacts →
The NP&EDC believes that it is premature to identify a specific solution for Madaket until the final results of water quality testing, and the final reports and conclusions of the Massachusetts Estuaries Project have been submitted and analyzed. We are also uncertain if the low-pressure sewer option, in concert with a legislated restriction similar to that implemented by Provincetown, is the correct solution to managing the growth induced by the possible extension of sewers. We intend to evaluate the growth consequences of this solution in Madaket through the NP&EDC's CWMP Growth Committee to determine if this is the most prudent answer to concerns over growth inducement.

Shimmo

✓ We are still unconvinced that the extension of conventional sanitary sewers is the best solution for all of Shimmo, especially the area east of Rabbit Run and Drew Lane, where the lot sizes are generally large, and where there exists a substantial amount of preserved land. We agree that the final solution should be held in abeyance pending the submission of a final report under the auspices of the Massachusetts Estuaries Project.

Proposed Sites for Treatment Plants

We were pleased to learn that all but one possible plant site that we raised concerns about in the Phase II comment letter have been eliminated from consideration.

Other Comments

We note that the Town has satisfactorily answered miscellaneous comments made by the NP&EDC in its Phase II comment letter.

Once again, we are grateful for this opportunity to comment on this important project.

Very truly yours,

Alvin S. Topham
Chairman

Cc: Nantucket Board of Selectmen
Jeff Willett, Director, DPW



N2

The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

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MAY 4 2004

MEPA

May 3, 2004

Secretary Ellen Roy Herzfelder
Attn.: Nicholas Zavolas, MEPA Office
Executive Office of Environmental Affairs
251 Causeway Street, 9th Floor
Boston, MA 02114-2150

RE: Comprehensive Wastewater Management Plan/Final Environmental Impact Report, Nantucket
MHC #RC.22107, EOE #12617

Dear Secretary Herzfelder:

Staff of the Massachusetts Historical Commission have reviewed the Final Environmental Impact Report (FEIR) for the proposed project referenced above and have the following comments.

Upon review of the DEIR for this project MHC requested that an intensive (locational) archaeological survey (950 CMR 70) be conducted for the project impact areas. MHC understands that the Town of Nantucket intends to have an intensive survey conducted (FEIR, Vol. III, p. 1-3). MHC looks forward to receiving for review an application for a State Archaeologist's Permit (950 CMR 70) for the intensive survey.

These comments are offered to assist in compliance with Massachusetts General Laws, Chapter 9, Sections 26-27C (950 CMR 71) and MEPA. If you have any questions concerning this review, please feel free to contact Eric Johnson at this office.

Sincerely,

Brona Simon
State Archaeologist
Deputy State Historic Preservation Officer
Massachusetts Historical Commission

xc: Thomas E. Parece, Earth Tech
Michael Pappalardo, Earth Tech
DEP, SERO
Nantucket Historic District Commission
Nantucket Historical Commission

220 Morrissey Boulevard, Boston, Massachusetts 02125
(617) 727-8470 • Fax: (617) 727-5128
www.state.ma.us/sec/mhc