

Tri-Town Facility & Namskaket Marsh Issues

Prepared for

The Namskaket Technical Panel

P. R. Ammann

September 2014

Introduction

- In the late 1980s a septage treatment plant was constructed at the current Tri-Town site located at the southern edge of Namskaket Marsh.
- The Plant began operation around 1990 and has operated more-or-less continuously since that time.
- All treated effluent has been discharged into Rapid Infiltration Beds (RIBs).

Introduction

- From 1990 through 2012, the plant discharged approximately **200 million gallons** of treated wastewater per year containing an estimated **72,000 pounds of nitrogen**.
- The decision to discharge effluent to the RIBs located adjacent to the ACEC was based on the marsh having the capacity to absorb nutrients (nitrogen) into its plant life and it has been assumed that the effluent discharges would **NOT** harm the marsh or its ecosystems.

Purpose

- The aim of this document is to:
 - Present the approximate history of effluent discharges from the septage treatment plant.
 - Provide other relevant data.
 - Present relevant and important sections of the **ACEC** regulations.

Purpose

- Describe the relevance of the **Hofe Trust** and the **Orleans Conservation Trust**.
- Provide some information related to regulatory and legal matters.

Septage Plant Discharge

- USGS ¹ suggested three directions the wastewater effluent could go:
 - 1) Discharge through surface seeps into Inner Namskaket Marsh and Hurley's Bog,
 - 2) Discharge through the "creeks" in the marsh, and
 - 3) Travel underneath the Marsh with ultimate discharge into Cape Cod Bay.
- A fourth option:
 - 4) Accumulate in the subsurface space.

Source: Barlow, Paul, "Ground Water in Freshwater-Saltwater Environments of the Atlantic Coast", USGS, 2003, Chapter: "Ground-Water Discharge, Plant Distribution, and Nitrogen Uptake in a New England Salt Marsh", pages 90 – 95.

Septage Plant Discharge

1) Surface Seeps.

- A. Treated wastewater can discharge from the elevated Tri-Town property directly through the surface interfaces (margins) into Inner Namskaket Marsh or Hurley's Bog.
- B. Evidence of seeps is shown in the next photograph.

Seep Into Inner Namskaket Marsh

Photo by Dr. Peter Weiskel at the edge of Inner Namskaket Marsh.

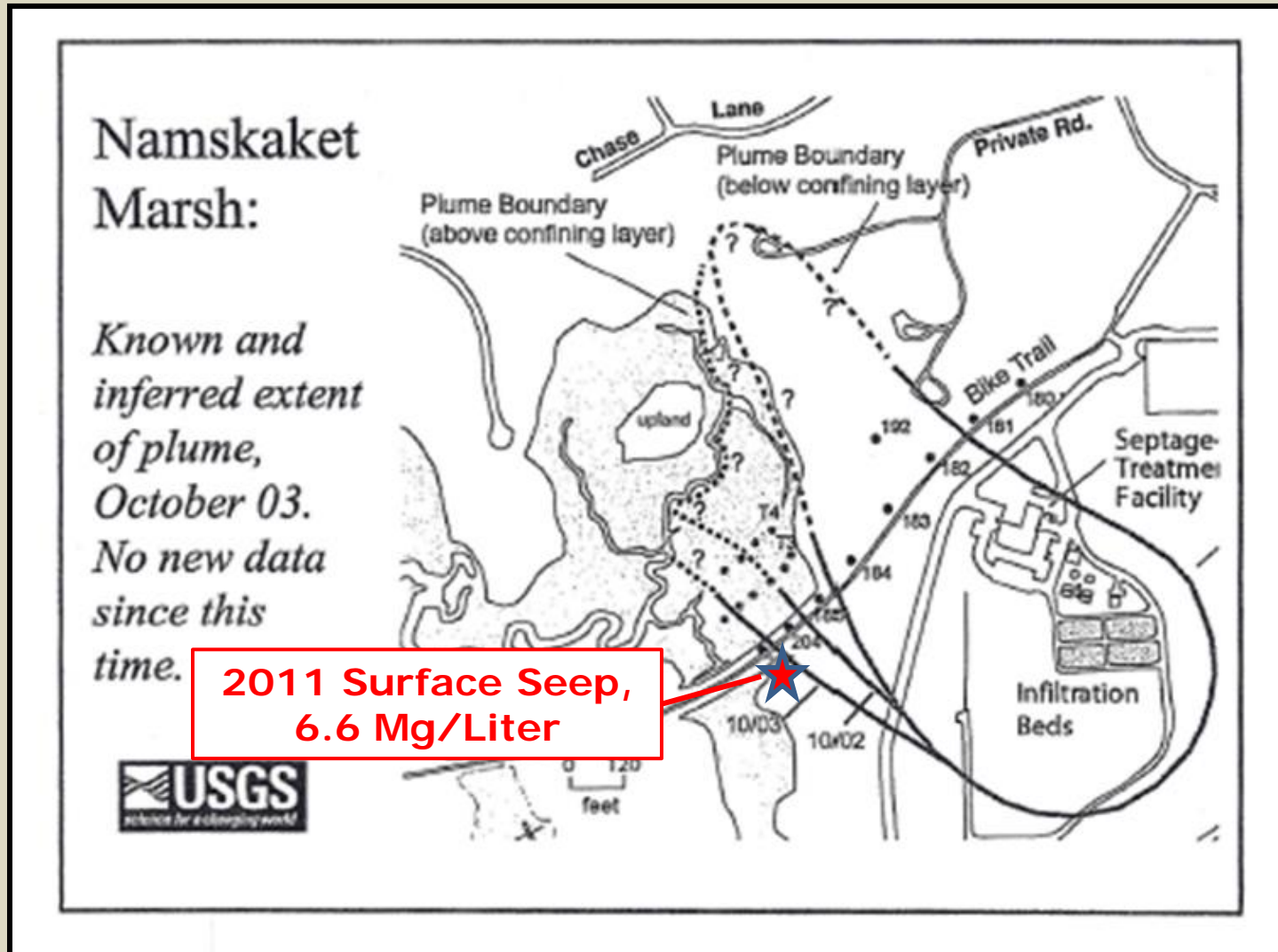
Source: Barlow, Paul, "Ground Water in Freshwater-Saltwater Environments of the Atlantic Coast", USGS, 2003, Chapter: "Ground-Water Discharge, Plant Distribution, and Nitrogen Uptake in a New England Salt Marsh", pages 90 – 95.

