

	)	
In re Easterly Wastewater Treatment Facility	)	OADR No. 2026-013
Groundwater Discharge Permit No. 1018-0	)	DEP No. 25-WP79-0137-APP/1018-0
	)	

I, Andrew Gottlieb, submit this testimony on behalf of the Petitioners:

1. The purpose of my testimony is to describe and discuss certain regulatory requirements in MassDEP's Groundwater Discharge Permitting Regulations and the Massachusetts Surface Water Quality Standards their relevance and applicability to the groundwater discharge permit issued for the Easterly project that is the subject of this appeal. My testimony will discuss MassDEP's failure to comply with its own regulations and past practices in the issuance of the permit and that the unenforceability of the permit renders it invalid.

2. My testimony is based on my personal knowledge, and informed by my professional experience as the former Director of the Division of Watershed Management at MassDEP, as the former Assistant Commissioner of the Bureau of Planning and Policy at MassDEP, as the former Chief of the Office of Commonwealth Development reporting directly to the Governor of the Commonwealth, and as the current executive director of the Association to Preserve Cape Cod (“APCC”), and my review of the documents and sources of information that are referenced in my testimony below.

Statement of Interest

3. APCC's reasons for participating in this adjudicatory proceeding stem from its enduring concern for protecting the natural resources of Cape Cod from the impacts of unlawful and bad environmental policies and practices.

4. For over five decades, APCC has been Cape Cod's advocate for the environment, working on behalf of the Cape's residents and visitors to protect the natural resources that define our region. Our efforts have led to landmark achievements in water resource protection, land preservation, and smart growth, earning APCC the reputation as Cape Cod's most prominent and influential environmental advocacy group. The success of APCC's advocacy is grounded in our reliance on sound science, in our ability to forge effective collaborations with a diverse group of partners, and in our long history of working with policy makers on the local, regional, state and federal levels.

5. Founded in 1968 by a group of concerned citizens to oppose an Army Corps of Engineers' proposal to turn Nauset Marsh into a deep-water port, APCC's birth occurred at the dawning of the nation's environmental movement – the same awakening of environmental concern that produced Earth Day, the EPA, the Clean Water Act and the Endangered Species Act. APCC works in every Cape town, and at every level, from helping to organize neighborhood volunteer groups to providing towns with technical assistance on natural resource improvement projects. It has worked closely with elected officials and policy makers from our region and beyond, forged effective partnerships with the Cape Cod Chamber of Commerce and local business leaders, and has been a close collaborator with its fellow environmental organizations such as the Compact of Cape Cod Conservation Trusts and the Center for Coastal Studies.

6. APCC has long been concerned with the reducing nutrient enrichment of Cape Cod's groundwater and surface waters. APCC has devoted significant resources to supporting the development

of legislation and state policies to facilitate and encourage water quality improvements through the reduction of nutrients, especially those from wastewater treatment. The permit in question is at variance with prior MassDEP permitting practices and runs counter to longstanding policies enacted to protect the waters of the Cape.

7. APCC is fully committed to standing up for everyone who values the waters of Cape Cod for the ecological treasures that they are and who relies on the ecology of the Cape to support their families or to protect their investments in homes and businesses.

8. APCC opposes the ongoing threat of excess nutrient discharge to the waters of the Cape authorized by this flawed groundwater discharge permit. Plainly stated, it is the position of APCC – informed by my professional opinion as its Executive Director -- that any new discharge of wastewater into a nutrient impaired watershed must include complete offset of that new discharge's nutrient load by the applicant contemporaneous with the permit issuance to achieve a net-zero additional load. These permit conditions must be fully enforceable through MassDEP administrative oversight and/or third party intervention.

Background and Professional Qualifications

9. I have a B.A. in Government from Harvard University and an M.B.A. in Public and Non-Profit Administration from Boston University. I have almost 40 years of environmental protection experience in government and non-profit sectors, and multiple elected terms in municipal office. I am a resident of Cape Cod.

10. I am currently the Executive Director at APCC and have served in that position since 2017.

11. Prior to APCC, I was the Executive Director of the Cape Cod Water Protection Collaborative, a multi-faceted, county-authorized, coordinated effort to enhance the water and wastewater management efforts of Cape towns, from 2007 until January 2017. There, I guided a Barnstable County effort to protect and restore water quality on Cape Cod, including an ongoing

update of the Clean Water Act Section 208 areawide water quality plan update. I also provided legislative, financial and strategic guidance and support to the Collaborative's 15 member communities and the County Commissioners.

12. Additionally, I was an independent consultant and the Principal at Clean Water Associates, my own consulting firm, from 2013 to 2017. In that role, I provided consulting expertise to clients seeking support for water resources management challenges and project development, including financing, strategic planning, and overall environmental permitting and compliance.

13. I also served as a consultant at Serrafix Corporation, a strategic consulting firm focused on energy, transportation, and climate change, from 2007 to 2014. At Serrafix, I worked with clients seeking development of sustainable business models to promote and finance large-scale energy conservation. I specialized in assisting medium-to-large cities and other entities seeking assistance in the creation of management and finance structures needed to attract financing and to ensure implementation of efficiency.

14. From 2009 to 2017, I was Vice President of Business Development at RainBankUS, a start-up software company with a proprietary technology that is changing stormwater management, with an innovative solution that prevents flooding at a fraction of the cost of current solutions. At RainBank, I coordinated government affairs and business development.

15. Immediately preceding these private sector engagements, I was the Chief of the Commonwealth's Executive Office of Commonwealth Development, which was a "super-Secretariat" established during Governor Mitt Romney's administration. At the Office of Commonwealth Development, I coordinated Massachusetts's energy, housing, environmental and transportation policies, from 2006 to 2007. I also served as the Undersecretary for that Office from 2004 to 2005.

16. From 1988 to 2004, I worked at the Massachusetts Department of Environmental

Protection (“MassDEP”). During my 16 years at MassDEP, which ended with my being the Assistant Commissioner for Policy from 2000 to 2004, I had a broad view of the agency’s water, air, and waste site policies and programs. I conceived the successful estuaries preservation program and built an innovative revolving fund into the nationally recognized model for watershed protection funding. As Director of the Division of Watershed Management, from 1993 to 1996, I had oversight of the full range of MassDEP water quality permitting, including water quality certifications, wastewater management permits, and water quality permits. Prior to that position, I was a Manager at the Water Management Program from 1988 to 1993. I also served as Director of the Division of Municipal Services, from 1996 to 2000.

Falmouth Easterly Permit

17. Based on my direct experience with the Massachusetts Groundwater Discharge Program, both as a senior DEP manager with direct oversight of the program, and governing policy and regulations as well as having interacted with the Department as a consultant and as an advocate, the permit issued to Easterly fails to meet the Department’s own requirements under the surface water quality standards, is at variance from past permitting practice, and contains conditions that are unenforceable and do not achieve a net-zero offset of the new nitrogen discharge load.