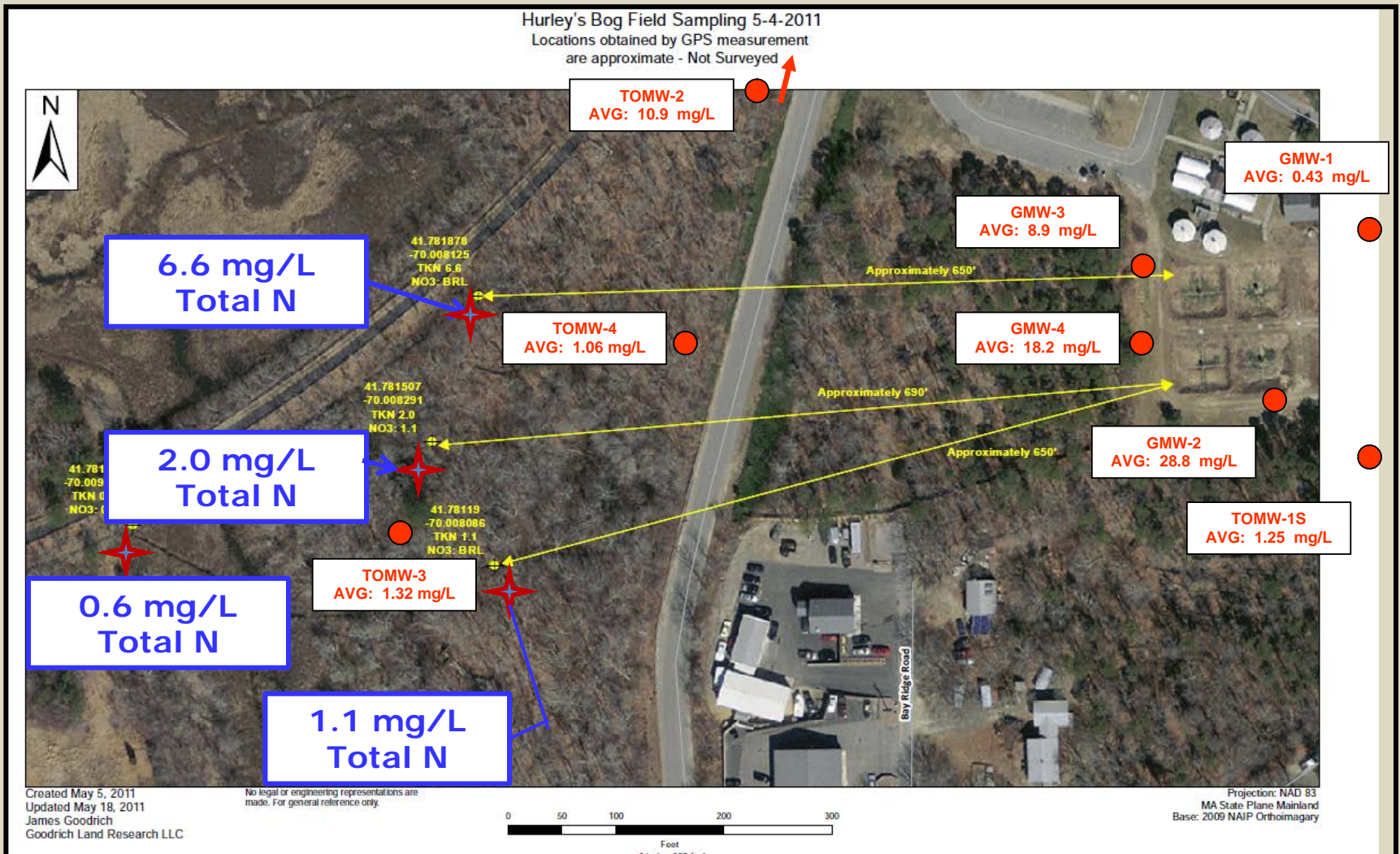


Photograph by Peter Weiskel, U.S. Geological Survey

Ground-water seepage is visible on the marsh surface at the boundary between the marsh and upland areas.

Surface Seep superimposed on USGS map of effluent plume.





Plan View Of Tri-Town Plant Site Showing GMW and TOMW Monitoring Wells and the Locations of the Four Seeps. [By Permission of: The Cape Cod Groundwater Protection Fund, July, 2014]

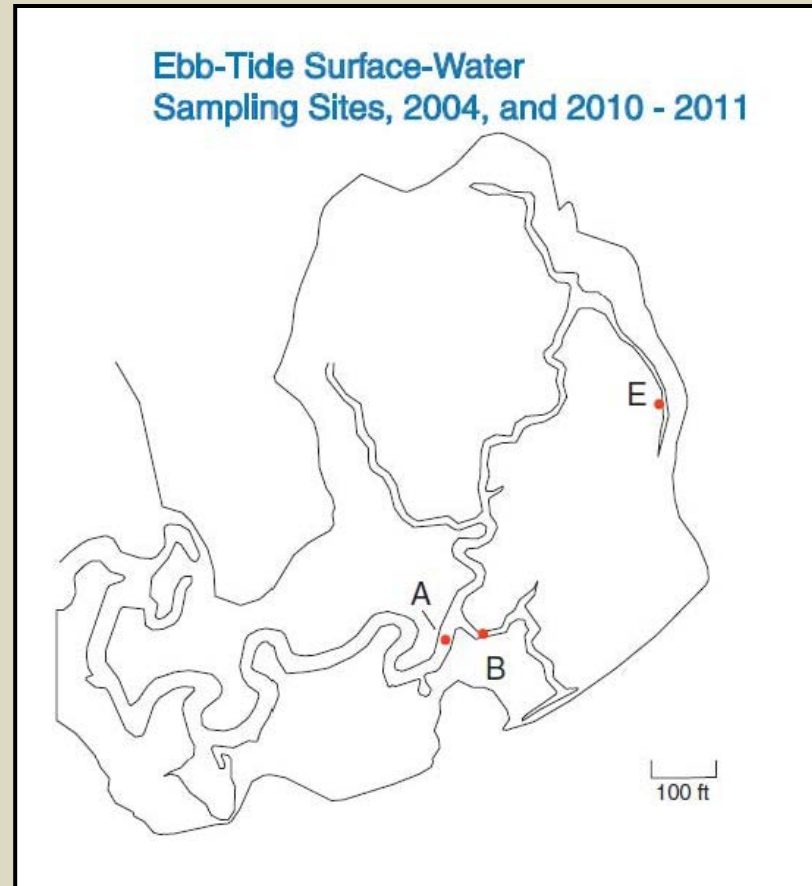
Seep Into Inner Namskaket Marsh

- It appears that little or no effort has been devoted to measuring the composition of surface seeps (at the water table margin) along the common boundary of Site 241 (Tri-Town) with Inner Namskaket Marsh and Hurley's Bog.

Septage Plant Discharge

- 2) Discharge through creeks (in marsh).
 - A. With the Water Quality Task Force, Dr. Peter Weiskel, USGS, conducted a study of the nitrogen content at five locations in the creeks of Inner Namskaket Marsh, as shown in the next chart.
 - B. Apparently, no evidence was found that elevated amounts of nitrogen from the Tri-Town plant discharged into Inner (Upper) Namskaket Marsh.

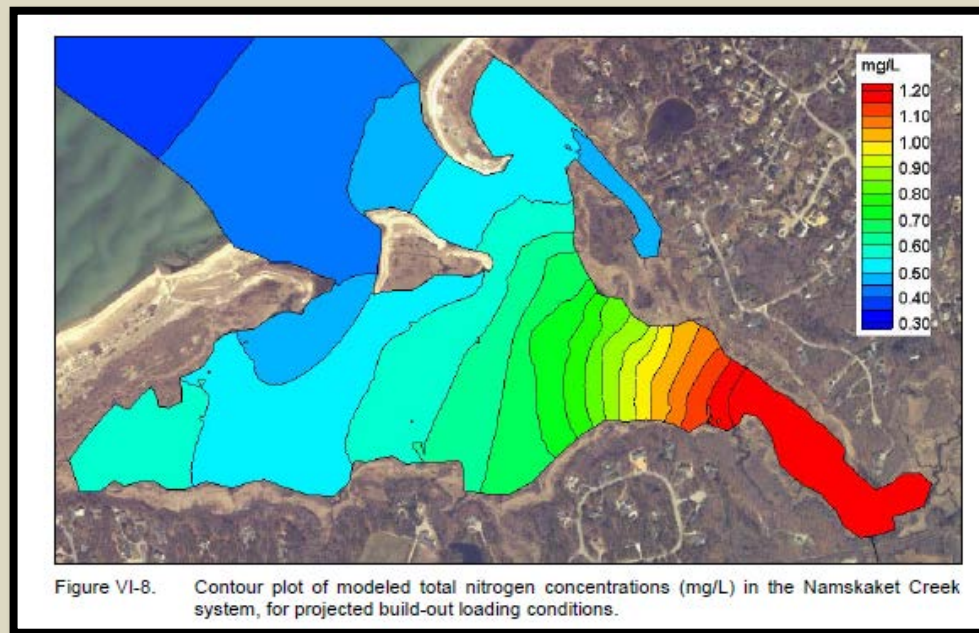
Septage Plant Discharge



Source: Summary of USGS Monitoring and Assessment Activities, Namskaket Marsh, Creek, and Adjacent Aquifer, Orleans, Mass., Peter K. Weiskel, U.S. Geological Survey, March 1, 2011

Nitrogen in Namskaket – Projected Buildout Conditions

- The MEP model projects that the discharge from the Tri-Town plant impacts the Inner Namskaket Marsh [Hofe Trust property] preferentially. The **RED** in the diagram indicates **increased nitrogen concentration**, but also a **decrease in salinity**.



Source: "Massachusetts Estuaries Project, Linked Watershed-Embayment Model to Determine Critical Nitrogen Loading Thresholds for the Namskaket Marsh Estuarine System, Orleans, MA ", December 2008, Page 84.