18. Since 2006, the Great Pond Watershed has had a DEP-issued TMDL for nitrogen, which limits the maximum amount of nitrogen that the Great Pond, as an impaired water body can receive without exceeding water quality standards. In order to attain or maintain the nitrogen limit set by the TMDL, the nitrogen load to Great Pond must be reduced by 12,154 kilograms per year based on the existing discharges.

19. New projects requiring groundwater discharge permits located in impaired watersheds on the § 303d list cannot increase nutrient pollution loads. Most, if not all of Cape Cod’s nitrogen TMDLs are based on nitrogen reduction targets in the UMass Dartmouth School for Marine Science

and Technology (“SMAST”) Technical Reports. The establishment of TMDLs based on the SMAST reports is predicated on the essential premise that new development will not be permitted to increase nitrogen loading. For that reason, new development in highly impaired watersheds like Great Pond must offset existing nutrient pollution to ensure no net increase to the § 303d listed receiving water. By DEP’s own regulations, the Easterly project requires any new nitrogen discharge allowed by a groundwater discharge permit to be fully offset so the new nitrogen discharge is net-zero. The Final Permit fails this fundamental test because there are no quantified, enforceable offsets required by Applicant to make the new discharge net-zero nitrogen.

20. The Easterly Permit stands at odds with other similar permits issued by MassDEP after the focus on nitrogen reduction based on the SMAST findings became the basis of and focus of policy and regulation. As evidenced by DEP issued Groundwater Discharge permit 852-0M1 issued to Housing Assistance Corporation for a housing project in Bourne (exhibit 1) and Groundwater Discharge permit SE #0-850 for another project in Cotuit (exhibit 2) it has been past practice by DEP to require the permittee to contemporaneously offset the excess nitrogen authorized in the permit for discharges into nitrogen impaired watersheds. The offset sections of each of these permits detail specific load reductions and make the permittee responsible for effectuating them.

21. The two referenced permits establish in plain reading of General Condition 1 (see below) that the surface water quality standards are applicable to groundwater discharge permits issued in nitrogen impaired watershed like Great Pond Watershed:

(1) No discharge authorized in the permit shall cause or contribute to a violation of the Massachusetts Surface Water Quality Standards (314 CMR 4.00) or any amendments thereto. Upon promulgation of any amended standard, this permit may be revised or amended in accordance with such standard and 314 CMR 2.10 and 3.13 or S.12. Except as otherwise provided in 314 CMR 5.10 (3)(c), 310 CMR 5.10(4)(a)2 and 314 CMR 5.10(9), no discharge authorized in the permit shall ^{impair} the ability of the ground water to act as an actual or potential source of potable water. Evidence that a discharge impairs the ability of the ground water to act as an actual or potential source of potable water includes, without limitation, analysis of samples taken in a downgradient well that shows one or more exceedances of the applicable water quality-based effluent limitations set forth in 314 CMR

5.10. In those cases where it is shown that a measured parameter exceeds the applicable water quality based effluent limitations set forth in 314 CMR 5.10 at the upgradient monitoring well, evidence that a discharge impairs the ability of the ground water to act as an actual or potential source of potable water is deemed to exist if a measured parameter in any downgradient well exceeds the level of that same measured parameter in the upgradient well for the same sampling period. A statistical procedure approved by the Department shall be used in determining when a measured parameter exceeds the allowable level.

22. Further, it is clear from both the referenced permits that the nitrogen offsets are enforceable because they are clear, specifically articulated in the permit and are the direct responsibility of the permittee to accomplish contemporaneously with the development of the disposal facility. The Easterly permit is at variance with both the regulations and previous permits for several reasons:

- 1) It fails to require the permittee to fully offset its nitrogen contribution to an impaired watershed where it will exacerbate nutrient enrichment;
- 2) It also fails to specify specific measures to be undertaken to offset the increased loading and is non-specific about the required reduction;
- 3) It relies on a contractual sleight of hand to transfer the responsibility to offset the load to a third party (the town of Falmouth) thereby blunting any enforcement of achieving reductions by obligating an entity not a party to the permit to fulfill the vague reductions contemplated. By shifting responsibility to a non-regulated entity the permit undermines a key provision of the permit regime under which Cape Cod groundwater discharge permits have been issued for over a decade. This provides no reasonable assurance that the permitted discharge will not worsen the impairment of the watershed and therefore fails to meet DEP's own permitting practices; and
- 4) The shifting of the nutrient reduction responsibility to the Town of Falmouth renders the permit unenforceable by the Department or any other third party interested in ensuring that the Great Pond watershed not be allowed to slip further into noncompliance.

23. It is my opinion as a seasoned and experienced former DEP administrator with a long history of involvement in and shaping of nutrient disposal policy and regulation that the permit issued to Easterly is in violation of the department's standards and regulations, is defective due to a lack of practical enforceability, improperly prioritizes new housing over its equally important emphasis on reducing nutrient loading. For all these reasons the permit will fail to prevent the further degradation of an already impaired estuarine system and should not be allowed to remain in effect.

Signed under the pains and penalties of perjury this 24th day of July, 2026.



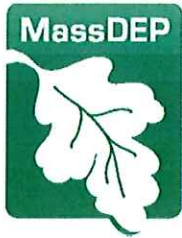
Andrew Gottlieb

**PRE-FILED DIRECT TESTIMONY
OF ANDREW GOTTLIEB**

EXHIBIT INDEX

EXHIBIT	DESCRIPTION
AG-1	Groundwater Discharge permit 852-0M1 issued to Housing Assistance Corporation
AG-2	Groundwater Discharge permit SE #0-850 issued to Cotuit Meadows
AG-3	Andrew Gottlieb Resume

Exhibit 1



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

May 17, 2017

Sanford M. Horvitz
Director of Housing Development
Housing Assistance Corporation
460 W. Main Street
Hyannis, MA 02601

RE: BOURNE: BRPWP06, Clay Pond
Cove, 6 Otis Park Drive
Permit No.: 852-0M1

Transmittal No. W140576

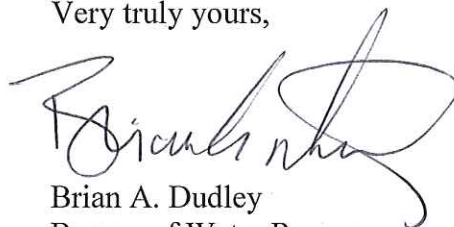
Dear Mr. Horvitz:

You requested from the Department a permit modification to reflect the allocation of design flow reserved as "future expansion" from the subject facility.

The Department approves your request. Enclosed please find a modified permit issued to reflect the change in the description of the property as shown on page one of the permit.

Should you have any questions regarding this matter, please contact Christos Dimisioris at (508) 946-2736.

Very truly yours,



Brian A. Dudley
Bureau of Water Resources

D/CD/

Enclosure: Groundwater discharge permit

cc: Mr. F.P. (Tom) Lee, P.E.
Horsley Witten Group, Inc.
90 Route 6A
Sandwich, MA 02563
(w/ enclosure)

Julie Creamer
Preservation of Affordable Housing
40 Court Street Suite 700
Boston, MA 02108
(w/ enclosure)

Terri Guarino, RS
Bourne Board of Health
24 Perry Avenue, Buzzards Bay
Bourne, Massachusetts 02532
(w/ enclosure)

ecc: DEP/Boston Wastewater Management Section
(w/ enclosure)

DEP/SERO
Attn: Cheryl Bump
(w/ enclosure)

P:\06\852 - 0M1 - Bourne - Canal Bluffs Modified Permit Cover Letter.docx



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

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Secretary

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Commissioner

GROUNDWATER DISCHARGE PERMIT

Name and Address of Applicant: ***Housing Assistance Corporation, 460 West Main Street,
Hyannis, MA 02601***

Date of Application: ***July 19, 2007***

Application/Permit No. ***852-0M1***

Date of Issuance: ***June 22, 2011***

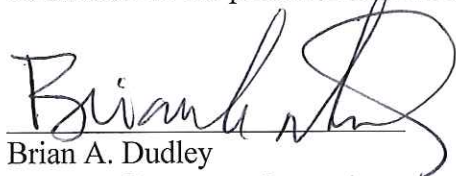
Date of Expiration: ***July 22, 2016***

Effective Date: ***July 22, 2011***

Date Modified: ***May 17, 2017***

AUTHORITY FOR ISSUANCE

Pursuant to authority granted by Chapter 21, Sections 26-53 of the Massachusetts General Laws, as amended, 314 CMR 2.00, and 314 CMR 5.00, the Massachusetts Department of Environmental Protection (the Department) hereby issues the following permit to: Housing Assistance Corporation (hereinafter called "the permittee") authorizing discharges from the on-site wastewater treatment facility to the ground to be located at Residences of Canal Bluffs, 6 Otis Park Drive, Bourne, Massachusetts 02532 (a 221 bedroom community with associated office space, and a 7,528 gallon per day (gpd) reserve for off-site nitrogen mitigation), such authorization being expressly conditional on compliance by the permittee with all terms and conditions of the permit hereinafter set forth.



Brian A. Dudley

Bureau of Resource Protection

May 17, 2017
Date

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

I. SPECIAL CONDITIONS**A. Effluent Limits**

The permittee is authorized to discharge into the ground from the wastewater treatment facilities for which this permit is issued a treated effluent whose characteristics within one month of startup of the wastewater treatment facility proposed for phase 3 and continuing thereafter shall not exceed the following values:

Effluent Characteristics	Discharge Limitations
Flow	31,994 GPD
Oil and grease	15 mg/l
Total Suspended Solids (TSS)	10 mg/l
Total Nitrogen (NO ₂ + NO ₃ + TKN)*	10 mg/l
Nitrate-Nitrogen	10 mg/l
Biochemical Oxygen Demand, 5-day @20°C (BOD ₅)	30 mg/l
Turbidity	5 NTU
Total Organic Carbon (TOC)	5 mg/L
Fecal Coliform	200 organisms/100 mL

*Refer to Section E. "Nitrogen Offsets" and Appendices A and B.

- a) The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time or not more than 0.2 standard units outside the naturally occurring range.
- b) The discharge of the effluent shall not result in any demonstrable adverse effect on the groundwater or violate any water quality standards that have been promulgated.
- c) The monthly average concentration of BOD and TSS in the discharge shall not exceed 15 percent of the monthly average concentrations of BOD and TSS in the influent into the permittee's wastewater treatment facility.
- d) When the average annual flow exceeds 80 percent of the permitted flow limitations, the permittee shall submit a report to the Department describing what steps the permittee will take in order to remain in compliance with the permit limitations and conditions, inclusive of the flow limitations established in this permit.

B. Monitoring and Reporting**1) INFLUENT:**

The permittee shall monitor and record the quality of the **influent** waste stream to the facility according to the following schedule and other provisions:

Parameter	Minimum Frequency of Analysis	Sample Type
BOD ₅	Monthly	24-Hour Composite
Total Suspended Solids	Monthly	24-Hour Composite
Total Solids	Monthly	24-Hour Composite
Ammonia Nitrogen	Monthly	24-Hour Composite
Volatile Organic Compounds (US EPA Method #624)	Annually	Grab

EFFLUENT:

The permittee shall monitor and record the quality and quantity of **effluent** at the effluent pump chamber to the leaching area according to the following schedule and other provisions:

Parameter	Minimum Frequency of Analysis	Sample Type
Flow	Daily	Meter reading Report: Min – Max - Average
pH	Daily	Grab
UV Intensity	Continuous	Continuous recording
Turbidity	Continuous	Continuous recording
Total Suspended Solids	Weekly	24-Hour Composite
Oil & Grease	Monthly	Grab

BOD ₅	Weekly	24-Hour Composite
Nitrate Nitrogen	2/Weekly	24-Hour Composite
Ammonia Nitrogen	2/Weekly	24-Hour Composite
Total Nitrogen (NO ₂ + NO ₃ + TKN)	2/Weekly	24-Hour Composite
Total Organic Carbon (TOC)	2/Weekly	24-Hour Composite
Fecal Coliform	Weekly	Grab
Total Phosphorus ² (as P)	Quarterly	Grab
Orthophosphate ² (as P)	Quarterly	Grab
Volatile Organic Compounds ¹	Semi-annually	Grab

¹USEPA Method #624

²After one full year of monitoring the Total Phosphorus and Orthophosphate results, the Department may determine, upon the request of the permittee, that the frequency of monitoring may be reduced if, in the judgment of the Department, the results of the sampling indicate that existing phosphorus levels will not adversely impact downgradient receptors. If the Department reduces the frequency of monitoring for Total Phosphorus and Orthophosphate, the Department reserves the right to resume more frequent monitoring if the Department determines that phosphorus levels are impacting downgradient receptors.

- 2) The permittee shall install a minimum of three (3) monitoring wells, one upgradient and two downgradient of the discharge. Detailed plans of the wells, the locations thereof and the method and means of sampling the wells shall be submitted to and approved by the Department prior to the proposed wastewater treatment facility accepting any flow. The plan shall also include provisions for labeling and security of monitoring wells.

The permittee shall install the approved monitoring wells at least 90 days prior to treatment facility start-up and shall monitor, record and report the quality of water in the monitoring wells according to the following schedule and other provisions:

Parameter	Sample Type	Frequency of Analysis
Static Water Level ¹	Measurement	Monthly
Specific Conductance	Grab	Monthly
pH	Grab	Monthly

Total Nitrogen (NO ₂ +NO ₃ +TKN)	Grab	Quarterly
Nitrate-Nitrogen	Grab	Quarterly
Total Organic Carbon (TOC)	Grab	Quarterly
Total Phosphorus ³ (as P)	Grab	Quarterly
Orthophosphate ³ (as P)	Grab	Quarterly
Volatile Organic Compounds ²	Grab	Annually

¹Static Water Level shall be expressed as an elevation and shall be referenced to the surveyed datum established for the site. It shall be calculated by subtracting the depth to the water table from the surveyed elevation of the top of the monitoring well's PVC well casing/riser.