Septage Plant Discharge

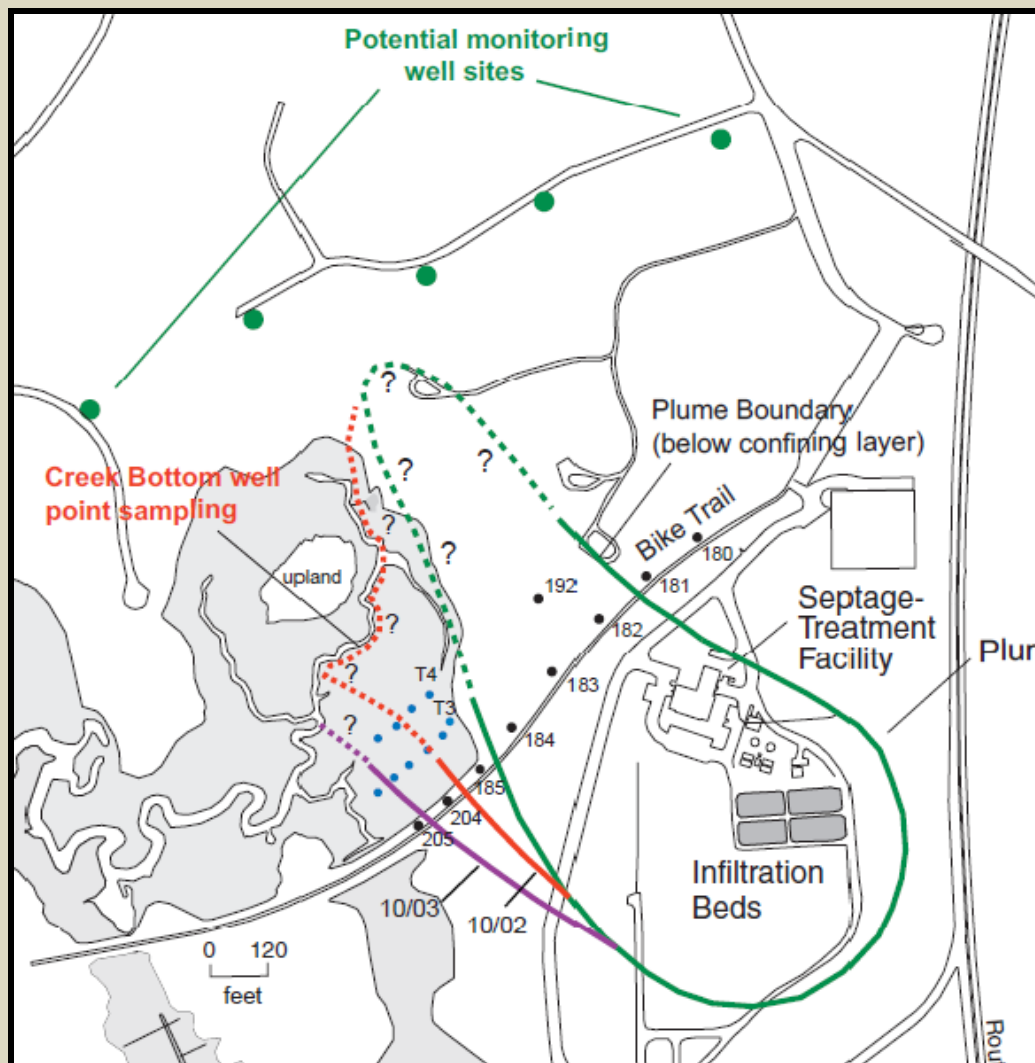
3) Travel under the marsh into Cape Cod Bay

- A. At the present time, there is inadequate sampling data to determine path of subsurface flows.
- B. Dr. Peter Weiskel suggested the need for additional sampling capability, as shown in the next slide.

Septage Plant Discharge

Suggested additional groundwater sampling locations to measure the extent of groundwater plume.

Source: "Summary of USGS Monitoring and Assessment Activities, Namskaket Marsh, Creek, and Adjacent Aquifer", Orleans, Mass. Peter K. Weiskel, U.S. Geological Survey, March 1, 2011, Slide 10.



Septage Plant Discharge

4) Plume Accumulation

Using monitoring wells at the Tri-Town site plus observation wells installed by USGS, Dr. Peter Weiskel determined that a plume of wastewater has accumulated under the Tri-Town site.

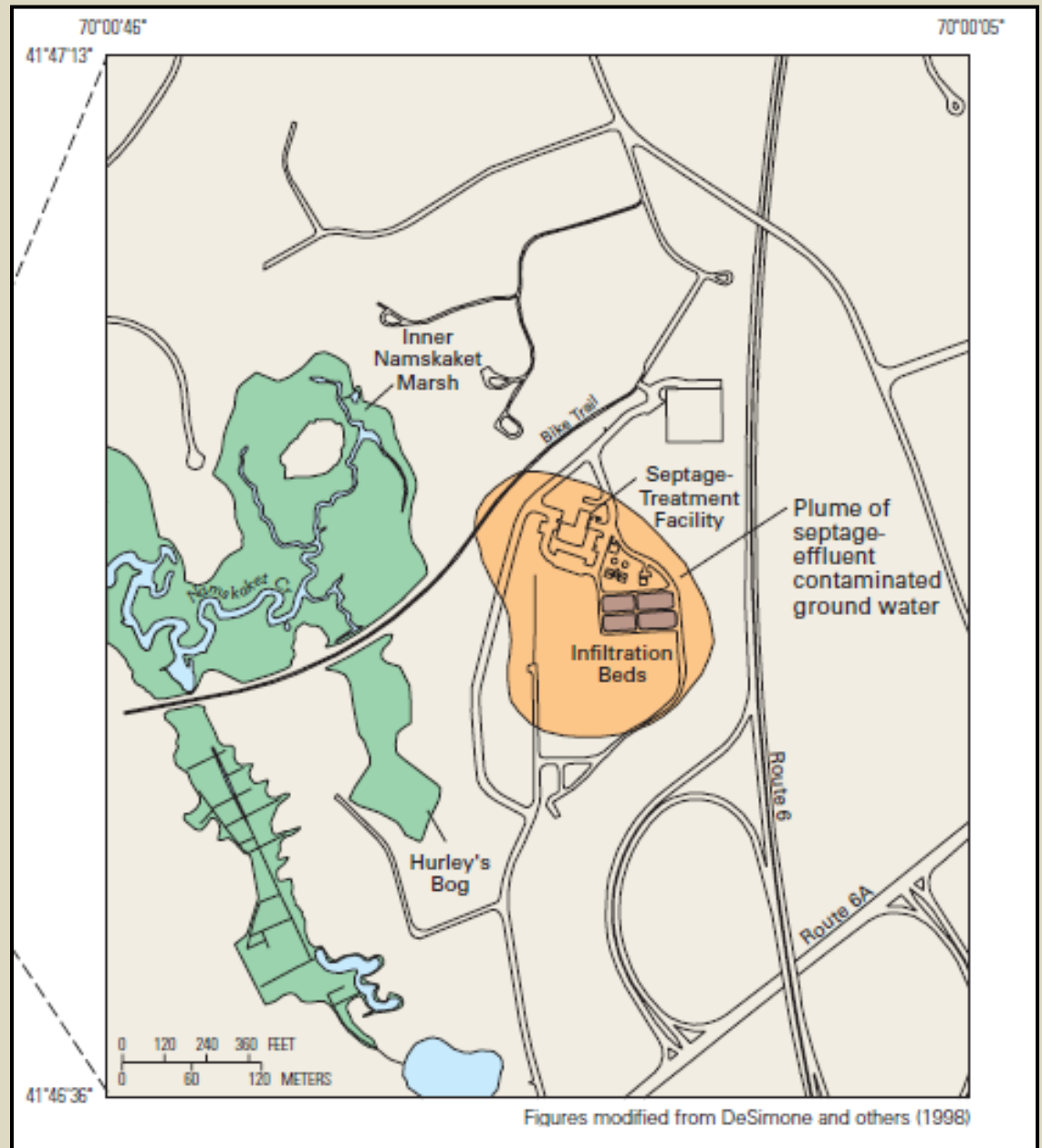
A. From 1990 to 1997 the Tri-Town plant discharged approximately 13,000 kilograms (28,600 pounds) of nitrogen. [Slide 21]

B. Less than half of this amount is estimated to be present in the subsurface plume at that time. [See next slide.]

Septage Plant Discharge

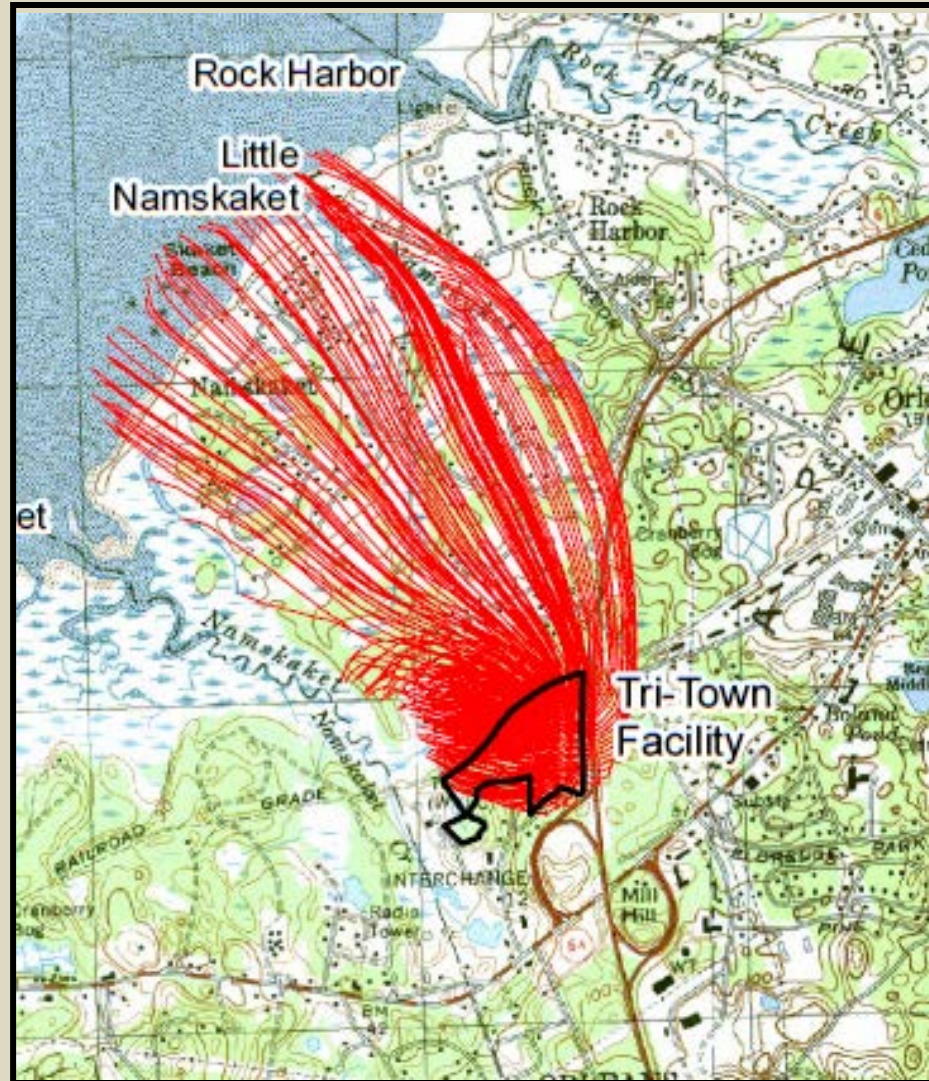
- The USGS provided an estimate of the dimensions and extent of the subsurface wastewater plume from the Tri-Town Plant in 1997.
- Using this volume estimate and the indicated concentrations of nitrogen, the **1997 plume** contained about **3,900 kilograms** of nitrogen.