²USEPA Method #624

³After one full year of monitoring the Total Phosphorus and Orthophosphate results, the Department may determine, upon the request of the permittee, that the frequency of monitoring may be reduced if, in the judgment of the Department, the results of the sampling indicate that existing phosphorus levels will not adversely impact downgradient receptors. If the Department reduces the frequency of monitoring for Total Phosphorus and Orthophosphate, the Department reserves the right to resume more frequent monitoring if the Department determines that phosphorus levels are impacting downgradient receptors.

- 3) Any grab sample or composite sample required to be taken less frequently than daily shall be taken during the period of Monday through Friday inclusive. All composite samples shall be taken over the operating day.

The permittee shall submit all monitoring reports within 30 days of the last day of the reporting month. Reports shall be on an acceptable form, properly filled and signed and shall be sent to the Department of Environmental Protection, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347, and to the Director of Watershed Permitting, Department of Environmental Protection, Watershed Permitting Group, One Winter Street, Boston, MA 02108, and to the Bourne Board of Health, 24 Perry Avenue, Buzzards Bay, Massachusetts 02542. Submission of monitoring reports in electronic format is available through eDEP and serves as data submission to both the Regional and Boston offices. To register for electronic submission go to: <http://www.mass.gov/dep/service/compliance/edeponlf.htm>

C. Nitrogen Offset

It has been determined that the Phinneys Harbor estuarine system is impaired due to nitrogen, and a Total Maximum Daily Load (TMDL) has been developed for this watershed. Based on surface water quality impacts within the watershed the permit includes the following measure which is expected to achieve a no net nitrogen load impact as a result of the discharge:

Based on the agreement with Claybourne Trust, as shown in Appendix A, and nitrogen offset calculations, as shown in Appendix B, the permittee has demonstrated that with the current elimination of a portion of wastewater load from the Claybourne property and capacity reserved for any proposed redevelopment of the Claybourne property, the project will not result in any increase in nitrogen load to the Phinneys Harbor watershed.

D. Financial Assurance Mechanisms

1.

- a. The permittee shall establish and maintain a financial assurance mechanism that provides for the continued availability of an immediate repair and replacement account to be used by the permittee solely for the immediate repair and replacement of any failing components of the PWTF. To create an immediate repair and replacement account, the permittee shall deposit at least 15% of the estimated construction cost of the PWTF into an interest bearing escrow account in accordance with the financial assurance mechanism and 314 CMR 5.15.
- b. The permittee shall also establish and maintain a financial assurance mechanism in accordance with 314 CMR 5.15 that provides for the accumulation in a capital reserve account of sufficient funds to make any necessary modifications to the PWTF and other related equipment within twenty years from the date the PWTF commenced operation or such other period determined to be appropriate by the Department based on the age and condition of the PWTF. The financial assurance mechanism shall provide for the accumulation in the capital reserve account of an amount equal to at least 25% of the estimated construction cost of the PWTF.
- c. On or before January 31st of each year, the permittee shall submit an annual financial report identifying the initial and current balances in the immediate repair and replacement account and the capital reserve account and confirming the continuing availability of the funds in said account for the purposes specified in the permit and 314 CMR 5.15. Said report shall be prepared in accordance with generally accepted accounting principles. Reports pertaining to the required financial assurance mechanism(s) shall be sent to the Wastewater Management Section Chief at the appropriate Regional Office

2. The permittee shall meet the obligation to establish all required financial assurance mechanisms by using Department-approved form documents and shall submit said Department-approved form documents to the Department for its review and approval as follows:

- a. A permittee that constructs the wastewater treatment facility after the issuance of the Individual permit may submit the financial assurance mechanism(s) to the Department for its review and approval no later than ninety (90) days prior to the start-up of the

facility. Such a permittee shall not operate the facility unless and until the Department has approved the required financial assurance mechanism(s), the financial assurance mechanisms are in full force and effect, and the permittee has made all contributions required thirty (30) days prior to the start-up of the facility.

- b. A permittee with a wastewater treatment facility in existence prior to the submission of the individual permit renewal application may submit the financial assurance mechanisms to the Department for its review and approval no later than ninety (90) days from the date of submission of the individual permit renewal application. Said permittee shall be in compliance with the provision of each approved financial assurance mechanism requiring contributions to the immediate repair and replacement account and the capital reserve account no later than thirty (30) days prior to the date on which the renewal is issued.
3. The permittee shall maintain the current form documents evidencing all required financial assurance mechanisms approved by the Department. The permittee shall perform all its obligations under the required financial assurance mechanisms as approved by the Department.
4. For purpose of the financial assurance mechanism requirement, the estimated construction cost of the wastewater treatment facility shall include the cost of constructing the wastewater treatment plant, collection system, associated mechanical equipment, but not including the land, ground and disposal area.

E. Supplemental Conditions

1. The permittee shall notify the Department at least thirty (30) days in advance of the proposed transfer of ownership of the facility for which this permit is written. Said notification shall include a written agreement between the existing and new permittees containing a specific date for transfer of permit, responsibility, coverage and liability between them.
2. A staffing plan for the facility shall be submitted to the Department once every two years and whenever there are staffing changes. The staffing plan shall include the following components:
 - a. The operator(s)'s name(s), operator grade(s) and operator license number(s);
 - b. The number of operational days per week;
 - c. The number of operational shifts per week;
 - d. The number of shifts per day;
 - e. The required personnel per shift;
 - f. Saturday, Sunday and holiday staff coverage;
 - g. Emergency operating personnel
3. The permittee is responsible for the operation and maintenance of all sewers, pump stations, and treatment units for the permitted facility, which shall be operated and maintained under the direction of a properly certified wastewater operator.