Illustration of Effluent Discharge Plume in 1998. From DeSimone & Others.



Wright-Pierce estimate of the wastewater plume flow by a "tracking model". (2010). Shows pathways of effluent flow from the Tri-Town Site.

From Orleans CWMP, 2010.
Prepared by Jesse Schwalbaum,
Hydrologist and consultant to
Wright-Pierce.



Estimated Nitrogen Discharge From Tri-Town Plant

7.48 Gals Per Cubic foot
35.31 Cubic Feet Per Cubic meter

Year	Daily Flow (000s)		No. Days	000 Gals/Year	Total Volume (000 Liters)	Average Concentration (Mg TN/Liter)	Total Nitrogen (Kgs)	Cum. Nitrogen (Kgs)
	(Gals/ Day)	(Liters/Day)						
1990	5	19	330	1,650	6,245	80	0	0
1991	10	38	330	3,300	12,491	80	1	1
1992	15	57	330	4,950	18,736	80	1	3
1993	20	76	330	6,600	24,981	80	2	5
1994	20	76	330	6,600	24,981	80	2	7
1995	20	76	330	6,600	24,981	80	2	9
1996	20	76	330	6,600	24,981	80	2	11
1997	20	76	330	6,600	24,981	80	2	13
1998	30	114	330	9,900	37,472	50	2	15
1999	30	114	330	9,900	37,472	50	2	17
2000	30	114	330	9,900	37,472	50	2	19
2001	30	114	330	9,900	37,472	40	1	20
2002	30	114	330	9,900	37,472	40	1	22
2003	30	114	330	9,900	37,472	30	1	23
2004	30	114	330	9,900	37,472	30	1	24
2005	30	114	330	9,900	37,472	30	1	25
2006	30	114	330	9,900	37,472	30	1	26
2007	30	114	330	9,900	37,472	30	1	27
2008	30	114	330	9,900	37,472	30	1	28
2009	30	114	330	9,900	37,472	30	1	29
2010	30	114	330	9,900	37,472	30	1	31
2011	30	114	330	9,900	37,472	30	1	32
2012	30	114	330	9,900	37,472	30	1	33
2013								
Total				191,400,000	724,449		32,850	
			Cubic feet:	25,588,235			72,369	Pounds
			Cubic Meters:	724,659				

Septage Plant Discharge

- From the time the Tri-Town Plant began operation (**1990 through 2012**), it discharged an estimated **191 million gallons** of treated effluent and **33,000 kilograms (72,000 pounds – 36 tons)** of nitrogen in the wastewater.
- The estimated quantity of nitrogen is equivalent to **12,700 gallons of (100%) liquid ammonia (82% N)**!
- ***So where did all of this nitrogen (& wastewater) go?***

Legal and Regulatory Documentation Related to Namskaket Marsh

Prepared for

The Namskaket Technical Panel

September 2014

Introduction

- Legal restrictions and state regulations may determine whether treated wastewater should be discharged at the Tri-Town location in the future.
- These factors are summarized in the following slides.

Orleans CWMP

- Collect sewage from 2,830 properties
- Complete project wastewater flows:

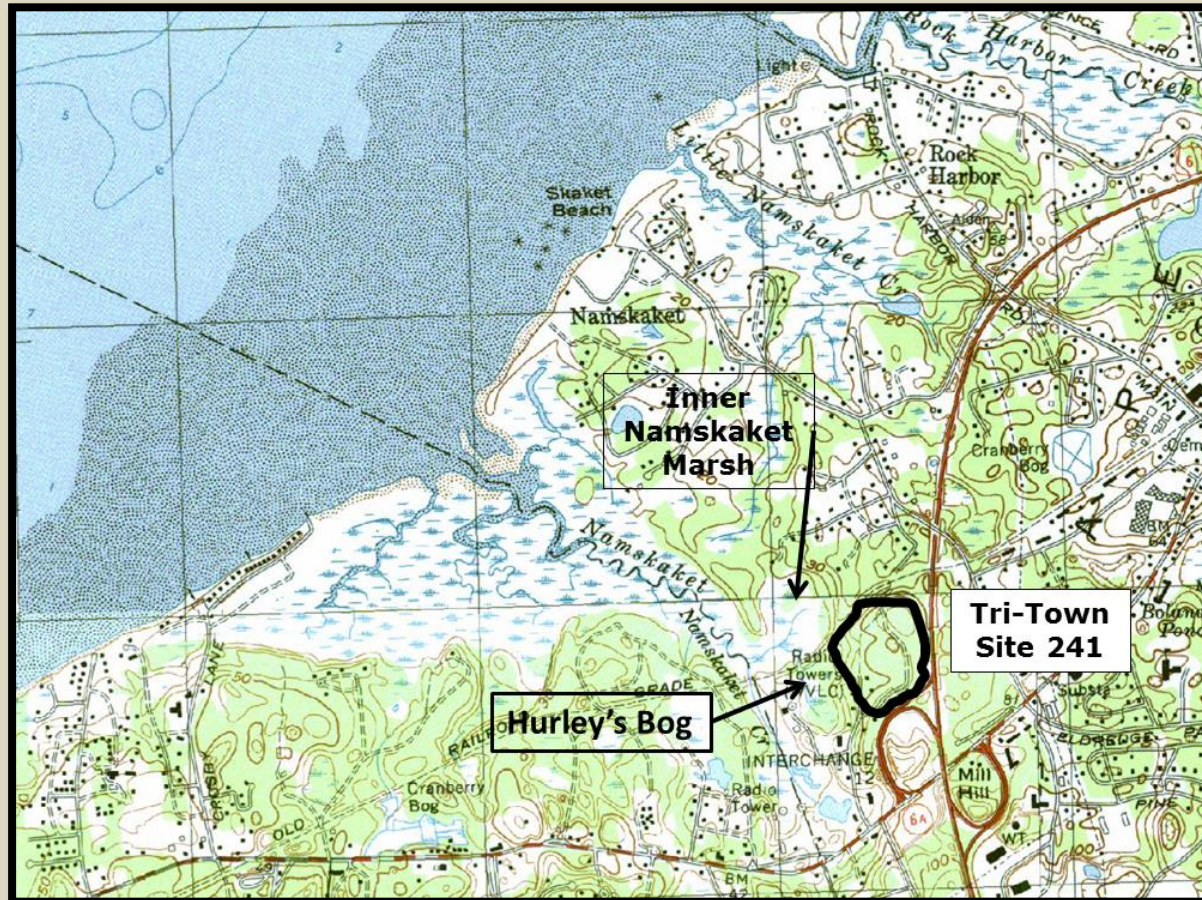
	Annual Average	Peak Flow
Treated Wastewater, Gals Per Day	740,000	1,440,000

Note: Various numbers quoted in CWMP. Values in this table seem to be representative.

- All sewage treated at Tri-Town Plant location and discharged into Rapid Infiltration Beds at the site.

Orleans CWMP

- The Tri-Town plant location is shown relative to Namskaket Marsh.