4. Operation and maintenance of the proposed facility must be in accordance with 314 CMR 12.00, "Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges", and, 257 CMR 2.00, "Rules and Regulations for Certification of Operators of Wastewater Treatment Facilities".
 - a. The facility has been rated (in accordance with 257 CMR 2.00), to be a Grade 4 facility. Therefore, the permittee shall provide for oversight by a Massachusetts Certified Wastewater Treatment plant operator (Chief Operator) Grade 4 or higher. The permittee will also provide for a backup operator who shall possess at least a valid Grade 3 license.
 - b. The date and time of the operator's inspection along with the operator's name and certification shall be recorded in the log book on location at the treatment facility. All daily inspection logs consistent with the O&M Manual requirements shall be kept at the facility for a period of three (3) years.
 - c. Records of operation of wastewater treatment facilities or disposal systems required by the Department shall be submitted on forms supplied by the Department or on other forms approved by the Department for such use. Monthly reports shall be certified by the wastewater treatment plant operator in charge and shall be included in the discharge monitoring reports submitted each month.
5. If the operation and maintenance of the facility is to be contracted to a private concern, the permittee shall submit a copy of the contract, consistent with what is required by the approved Operation & Maintenance manual and signed only by the contractor, to the appropriate MassDEP Regional Office for review and approval ninety (90) days **prior** to the start up of the facility. Along with the contract, a detailed listing of all contract operation obligations of the proposed contractor at other facilities shall also be submitted. The permittee shall not begin operation of the treatment facility until the Department approves the contract.
6. Any additional connections to the sewer system, beyond the facility as described on page 1 of this permit shall be approved by MassDEP and the local Board of Health prior to the connection.
7. All tests or analytical determinations to determine compliance with permit standards and requirements shall be done using tests and procedures found in the most recent version of *Standard Methods for the Examination of Water and Wastewater* and shall be performed by a Massachusetts Certified laboratory.
8. The permittee shall notify the appropriate MassDEP Regional Office, in writing, within thirty (30) days of the following events:
 - a. The date of treatment plant start up.
 - b. Any interruption of the treatment system operation, other than routine maintenance.
 - c. Final shutdown of the treatment system.
9. The permittee shall contract to have any and all solids and sludges generated by the treatment system for which this permit is issued removed off site by a properly licensed waste hauler for disposal at an EPA/MassDEP approved facility. The name and license number of the hauler along with the quantity of wastes removed and the date(s) of removal shall be reported by the permittee in writing to the appropriate MassDEP Regional Office.

10. Simultaneously with the permit renewal application at year fifteen 2026 following the initiation of plant operations, the permittee shall submit two reports to the Department for its review and approval:
 - a. An engineering report, prepared by a registered professional engineer, that outlines in sufficient detail what modifications (if any) to the facility or other changes are required to insure that the facility can remain in compliance with its GWDP and other applicable requirements through the next 5 year permit term (year 2031) and beyond; and
 - b. A financial plan that contains the cost estimates for implementing the facility modifications or other changes identified in the engineering report, and describes and demonstrates, how and when the permittee will finance the needed facility modifications or other changes.
11. In the event that effluent limits are not met, or the discharge is determined to impair groundwater quality in accordance with 314 CMR 5.16(1), the permittee may be obligated to modify, supplement or replace the permitted treatment process so as to ensure that the discharge does not impair the ability of the groundwater to act as an actual or potential source of potable water.
12. The Cooperative Development Agreement (“CDA”) between the permittee and Claybourne Trust shall be recorded in the chain of title for the Claybourne Trust. Proof of recording shall be submitted to the Department within thirty (30) days of issuance of this permit.

F. Appeal Rights

During the thirty (30) day period following issuance of this permit, a Notice of Claim for an Adjudicatory Appeal may be sent by any person aggrieved (the “Petitioner”) by the issuance to:

Case Administrator
Office of Appeals and Dispute Resolution
Department of Environmental Protection
One Winter Street/2nd Floor
Boston, MA 02108

310 CMR 1.01(6)(b) requires the Notice of Claim to: include sufficient facts to demonstrate aggrieved person status; state the facts which are grounds for the appeal specifically, clearly and concisely; and, state relief sought. The permit shall become or remain effective at the end of the 30 day appeal period unless the person filing the Notice of Claim requests, and is granted, a stay of its terms and conditions. If a permit is modified under 314 CMR 2.10, only the modified terms and conditions may be subject to an Adjudicatory Appeal. All other aspects of the existing permit shall remain in effect during any such Adjudicatory Appeal.

Per 310 CMR 4.06, the hearing request to the Commonwealth will be dismissed if the filing fee is not paid. Unless the Petitioner is exempt or granted a waiver, a valid check payable to the Commonwealth to Massachusetts in the amount of \$100.00 must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection

P.O. Box 4062
Boston, MA 02211

The filing fee is not required if the Petitioner is a city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority effective January 14, 1994, or any municipal housing authority; or, per MGL 161A s. 24, the Massachusetts Bay Transportation Authority. The Department may waive the adjudicatory hearing filing fee for a Petitioner who shows that paying the fee will create an undue financial hardship. A Petitioner seeking a waiver must file, along with the hearing request, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

II. GENERAL PERMIT CONDITIONS

The following conditions apply to all individual and general permits:

- (1) No discharge authorized in the permit shall cause or contribute to a violation of the Massachusetts Surface Water Quality Standards (314 CMR 4.00) or any amendments thereto. Upon promulgation of any amended standard, this permit may be revised or amended in accordance with such standard and 314 CMR 2.10 and 3.13 or 5.12. Except as otherwise provided in 314 CMR 5.10 (3)(c), 310 CMR 5.10(4)(a)2. and 314 CMR 5.10(9), no discharge authorized in the permit shall impair the ability of the ground water to act as an actual or potential source of potable water. Evidence that a discharge impairs the ability of the ground water to act as an actual or potential source of potable water includes, without limitation, analysis of samples taken in a downgradient well that shows one or more exceedances of the applicable water quality based effluent limitations set forth in 314 CMR 5.10. In those cases where it is shown that a measured parameter exceeds the applicable water quality based effluent limitations set forth in 314 CMR 5.10 at the upgradient monitoring well, evidence that a discharge impairs the ability of the ground water to act as an actual or potential source of potable water is deemed to exist if a measured parameter in any downgradient well exceeds the level of that same measured parameter in the upgradient well for the same sampling period. . A statistical procedure approved by the Department shall be used in determining when a measured parameter exceeds the allowable level.
- (2) Duty to Comply. The permittee shall comply at all times with the terms and conditions of the permit, 314 CMR 5.00, M.G.L. c. 21, §§ 26 through 53.
- (3) Standards and Prohibitions for Toxic Pollutants. The permittee shall comply with effluent standards or prohibitions established under § 307(a) of the Federal Act, 33 U.S.C § 1317(a), for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- (4) Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and equipment installed or used to achieve compliance with the terms and conditions of the permit, and the regulations promulgated at 314 CMR 12.00: *Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges*, and 257 CMR 2.00: *Rules and Regulations for Certification of Operators of Wastewater Treatment Facilities*.
- (5) Duty to Halt or Reduce Activity. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of treatment is provided. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- (6) Power Failure. In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:
 - (a) provide an alternative power source sufficient to operate the wastewater control facilities;
or
 - (b) halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

(7) Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any adverse impact on human health or the environment resulting from non-compliance with the permit.

(8) Duty to Provide Information. The permittee shall furnish to the Department within a reasonable time as specified by the Department any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine whether the permittee is complying with the terms and conditions of the permit.

(9) Inspection and Entry. The permittee shall allow the Department or its authorized representatives to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records required by the permit are kept;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (c) Inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit; and
- (d) Sample or monitor at reasonable times for the purpose of determining compliance with the terms and conditions of the permit.

(9A) The permittee shall physically secure the treatment works and monitoring wells and limit access to the treatment works and monitoring wells to those personnel required to operate, inspect and maintain the treatment works and to collect samples.

(9B) The permittee shall identify each monitoring well by permanently affixing to the steel protective casing of the well a tag with the identification number listed in the permit.

(10) Monitoring. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless other test procedures are specified in the permit.

(11) Recordkeeping. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and all records of all data used to complete the application for the permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time. Records of monitoring information shall include:

- (a) The date, exact place, and time of sampling or measurements;
- (b) The individual(s) who performed the sampling or measurement;
- (c) The date(s) analyses were performed;
- (d) The individual(s) who performed the analyses;
- (e) The analytical techniques or methods used; and
- (f) The results of such analyses.

(12) Prohibition of Bypassing. Except as provided in 314 CMR 5.19(13), bypassing is prohibited, and the Department may take enforcement action against a permittee for bypassing unless:

- (a) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- (c) The permittee submitted notice of the bypass to the Department:
 1. In the event of an anticipated bypass, at least ten days in advance, if possible; or
 2. In the event of an unanticipated bypass, as soon as the permittee has knowledge of the bypass and no later than 24 hours after its first occurrence.

(13) Bypass not Exceeding Limitations. The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if necessary for the performance of essential maintenance or to assure efficient operation of treatment facilities.

(14) Permit Actions. The permit may be modified, suspended, or revoked for cause. The filing of a request by the permittee for a permit modification, reissuance, or termination, or a notification of planned changes or anticipated non-compliance does not stay any permit condition.

(15) Duty to Reapply. If the permittee wishes to continue an activity regulated by the permit after the expiration date of the permit, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department in writing.

(16) Property Rights. The permit does not convey any property rights of any sort or any exclusive privilege.

(17) Other Laws. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, and local laws and regulations.

(18) Oil and Hazardous Substance Liability. Nothing in the permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Federal Act, 33 U.S.C. § 1321, and M.G.L. c. 21E.

(19) Removed Substances. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed in a manner consistent with applicable Federal and State laws and regulations including, but not limited to, the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53 and the Federal Act, , 33 U.S.C. § 1251 *et seq.*, the Massachusetts Hazardous Waste Management Act, M.G.L. c. 21C, and the Federal Resource Conservation and Recovery Act, 42 U.S.C. § 6901, *et seq.*, 310 CMR 19.000 and 30.000.

(20) Reporting Requirements.

- (a) Monitoring Reports. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) at the intervals specified elsewhere in the permit. If the permittee monitors any pollutant more frequently than required by the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- (b) Compliance Schedules. Reports of compliance or non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date.
- (c) Planned Changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility or activity which could significantly change the nature or increase the quantity of pollutants discharged. Unless and until the permit is modified, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.
- (d) Anticipated Non-compliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in non-compliance with permit requirements.
- (e) 24 Hour Reporting. The permittee shall report any non-compliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. The following shall be included as information which must be reported within 24 hours:
 - 1. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - 2. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.
- (f) Other Non-compliance. The permittee shall report all instances of non-compliance not reported under 314 CMR 5.19(20)(a), (b), or (e) at the time monitoring reports are submitted. The reports shall contain the information listed in 314 CMR 5.19(20)(e).
- (g) Toxics. All manufacturing, commercial, mining, or silvicultural dischargers must notify the Department as soon as they know or have reason to believe:
 - 1. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant listed in 314 CMR 3.17 which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - a. 100 micrograms per liter (100 ug/l);
 - b. 200 micrograms per liter (200 ug/l) for acrolein and acrylonitrile; 500 micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - c. Five times the maximum concentration value reported for that pollutant in the permit application; or

2. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
- (h) Indirect Dischargers. All Publicly Owned Treatment Works shall provide adequate notice to the Department of the following:
 1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to § 301 or 306 of the Federal Act, 33 U.S.C. §§ 1311 or 1316, if it were directly discharging those pollutants; and
 2. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- (i) Information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
- (21) Signatory Requirement. All applications, reports, or information submitted to the Department shall be signed and certified in accordance with 314 CMR 3.15 and 5.14.
- (22) Severability. The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.
- (23) Reopener Clause. The Department reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53 or the Federal Act, 33 U.S.C. § 1251 *et seq* in order to bring all discharges into compliance.
- (24) Approval of Treatment Works. All discharges and associated treatment works authorized herein shall be consistent with the terms and conditions of this permit. Any modification to the approved treatment works shall require written approval of the Department prior to the construction of the modification.
- (25) Transfer of Permits.
 - (a) RCRA Facilities. Any permit which authorizes the operation of a RCRA facility which is subject to the requirements of 314 CMR 8.07 shall be valid only for the person to whom it is issued and may not be transferred.
 - (b) Transfers by Modification. Except as provided in 314 CMR 5.19(25)(a) and (c), a permit may be transferred by the permittee to a new owner or operator provided that the permit has been modified or revoked and reissued or a minor modification is made to identify the new permittee in accordance with 314 CMR 5.12(3) and (4).
 - (c) Automatic Transfers. For facilities other than Privately Owned Wastewater Treatment Facilities (PWWTFs) that treat at least some sewage from residential uses, hospitals, nursing or personal care facilities, residential care facilities, and/or assisted living facilities, PWWTFs that have been required to establish financial assurance mechanism(s) pursuant to 314 CMR 5.15(6), and RCRA facilities subject to the requirements of 314

CMR 8.07, a permit may be automatically transferred in accordance with 314 CMR 5.12(5).

(26) Permit Compliance Fees and Inspection Information. Except as otherwise provided, any permittee required to obtain a surface water or ground water discharge permit pursuant to M.G.L. c. 21, § 43 and 314 CMR 3.00 and 5.00, shall be required to submit the annual compliance assurance fee established in accordance with M.G.L. c. 21A, § 18 and 310 CMR 4.00 as provided in 314 CMR 2.12. The requirement to submit the annual compliance fee does not apply to any local government unit other than an authority. Any permittee required to obtain a surface water or ground water discharge permit pursuant to M.G.L. c. 21, § 43 and 314 CMR 3.00 and 5.00 may be required to submit inspection information annually as a condition of the permit as provided in 314 CMR 2.12.

Appendix A

THIRD AMENDMENT TO COOPERATIVE DEVELOPMENT AGREEMENT

...j This Third Amendment to Cooperative Development Agreement is entered into as of the ~day of March, 2011 between HAC, LLC, a Massachusetts limited liability company with an address of c/o Housing Assistance Corporation 460 West Main Street, Hyannis, MA 02601 "HAC" and Drake G. Behrakis, Trustee of Claybourne Trust, under Declaration of Trust dated August 22, 2007, and recorded with the Barnstable County Registry of Deeds in Book 22417, Page 1, having an address of c/o Marwick Associates, 80 Hayden Ave., Suite 100, Lexington, MA 02421 ("Claybourne").