Area of Critical Environmental Concern [ACEC]

ACEC Regulations

- The Commonwealth of Massachusetts website cites the following:
 - *“An Area of Critical Environmental Concern (ACEC) is a place in Massachusetts that receives special recognition because of the quality, uniqueness, and significance of its natural and cultural resources.”* (Underline added.) And,
 - *“The goals of the program are to identify and designate these ecological areas, to increase the level of protection for ACECs, and to facilitate and support the stewardship of ACECs.”* (Underline added.) And,
 - *“...to avoid or minimize adverse environmental impacts.”* (Underline added.)

<http://www.mass.gov/dcr/stewardship/acec/acecProgram.htm>

ACEC Regulations

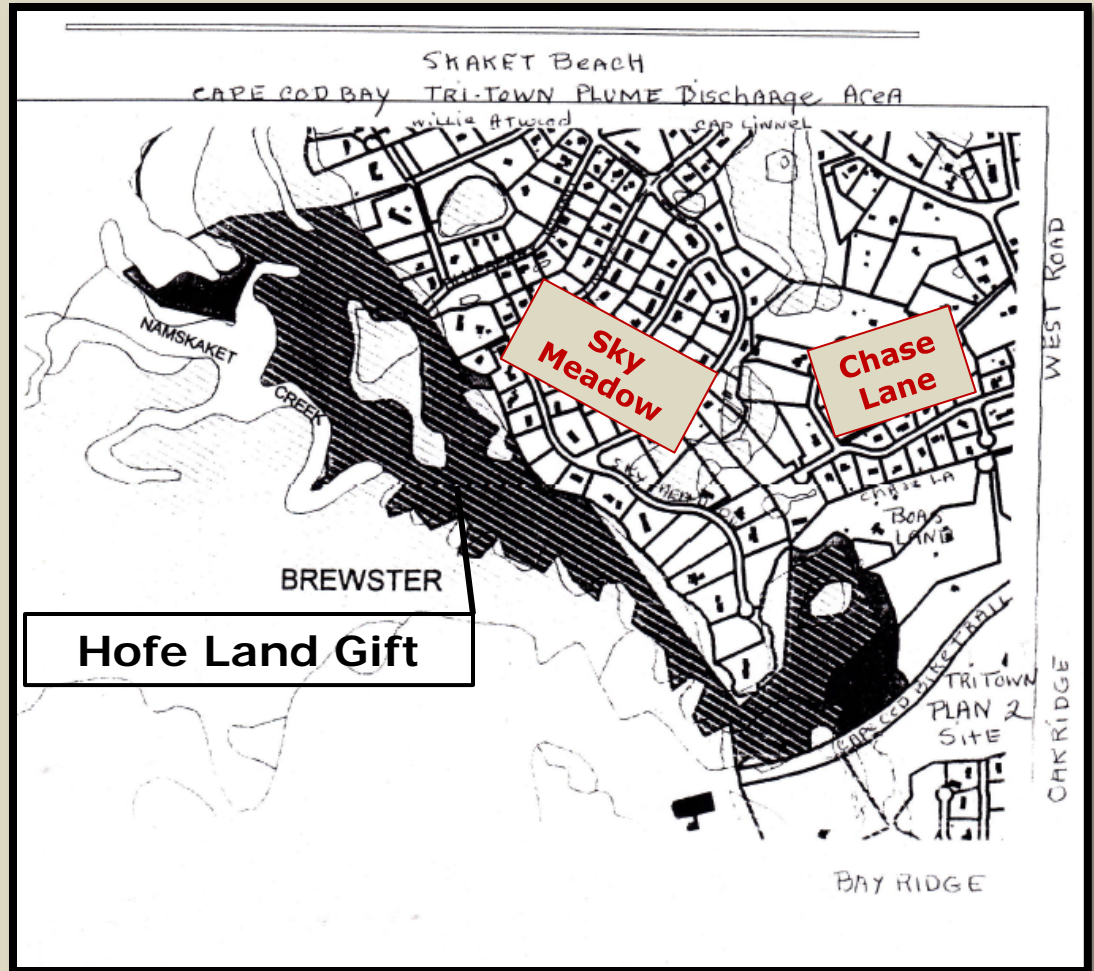
- The State regulations include the following:
 - (4) Uniqueness of Area: The area is unique or unusual from a regional, state, or national perspective...will apply to endangered plant and animal species; geologic features; archaeological/ historic/cultural features; or other resources of educational value; (Underline added.)
 - Irreversibility of Impact: ...Irreversibility of impact will be assessed based on such factors as: the dependence of natural systems on groundwater; the tolerance of animals and habitats to pollutants; the degree of interdependence of ecosystems; and the sensitivity of species to changes in salinity; (Underline added.)

301 CMR: EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS, 301 CMR 12.00 AREAS OF CRITICAL ENVIRONMENTAL CONCERN

<http://www.mass.gov/dcr/stewardship/acec/acecProgram.htm>

The Hofe Trust

In 1982 the Hofe Trust deeded approximately 57 acres of upland and marsh located in Namskaket Marsh in Orleans to the Orleans Conservation Trust (OCT).



Hofe Deed to Orleans Conservation Trust, August 19, 1982

BOOK 3546 PAGE 265

23046

G. DOUGLAS HOFE, JR. of P. O. Box 222, South Orange, Essex County, State of New Jersey 07079, for nominal consideration as this deed is a gift, grants to PAUL DONHAM, RUSSELL FORD, MALCOLM M. DICKINSON, CHARLES H. THOMSEN, MALCOLM R. HOBBS, SHIRLEY S. NICKERSON, DONALD G. SCHALL, DORIS C. RAINEY, CHARLES S. DAVIS, ALBION G. HART, JR. and R. BRUCE HAMMATT, Trustees of the Orleans Conservation Trust under a Declaration of Trust dated 18 April 1970 and recorded in the Barnstable County Registry of Deeds in Book 1470 Page 432, with a mailing address of P. O. Box 485, Orleans, Massachusetts 02653, (see also Book 1961 Page 259, Book 2095 Page 1, Book 2395 Page 188, Book 2585 Page 230, Book 2577 Page 107, Book 2607 Page 210, Book 2635 Page 344, Book 2725 Page 275, Book 3014 Page 146 and Book 3224 Page 214 in said Registry for Certificate of Trustees and Acceptance by Successor Trustees and Resignation of Trustees and Death of a Trustee), with quitclaim covenants, the vacant land in Orleans, in that section known as Skaket, Barnstable County, Commonwealth of Massachusetts, bounded and described as follows:

NORTHERLY and NORTHWESTERLY by registered Lots 1C & 1B (L.C.P. No. 35018) by two courses there measuring five hundred fifty-four and 91/100 (554.91) feet and five hundred ninety (590) feet, more or less, as shown on a plan hereinafter mentioned;

SOUTHWESTERLY, SOUTHERLY, SOUTHWESTERLY, WESTERLY, SOUTHEASTERLY, SOUTHWESTERLY and WESTERLY by the Brewster/Orleans Town Line by Namskaket Creek (tidal) six thousand sixty (6060) feet, more or less, as shown on said plan;

SOUTHERLY and SOUTHEASTERLY by land of the Commonwealth of Massachusetts ("Cape Cod Rail Trail") nine hundred seventy-five (975) feet, more or less, as shown on said plan;

PETER DEW CAMPBELL, II
COUNSELLOR AT LAW
P.O. BOX 110
ORLEANS, MASS. 02654
TEL. 857-8888

Hofe Deed
to
Orleans
Conservation
Trust, August 19,
1982

"This land shall be preserved perpetually as open space devoted only to conservation purposes."

BOOK 3546 PAGE 267

This land shall be preserved perpetually as open space and devoted only to conservation purposes.

Consideration less than \$100, hence no revenue stamps required by law, as this conveyance is a gift to the Grantees.

There is conveyed appurtenant to said premises an easement for all purposes for which public ways are used in the Town of Orleans, both now and hereafter, over Beachplum Lane ~~XXXXXXXXXX~~ *GA*, as shown on a plan entitled: "Subdivision of Unity Acres in Orleans, Mass. property of Millard H. Tibbetts, Scale: 1 in. = 50ft., June 1950, Schofield Brothers, Civil Engineers, Orleans, Mass., Section One," which is recorded in Barnstable in Plan Book 94 Page 73. For additional authority to grant said easement see Grant of Easement dated 23 June 1974 and recorded in the Barnstable County Registry of Deeds in Book 2063 Page 317 and reservation in deed of G. Douglas Hofe, Jr. in deed dated 28 June 1974 recorded in Barnstable in Book 2063 Page 319.

For title see deed of Franklin L. Joy dated 6 June 1957 and recorded in the Barnstable County Registry of Deeds in Book 975 Page 569, deed of Franklin L. Joy dated 4 May 1956 and recorded in the Barnstable County Registry of Deeds in Book 958 Page 4 and deed of Elijah C. Long dated 4 June 1956 and recorded in the Barnstable County Registry of Deeds in Book 958 Page 5.

WITNESS my hand and seal this *19th* day of *August* 1982.