WHEREAS, HAC owns the real property located at 6 Otis Park Drive, as more particularly described in a Deed recorded with the Barnstable County Registry of Deeds in Book 22185, Page 324, and which real property is shown as Parcel on a plan of land recorded with the Barnstable County Registry of Deeds in Plan Book 561, Page 87 (the "HAC Parcel"); and WHEREAS, Claybourne owns the real property adjoining the northern edge of the HAC Parcel, being known as 170 Clay Pond Road and being more particularly described in a Deed recorded with the Barnstable County Registry of Deeds in Book 22447, Page 112, and which real property is shown as Lot 1 on a plan of land recorded with the Barnstable County Registry of Deeds in Plan Book 489, Page 57 (the "Claybourne Parcel"); and

WHEREAS, the Bourne Board of Appeals has issued a Comprehensive Permit to HAC authorizing the construction in three phases of residential rental apartments and residential condominiums on the HAC Parcel in a Decision recorded with the Barnstable County Registry of Deeds in Book 22543, Page 48, as amended in Book 22543, Page 78; Book 23078, Page 248; Book 23894, Page 122; and Book 23949, Page 187 (collectively, the "Canal Bluffs Development"); and

WHEREAS, the Cape Cod Commission issued a Minor Modification #2 to Claybourne's predecessor in title authorizing changes to the previously-approved and constructed retail development on the Claybourne Parcel (the "Retail Development") and specifically dealing with various cross arrangements concerning access, open space, water, and wastewater between the HAC Parcel and the Claybourne Parcel as regards ongoing and future development and redevelopment on both Parcels in a Decision recorded with the Barnstable County Registry of Deeds in Book 22019, Page 78, and FURTHER WHEREAS, HAC has agreed through such process to restrict certain portions of the HAC Parcel for various purposes related to future redevelopment of the Claybourne Parcel; and

WHEREAS, HAC and Claybourne's predecessor in title entered into a Cooperative Development Agreement dated June 26, 2007, as modified by Assignment and Amendment of Cooperative Development Agreement dated November 1, 2007 and Second Amendment to Cooperative Development Agreement dated December, 2007 (as amended, the "Cooperative Development Agreement") setting forth each party's desire to work together in connection with the build out of the Canal Bluffs Development on the HAC Parcel and further Retail Development on the Claybourne Parcel as regards, in part, shared access and wastewater treatment; and 1

WHEREAS, both the HAC Parcel and Claybourne Parcel are each located within the Phinneys Harbor watershed, for which the Massachusetts Department of Environmental Protection ("DEP") has established a Total Maximum Daily Load ("TMDL") for the discharge of nitrogen into such watershed; and FURTHER WHEREAS, as a consequence of this TMDL, DEP requires that any applicant for a new Groundwater Discharge Permit (the "GWDP") demonstrate an offset (i.e., the removal of another source of nitrogen in the watershed) that is sufficient to allow the new discharge to be approved with no net new total discharge of nitrogen into the watershed from the project; and

WHEREAS, the pending construction of the second building of the Canal Bluffs Development requires final permitting, construction, and operation of a sanitary wastewater treatment plant (the "WWTP") which will require a GWDP from the DEP; and FURTHER WHEREAS, the parties desire to memorialize their agreement providing the framework for the future shared treatment and disposal of the wastewater to be generated by both the HAC Parcel and Claybourne Parcel in compliance with the TMDL for parcels in the Phinneys Harbor watershed; and

WHEREAS, the ongoing vacancy of a portion of the Retail Development has resulted and continues to result in a significant reduction in the amount of nitrogen entering the Phinneys Harbor watershed which creates an ongoing offset that may be used by HAC in connection with the pending construction of the Canal Bluffs Development to meet DEP TMDL standards; and

WHEREAS, HAC's WWTP is being designed to accommodate the three phases of residential development on the HAC Parcel and the future connection of the wastewater and sewage to be generated by the Retail Development as well as a possible future redevelopment thereof on the Claybourne Parcel up to the maximum capacity of the WWTP as permitted by DEP through the GWDP, subject to DEP and other required regulatory approval; and

WHEREAS, HAC and Claybourne deem it to be in their mutual interest to amend and modify the Cooperative Development Agreement whereby the Parties establish the framework by which HAC, through HAC's WWTP on the HAC Parcel, will, subject to DEP approval, receive, treat, and dispose of the wastewater and sewage generated by the Retail Development on the Claybourne Parcel in the future when Claybourne connects to the HAC WWTP, as further specified herein; and FURTHER WHEREAS, such Amendment will allow for the potential future expansion of the Retail Development on the Claybourne Parcel up to the maximum capacity of the WWTP as permitted by DEP as well as allow the pending construction of the second phase of the Canal Bluffs Development to be completed at this time by providing the required offset for the nitrogen to be generated by the Canal Bluffs Development in accordance with DEP regulations.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, HAC and Claybourne hereby agree to amend the Cooperative Development Agreement by deleting Section III thereof and inserting in its place the following paragraphs: 2

1. Design and Permitting of WWTP. HAC shall be responsible for, and agrees to assume, the design and permitting of the WWTP, including the filing of an application with and obtaining a GWDP from the DEP and any other applications necessary to construct and operate the WWTP (collectively "Applications"). Claybourne agrees to cooperate reasonably with HAC in the process of seeking the Applications and to execute all necessary forms and documents for the submittal and processing of such Applications. The Applications shall request approval for one or more designs that provide for a residential capacity for the three phases of residential housing on the HAC Parcel up to a combined maximum design flow of 23,884 gallons per day (the "Residential Capacity") as well as a retail capacity on the Claybourne Parcel up to a maximum design flow of 8,061 gallons per day (the "Retail Capacity"). Claybourne shall have the right to approve the terms and conditions of any such GWDP, which approval shall not be unreasonably withheld. Claybourne need not consider for approval any GWDP that does not accommodate the Retail Capacity. If a GWDP that is satisfactory to both parties has not been obtained by January 17, 2012, then either party shall have the right to terminate the obligations and rights of this Amendment, by written termination notice delivered by one party to the other, in which event the terms of Section III of the Cooperative Development Agreement shall no longer be terminated and shall remain in full force and effect.
2. Construction of WWTP and Retail Development Connection.
 - A. HAC has already completed Phase I of its development, consisting of a septic field and a system which processes flows for 56 bedrooms in 28 housing units. Except as provided otherwise in Paragraph 2(B) below, HAC shall be responsible for, and agrees to assume, at HAC's expense, the construction of the WWTP on the HAC Parcel and in addition an additional connection line from the WWTP to the existing Claybourne pump chamber located in the supermarket parking lot to service the Residential Capacity on the HAC Parcel and the Retail Capacity on the Claybourne Parcel. Such construction shall include, without limitation, (i) a force main extension from the WWTP to the existing Claybourne pump chamber located in the supermarket parking lot, and (ii) sufficient capacity and facilities to accommodate the collection, pretreatment, advanced treatment and disposal on the HAC Parcel of effluent from the Claybourne Parcel for the Retail Capacity. HAC's construction described above shall be consistent with the plan entitled "Marwick Properties Concept Plan" dated February 1, 2011 prepared by the Horsley Witten Group, Inc. and related specifications which are attached hereto as Exhibit A and incorporated herein.
 - B. Claybourne shall be responsible for, and agrees to assume, the costs described on Exhibit B attached hereto and incorporated herein, to be required at such time as the Claybourne Parcel connects to the WWTP in order for both Parcels to meet the DEP TMDL standards.
 - C. The WWTP and all required connections and appurtenances shall be constructed, operated, and maintained in accordance with all applicable federal and state 3

guidelines and applicable Town of Bourne bylaws and regulations.