G. Douglas Hofe, Jr.
G. DOUGLAS HOFE, JR.

STATE OF NEW JERSEY

MORRIS
ESSEX, ss.

August 19 1982

Then personally appeared the above-named G. DOUGLAS HOFE, JR. and acknowledged the foregoing instrument to be his free act and deed, before me

Stacey S. Bartholf
Notary Public

My Commission Expires:

STACEY C. BARTHOLF
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires March 19, 1988

**Letter from
Carolyn Hofe Nowak to
the Orleans
Conservation Trust,
April 12, 2011**

April 12, 2011

Dear Linde MacLeod and the Trustees of The Orleans Conservation Trust,

I am wearing two hats as I write to you today.

First, I am the niece of G. Douglas Hofe. As you know, he gave a large parcel of Namskaket Marsh and some upland to the Orleans Conservation Trust in 1982. His language in the deed specifically required that it be used for conservation purposes only.

Second, I have a masters degree in marine sciences from the University of Rhode Island. Therefore, I might be considered someone who, because of my education, understands more than the person who has not had the same experience. As a matter of fact, I very well could be employed by a person such as yours.

"I understand that the proposed sewer plant would increase the amount of freshwater effluent into Namskaket Marsh by as much as 600,000 gallons per day. If this sewer plan goes through, your conservation mission will have failed my Uncle and all those to whom the marsh is important past and future.

As a Hofe and a marine biologist, I am very concerned and angered that it has come this far. Where are the LAWS that protect the land you say you are protecting?"

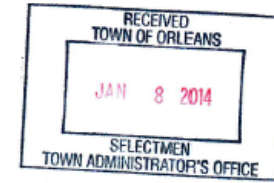
...tion that the Town of Orleans would like to build a plant that may reduce nitrogen loading that may or may not be adjacent waterways. It appears that much of the work is already under way. I understand that the proposed sewer plant will increase the amount of freshwater effluent into Namskaket Marsh by 600,000+ gallons per day. If this sewer plan goes through, your conservation mission will have failed my Uncle and all those to whom the marsh is important, past and future.

As a marine biologist, I am very concerned and angered that it has come this far. Where are the LAWS that protect the land you say you are protecting?"

...ould encourage this project considering how much freshwater could be lost to any salt marsh, leave alone the marsh that is protected by you and is considered to be an environmental concern. Your own web site invites people to

...ing our land... All of us have a stake in the land which the Trust was organized - to save and maintain the pace in the town of Orleans - especially as the population growth and development threaten our resources and environment.

Letter from
Carolyn Hofe
Nowak
to
Michael Ford,
January 3, 2014



Mr. Michael Ford
Town of Orleans
Town Hall
19 School Rd.
Orleans, MA 02653

January 3, 2014

My name is Caroline Hofe. I am the niece of George Douglas Hofe. I am writing to you on behalf of the Hofe Family.

We have been monitoring the events surrounding the proposed water treatment plant which involves Namskaket Marsh. Over the last couple of years, I have written letters to the Orleans Conservation Trust and to the Cape Codder newspaper. My concern around extreme fresh water pollution in Namskaket Marsh (the result of sewage treatment plant effluent) stems both from the fact that I have a family connection to the land and that my education involves a MS in marine sciences.

In 1982, my uncle donated a 57.5 acre parcel of land to The Orleans Conservation Trust. According to the deed, the conditions of conveyance included being held in perpetuity and being used for conservation purposes only. It is known as the George D. Hofe Memorial Conservation Area. (Walkers on the rail trail may have seen the memorial stone at the scenic overlook of the marsh). In 1985, this salt marsh was designated as an Area of Critical Environmental Concern as part of the broader designations in Brewster, Eastham and Orleans. According to the Bureau of Land Management web site:

"Areas of critical environmental concern (ACEC) are areas of Bureau of Land Management (BLM)- administered lands where special management attention is needed to protect their important and relevant values. "Special management attention" (43 U.S.C. 1702 Sec. 103(a)) refers to management prescriptions developed during preparation of a Resource Management Plan (RMP) or amendment expressly to protect the important and relevant values on an area from the potential effects of actions permitted by the RMP, including actions deemed to be in conformance with the terms, conditions, and decisions of the RMP (BLM Manual 1613). These are management measures that would not be necessary or prescribed if the critical and important features were not present.

To be designated as an ACEC, the area must meet the criteria of relevance and importance (as defined in BLM Manual 1613). Areas meeting the relevance criterion possess significant historic, cultural, or scenic values; fish or wildlife resources, including threatened and endangered species; or natural hazards. To meet the importance criterion, the resource must have substantial significance and value. This generally requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern." (http://www.blm.gov/pgdata/etc/medialib/blm/ww/programs/planning/rmps/rawlins/rod/appendix.Par.76518.File.dat/Appendix22_ACEC_Designation.pdf)

So why was this particular area proposed as an area of critical concern? The ACEC documentation concerning these lands enumerates a number of concerns including the quality of natural resources, productivity, uniqueness of the area, overdevelopment and economic benefits (fisheries). However, the first and last points mentioned are particularly appropriate for



Letter from Carolyn Hofe Nowak to Michael Ford, January 3, 2014

"The legal document signed in 1982 by my uncle with the OCT makes this saltwater system unusable as a "runoff" for freshwater effluent as this is not a 'conservation use'. The 1985 designation was given to ensure that this environmentally critical land was protected and its approval was unanimous."

the water treatment plant discussion. The first point discussed is the threat to the marsh via discharge:

"inappropriate discharges, direct or indirect, into this system could have public health repercussions through contamination of shellfish. Salt marshes are valuable for their ability to remove contaminants from adjacent waters."

The last paragraph entitled Other Supporting Factors, reads:

"There have been virtually unanimous agreement on the appropriateness of the designation among local residents, environmental groups and boards and commissions from the three towns. Each of the towns has taken steps to protect their natural resources and have indicated that *the ACEC designation will be an important part of planning and protection policies.*"

It is signed John S. Hoyte, Secretary of Environmental Affairs. (<http://www.mass.gov/eea/docs/dcr/stewardship/acec/acecs/ccb-des.pdf>)

The Orleans Conservation Trust (OCT) has publicly informed the town that OCT's job is to protect the land that was entrusted to them. They are asking the right questions. The OCT protects the land AND the people of the town from the inappropriate development of open space. If they did not, future land donors would not give land to the OCT, nor any other land trust for that matter. If land trusts did not protect the lands given to them, or adhere to the legal documents signed by them, private land owners would opt to keep land in the family. The Namskaket Marsh and bike trail access would not be available to the public if my uncle had decided to pass it on to me and my family. The Orleans Conservation Trust is doing their job and the town of Orleans needs to recognize and respect that this land is protected and deeded for conservation use only.

The legal documents signed in 1982 by my uncle with the OCT makes this saltwater system unusable as a "runoff" for freshwater effluent as this is not a "conservation use". The 1985 ACEC designation was given to ensure that this environmentally critical type of land was protected and its approval was unanimous.

Please make sure that the people of Orleans are aware of these facts and that, along with the Hofe family, they should be concerned that this land be protected and used for conservation purposes only.

Respectfully,



Caroline Hofe

Legal Opinions

- In 2014 Town Counsel provided legal opinions to 8 specific questions regarding the proposed Tri-Town septage & sewage treatment plant at the location and the Namskaket Marsh.
- These questions are presented in the following slides.
- Only a final summary to this request is provided.

Michael Ford to Orleans BoS, January 22, 2014

LAW OFFICES OF MICHAEL D. FORD
ATTORNEYS AT LAW
72 MAIN STREET, P.O. BOX 485
WEST HARWICH, MA 02671
TEL. (508)430-1900 FAX (508)430-9979
mdfesq1@verizon.net

MICHAEL D. FORD
JEFFREY M. FORD

January 22, 2014

Board of Selectmen
Town of Orleans
19 School Road
Orleans, MA 02653

Re: Proposed waste water treatment plant and Namskaket Marsh Questions

Dear Members of the Board of Selectmen:

My legal opinion "on the questions and issues surrounding the impact the treatment plant might have on Namskaket Marsh and/or surrounding areas, you have asked for my legal opinion regarding the following questions to any authority, cases, statutes, etc., which support or inform my opinion and my responses are set forth below:

Do I have "standing" today to bring legal action to block or forestall the discharge (through seepage or groundwater flow) of any substance - into Namskaket Marsh and/or Cape Cod Bay between the town of Orleans border and the town of Eastham's First Encounter Beach border? This question is not limited to) abutters, the Orleans Conservation Trust, other conservation Commissions, individual citizens, public/governmental and/or other organizations and town bodies/committees or anyone else you consider might

When I reviewed the Certificate of the Massachusetts Secretary of Energy Affairs on the Single Environmental Impact Report (SEIR) for the Orleans Water Treatment Plan issued on January 28, 2011 to determine the necessary for the project. I then reviewed the permit requirements to determine who or entities would have standing. Per the SEIR:

Page 1. "Question #1 That persons or entities have 'standing' today to bring action or block or forestall the discharge (even if such discharge is through seepage or groundwater of any substance - including freshwater – into Namskaket Marsh and/or Cape Cod Bay between the town of Brewster's Nauset marsh border...? This might include... abutters, The Orleans Conservation Trust, other landowners, conservation Commissions, individual citizens..."

Michael Ford to Orleans BoS, January 22, 2014

Page 10. "Question #2
On what grounds might such
legal action(s) be advanced?"

substantial harm with a clear nexus to the disputed action to be considered an aggrieved person. On the contrary, Holden had proven that the extent of the likely harm to the community's public health and finances was so potentially significant that it qualified as an aggrieved person even though the occurrence of that harm was dependent on the discretionary decisions of the other towns to increase their wastewater discharge volume to bring it about.

That the necessity of establishing that the threat to groundwater must be more than a possibility in order for a complainant to be considered an aggrieved party is clearly explicated in *Sweeney v. A.L. Prime Energy Consultants*, 451 Mass. 539 (2008)."

Therefore, in order to have standing to request an adjudicatory hearing on the groundwater discharge permit or to appeal a final decision of the DEP to the superior court, or to appeal an order of conditions issued by the Town of Orleans under the Orleans Wetlands Bylaw, a person or entity, including abutters or other towns, would have to establish that they are persons aggrieved pursuant to the general standing principles outline above. (Note also that the Orleans Wetlands Bylaw permits appeals by "any person aggrieved ... or any ten (10) residents of the Town of Orleans.")

Question #2

On what grounds might such legal action(s) be advanced?

Answer to Question #2

Under 314 CMR 2.08 a request for an adjudicatory hearing could be made on the grounds that a person is aggrieved by the issuance of the groundwater discharge permit coverage.

Under the State Administrative Procedures Act, G.L. c. 30A, §14 a person aggrieved by a final decision of DEP could file an appeal.

Under the Clean Water Act, G.L. c. 21, § 46A, any person aggrieved by the issuance of the groundwater discharge permit could file an appeal.

Under G. L. c. 214, § 7A, the legislature has granted a general right of action to any ten citizens domiciled in Massachusetts to bring a suit in Superior Court to restrain environmental damage that is alleged to have occurred or be imminent. Section 7A provides, in pertinent part, as follows:

The superior court for the county in which damage to the environment is occurring or is about to occur may, upon a civil action in which equitable or declaratory relief is sought in which not less than ten persons domiciled within the commonwealth are joined as plaintiffs ... determine whether such damage is occurring or is about to occur and may, before the final determination of the action, restrain the person causing or

Michael Ford to Orleans BoS, January 22, 2014

Page 11. "Question #3
Who might/would the
adverse parties be?"

Page 11. "Question #4 In
what court(s) might such
an action be brought?"

about to cause the damage; provided, however, that the damage caused or about to be caused by such person constitutes a violation of a statute, ordinance, bylaw or regulation the major purpose of which is to prevent or minimize damage to the environment.

Under the Orleans Wetlands Bylaw, c.160-9 an aggrieved party file an appeal with the Orleans District Court. An appeal under the State Wetlands Act would be to DEP.

In *Belanger v. Com.*, 41 Mass.App.Ct. 668(1996) (reversed on other grounds), the court held that the Massachusetts Clean Waters Act does not replace common law rules of liability, but rather was intended to complement common law rules, and the Act is not the exclusive remedy for persons aggrieved by a Department of Environmental Protection decision. M.G.L.A. c. 21, §§ 27, 46A. Therefore, a party would be entitled to pursue any common law claims such as trespass or nuisance.

Question #3

Who might/would the adverse parties be?

Answer to Question #3

Assuming that the reference to adverse parties means the potential defendants, then in a request for an adjudicatory hearing under 314 CMR 2.08 the defendants would be the Town and DEP.

In an appeal of a final decision of DEP the defendants would be the Town and DEP.

In an appeal of an order of conditions under the Orleans Wetlands Bylaw the defendant would be the Town of Orleans. An appeal under the State Wetlands Bylaw would be against DEP.

In other suits or appeals the defendants would be the Town of Orleans and perhaps DEP.

Question #4

In what court(s) might such an action be brought?

Answer to Question #4²

A request for an adjudicatory hearing under 314 CMR 2.08 would be to DEP.

Appeals pursuant to the State Administrative Procedures Act, G.L. c.30A and the other statutes cited above would be to the Superior Court.

² For the purposes of answering this question, I have assumed that the proposed wastewater treatment plant will require a groundwater discharge permit pursuant to the Massachusetts Clean Water Act because a discharge will be made to the waters of the Commonwealth and that a federal permit is not required because there will not be a discharge to waters of the United States and therefore federal law is not implicated.

Michael Ford to Orleans BoS, January 22, 2014

Page 12. "Question #5 How long might such a matter take to resolve if not subject to an agreed upon disposition?"

Page 12. Question #6 If not subject to an agreed upon disposition, what is your assessment of the chances the plaintiffs in such an action might prevail?"

Common law claims would be brought in the Superior Court.

An appeal of an Order of Conditions issued under the Orleans Wetlands Bylaw would be to the Orleans District Court.

Question #5

How long might such a matter take to resolve if not subject to an agreed upon disposition?

Answer to Question #5

It is difficult to predict exactly how long such a matter might take to resolve. However, the case of *Friends and Fishers of Edgartown Great Pond, Inc. v. Department of Environmental Protection*, 446 Mass. 830 (2006) indicates that such litigation could take several years. In *Friends and Fishers*, a citizens group brought an action against the DEP and the Edgartown Wastewater Commission contesting the grant of a groundwater discharge permit. In 1996 DEP issued a two-year interim groundwater discharge permit for the upgraded Edgartown facility. The citizens group appealed the grant of the 1996 permit. The appeal was stayed pending completion of a nutrient-loading study. In 1999 DEP issued a five-year discharge permit. An administrative law judge dismissed the 1996 permit appeal as moot and in 2004 the Appeals Court upheld that decision. However, the 1999 permit was also appealed by the citizens group. The five-year term of the 1999 permit expired during the course of the litigation, and the facility received a five-year renewal permit in 2004. The citizens group pursued an adjudicatory appeal of the 2004 permit. Since the 1999 permit expired during the course of the litigation, the issue on appeal was moot, however as the appeal of the 2004 permit showed, the issue was capable of repetition, so the court heard the case and in 2006 rendered a decision affirming the permit. In *Friends and Fishers* the litigation spanned a period of ten years (1996 to 2006). As noted, however, the litigation did not prevent the Edgartown facility from operating during the pendency of the appeal.

Question #6

If not subject to an agreed upon disposition, what is your assessment of the chances the plaintiffs in such an action might prevail?

Answer to Question #6

In my opinion the decision of the agency and the local board would be upheld on appeal.

Under G.L. c. 30A, § 14, the court reviews the findings of the agency only to determine whether the agency's decision was unsupported by substantial evidence, arbitrary and capricious, or otherwise based on an error of law. *Massachusetts Inst. of Tech. v. Department of Pub. Utils.*, 425 Mass. 856 (1997). "It is a standard of review 'highly deferential to the agency,' which requires ... according 'due weight to the experience, technical competence, and specialized

Michael Ford to Orleans BoS, January 22, 2014

Page 17. "Question #7 How much might the defense of such an action cost the town of Orleans?"

blanket waiver of protection. It specifically exempts certain categories of conduct that continue to enjoy the protection of sovereign immunity. General Laws c. 258, §10 (b) provides a public employer with immunity from "any claim based upon the exercise or ... the failure to exercise ... a discretionary function ... on the part of a public employer ... whether or not the discretion involved is abused." Analysis under § 10 (b) follows a two-prong test. *Harry Stoller & Co. v. Lowell*, 412 Mass. 139, 141(1992). The first inquiry is "whether the governmental actor had any discretion at all as to what course of conduct to follow." *Id.* The second inquiry is "whether the discretion that the actor had is that kind of discretion for which § 10 (b) provides immunity from liability." *Id.* In *Whitney v. Worcester*, 373 Mass. 208, 217 (1977) the court held that the dividing line should be between those functions that "rest on the exercise of judgment and discretion and represent planning and policymaking [for which there would be governmental immunity] and those functions which involve the implementation and execution of such governmental policy or planning [for which there would be no governmental immunity]."

In *Shapiro v. City of Worcester* 464 Mass. 261, 273 (2013), property owners brought actions against the city for nuisance, continuing nuisance, and continuing trespass, arising from the discharge of effluent from the city's sewer system onto their properties. In determining whether the nuisance backup was a failure in planning or a failure in implementing a plan." The court found that the events beginning with the joint study through the decision to upgrade the city's sewer system are "planning and policymaking" however, the contract with the MDC allowing sewage to flow into the system was implementation of the of the policy and plan and the exemption under § 10 (b) does not apply and the city is not immune from suit.

In the present case the Town of Orleans is making a reasonable use of its property (and will be doing so pursuant to a permit issued by DEP) and thus would not be liable under some type of nuisance claim. Moreover, any such nuisance claim would be subject to the Mass Torts Claims Act and the Town would be immune from liability under G.L. c.258 §10(b) because the decision of the town with respect to the waste water treatment facility is encompassed within the discretionary function exception.

In my opinion the Town would prevail in any action brought under G. L. c. 214, § 7A, to restrain environmental damage that is alleged to have occurred or be imminent. Section 7A requires that any such damage "constitutes a violation of a statute, ordinance, bylaw or regulation the major purpose of which is to prevent or minimize damage to the environment." The Town will be undertaking any all activities in accordance with and pursuant to permits issued by DEP and would not be violating any statutes.

Lastly, I note that there are numerous other factors and defenses that could influence the outcome of a case, such as statute of limitation issues, notice provisions, presentment provisions, standing, failure to state a claim, etc.

Question #7

How much might the defense of such an action cost the town of Orleans?

Michael Ford to Orleans BoS, January 22, 2014

Page 18. "Question #8 Also please advise (if it's considered a separate issue from above) what considerations need to be made in regards to the Hofe/OCT restrictive covenant and its possible legal effect on use of Namskaket marsh?"

Answer to Question #7

It is difficult to estimate how much the defense of such an action(s) would cost, other than to state that litigation is very expensive and would be in the thousands of dollars. If the litigation lasted for several years as in the *Friends and Fishers of Edgartown Great Pond, Inc. v. Department of Environmental Protection*, 446 Mass. 830 (2006) case discussed above, the costs and fees could exceed \$100,000.00. Also the need to obtain expert witnesses could increase the costs.

Question #8

Also please advise (if it's considered a separate issue from above) what considerations need to be made in regards to the Hofe/OCT restrictive covenant and its possible legal effect on use of Namskaket marsh?

Answer to Question #8

In 1982 G. Douglas Hofe conveyed a parcel of vacant land in Orleans to the Orleans Conservation Trust, as described in a deed recorded in the Barnstable Registry of Deeds in Book 3546 Page 265. The deed described the property as containing 57.59 acres, more or less (8.22 acres more or less of upland and 49.37 acres, more or less of salt marsh) and further provided that "This land shall be preserved perpetually as open space and devoted only to conservation purposes." This conservation area is known as the George D. Hofe Memorial Conservation Area.

I am in receipt of a letter dated January 3, 2014, from Ms. Caroline Hofe, the niece of George D. Hofe, describing this conservation gift and referencing the fact that this area is part of an ACEC designated in 1985. Ms. Hofe cites some of the reasons that the area was designated as an ACEC and advises that "the legal document signed in 1982 by my uncle with the OCT makes this saltwater system unusable as a 'runoff' for freshwater effluent as this is not a 'conservation use.' The 1985 ACEC designation was given to ensure that this environmentally critical type of land was protected and its approval was unanimous. Please make sure that the people of Orleans are aware of these facts and that, along with the Hofe family, they should be concerned that this land be protected and used for conservation purposes, only."

I have reviewed the deed from Mr. Hofe to the Orleans Conservation Trust and the ACEC designation of this area. The Inner Cape Cod Bay ACEC was nominated by the Conservation Commissions, Boards of Selectmen, and Planning Boards from the Towns of Brewster, Eastham, and Orleans and was designated by the Massachusetts Secretary of Environmental Affairs as an ACEC in 1985 because of the area's extraordinary natural resources. The boundary for this ACEC generally follows the 10-foot contour line on the landward side, and the mean low water on the seaward side, and extends from First Encounter Beach south to include Namskaket Creek. Included within the ACEC boundary are hundreds of acres of saltmarsh, highly productive shellfish beds, undisturbed wildlife habitat, barrier beaches, salt ponds, and tidal rivers and creeks. These areas provide flood control, storm damage prevention, improved water quality, and recreation opportunities to surrounding communities.

Michael Ford to Orleans BoS, January 22, 2014

I have reviewed the subject Conservation Restriction and note that the property is located on Cape Cod Bay. As noted by Attorney Adelson, on February 28, 2000, the Fursts, in consideration of \$75,000.00 granted the Town of Orleans a statutory conservation restriction on a portion of their property, pursuant to the provisions of M.G.L. c. 184, §31-33.³ The Conservation Restriction was over a portion of the Furst property located on Cape Cod Bay for the purpose of the "retention of the Conservation Area predominantly in its current state, a combination of tidal wetlands, dune system and beach, in a natural, scenic, open condition; the protection and development of natural resources including the scenic wetlands and beach areas; the protection and promotion of the conservation of wetlands, dune systems, beaches, soils, natural watercourses, water supplies and wildlife thereon; the protection and enhancement of the value of any abutting conservation areas." Pursuant to the restriction the Fursts agreed that they would refrain from activities inconsistent with the aforesaid purposes or which are detrimental to water quality, soil conservation, wildlife conservation or which is otherwise wasteful of the natural resources of the Conservation Area, including but not limited to "[c]onstruction or placing of any building, tennis court, swimming pool, artificial water impoundment, billboard, sign or other advertising display, asphalt or concrete pavement, antenna, utility pole, tower, conduit, line or other temporary or permanent structure or facility on, under or above the Conservation Area, except as permitted by Paragraph C."

Page 21 "The protection of the coastal resources and Namskaket Marsh including the Hofe Conservation area and the Furst property will continue to be reviewed and addressed through the permitting process. Pursuant to the DRI Decision, the Town will be required to provide confirmatory modeling results using the Linked Water Quality Model to identify estimated nitrogen reductions in nitrogen loading and interim water quality improvements associated with each phase of the Town's Core Program sewer construction program. The Town will be required to conduct groundwater monitoring of the Tri-Town site as part of the Town's AMP* as a condition of the CCC's DRI approval process."

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* **Adaptive Management Plan.**

**Michael Ford
to Orleans
BoS,
January 22,
2014**

I have reviewed the subject Conservation Restriction and note that the property is located on Cape Cod Bay. As noted by Attorney Adelson, on February 28, 2000, the Fursts, in consideration of \$75,000.00 granted the Town of Orleans a statutory conservation restriction on a portion of their property, pursuant to the provisions of M.G.L. c. 184, §31-33.³ The Conservation Restriction was over a portion of the Furst property located on Cape Cod Bay for the purpose of the "retention of the Conservation Area predominantly in its current state, a combination of tidal wetlands, dune system and beach, in a natural, scenic, open condition; the protection and development of natural resources including the scenic wetlands and beach areas; the protection and promotion of the conservation of wetlands, dune systems, beaches, soils, natural watercourses, water supplies and wildlife thereon; the protection and enhancement of the value of any abutting conservation areas." Pursuant to the restriction the Fursts agreed that they would refrain from activities inconsistent with the aforesaid purposes or which are detrimental to water quality, soil conservation, wildlife conservation or which is otherwise wasteful of the natural resources of the Conservation Area, including but not limited to "[c]onstruction or placing of any building, tennis court, swimming pool, artificial water impoundment, billboard, sign or other advertising display, asphalt or concrete pavement, antenna, utility pole, tower, conduit, line or other temporary or permanent structure or facility on, under or above the Conservation Area, except as permitted by Paragraph C."

Page 21 (Cont'd). "The AMP includes a Groundwater and Surface Water Quality Monitoring Plan that identifies specific annual water quality monitoring activities to be completed by the Town for the Tri-Town Site area, sensitive coastal embayments and select freshwater ponds in Orleans. The AMP requires the Town to coordinate its ongoing water quality monitoring activities with MassDEP, CCC, and ongoing water quality monitoring and modeling activities in Orleans being carried out by MEP, the United States Geological Survey (USGS), the Pleasant Bay Alliance, the Orleans Ponds Coalition and the Orleans Marine and Fresh Water Quality Task Force."

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**Michael Ford
to Orleans
BoS,
January 22,
2014**

Pleasant Bay Alliance, the Orleans Ponds Coalition and the Orleans Marine and Fresh Water Quality Task Force.

In light of the requirements of the Cape Cod Commission in the DRI decision on the CWMP and the comments in the SEIR decision regarding the importance of the Namskaket marsh system, my opinion as set forth above in answer to questions number 1-7 is not changed by the existence of the Hofe deed and the Furst Conservation Restriction.

I trust that this letter has addressed your questions. If you have any additional questions or comments please advise.

Very truly yours,



Michael D. Ford
Town Counsel

Page 21. "In light of the requirements of the Cape Cod Commission in the DRI decision on the CWMP and the comments in the SEIR decision regarding the importance of the Namskaket marsh system, my opinion as set forth above in answer to questions number 1 – 7 is not changed by the existence of the Hofe deed and Furst Conservation Restriction."

Kelly, Town Administrator
via S. May, Town Clerk

The End