D. The Parties further agree to cooperate reasonably in advancing the construction and connections set forth above to completion, including without limitation, reasonable review and approval of the other Party's design plans and specifications, which approval will not be unreasonably withheld or delayed. The Parties further agree to work cooperatively to resolve any comments or obligations which either Party have with respect to such plans or specifications.

3. Reserve Funds. In connection with permitting the WWTP, HAC shall provide (i) a repair and replacement fund which will contain a DEP-agreed-upon percentage of the plant cost minus the previously-constructed leach field cost, and (ii) a long-term capital improvement fund which will also contain a DEP-agreed-upon percentage of the plant cost minus the previously-constructed leach field cost. At the time that the Claybourne Parcel connects to the WWTP, the two Parties agree as set forth on Exhibit C to the pro rata contributions to such ongoing reserve funds based on relative design flows. If allowed by DEP and approved by HAC, which approval shall not be unreasonably withheld, Claybourne shall be permitted to make its contributions to such funds in installments over time.
4. Operating Costs. At the time that Claybourne connects to the WWTP, the two Parties shall share the cost of the ongoing operation and maintenance (the "O&M Costs") of the entire WWTP, including without limitation, all connections, appurtenances, pumps, and the leach field, based on the following formula:
 - A. Until such time as the shopping center on the Claybourne Parcel has an anchor tenant in place occupying and operating in the former Grand Union supermarket space, Claybourne's pro rata share of the O&M Costs shall be based on the design flow of the tenants occupying and operating in the Retail Development as determined on an annual basis; and
 - B. Once the shopping center has an anchor tenant in place occupying and operating in the former Grand Union supermarket space, Claybourne's pro rata share of the O&M Costs shall be based on the total design flow of the Retail Capacity regardless of vacancies from time to time thereafter in tenant space on the Claybourne Parcel.
- Nitrogen Offset. HAC is hereby authorized, in connection with construction and operation of the WWTP, to use as an offset in compliance with DEP TMDL standards, the amount of nitrogen that (i) has not been generated during the time that a portion of the Claybourne Parcel has been and continues to remain vacant and not generating sufficient wastewater and sewage to require connection to a WWTP and in addition (ii) the difference between the amount of nitrogen generated by untreated effluent on the Claybourne and HAC Parcels prior to the WWTP and that generated by the treated effluent from the WWTP.

A. Notwithstanding the foregoing, nothing in this Amendment shall be deemed to limit Claybourne's right to lease to any tenant or operator any vacant space at the Retail Parcel, for any use permitted by applicable law, regardless of the amount of wastewater such tenant would generate, provided in all cases that such wastewater to be generated is no greater than the Retail Capacity. If Claybourne desires to modify the WWTP to accommodate greater wastewater generation on the Claybourne Parcel than the Retail Capacity, then Claybourne may, at Claybourne's sole cost and expense and with the approval of HAC, which approval will not be unreasonably withheld, seek to amend the GWDP to upgrade the WWTP to the extent possible, in accordance with DEP, Cape Cod Commission, and Town of Bourne requirements to handle such additional wastewater generation on the Claybourne Parcel; and

B. Once the WWTP is operational and, subject to DEP approval under the GWDP process, HAC reserves the right, but not the obligation, to determine whether DEP would accept historical actual wastewater flows for the residential uses on the HAC Parcel such that there may be determined to be an excess capacity in the WWTP at that time. If HAC undertakes such a determination and excess capacity acceptable to DEP is established, HAC may decide to utilize such excess capacity for the provision of additional housing on the HAC Parcel. If HAC decides not to utilize such excess capacity, HAC hereby grants to Claybourne a right of first refusal to claim such excess capacity for additional development on the Claybourne Parcel up to the new capacity determination of the WWTP, subject to DEP, Cape Cod Commission, and Town of Bourne approval. If Claybourne claims such excess capacity, Claybourne shall be responsible, at its sole cost and expense, to amend the GWDP with the DEP, and shall further be responsible for paying the additional O&M Costs in accordance with the formula set forth in Paragraph 4 above notwithstanding whether it actually utilizes the excess capacity that it claims, recognizing that HAC's percentage of the O&M Costs would decrease accordingly. If Claybourne does not exercise its right of first refusal to claim such excess capacity within 60 days of being offered in writing by HAC, then such right of first refusal shall be deemed to be declined, and HAC shall have the right to sell such excess capacity to a third party upon terms and conditions to be determined by HAC.

6. Guaranty of Sewage Disposal. At such time as the Claybourne Parcel connects to the WWTP on the HAC Parcel, HAC agrees to receive and treat the wastewater and sewage generated by the Claybourne Parcel up to the Retail Capacity as permitted by DEP through the GWDP, subject to DEP and other required regulatory approval. HAC also agrees to dispose of Claybourne's treated wastewater and sewage on the HAC Parcel, as set forth above and in Exhibit A and as allowed by DEP.

— Further Documentation. The Parties agree to enter into and provide all necessary further documentation consistent with this Amendment and the Cooperative Development Agreement, subject to reasonable conditions, to allow construction, operation, and maintenance of and access to the WWTP and the connections of the HAC Parcel and Claybourne Parcel in accordance with the terms of this Amendment.

Such documents may include without limitation, reciprocal easements, shared wastewater system agreements, repair and replacement escrow agreements, and operating agreements, the parties hereby acknowledging that such documents will likely require the prior consent and subordination of Claybourne's lender and any lender to HAC.

8. **Certifications.** Any signatory to this Agreement who signs in a representative capacity for a Party certifies that he or she has taken all steps necessary to obtain authorization to enter into this Agreement, and such signatory also certifies that he or she is fully authorized to enter into this Agreement and to bind legally the party so represented. Claybourne agrees that it shall promptly seek and use reasonable efforts to obtain all third party approvals (including lender approvals and any land use approvals and permits) required in order for Claybourne to effect its obligations under the Cooperative Development Agreement, as amended hereby.
9. **No Consequential Damages.** Notwithstanding anything in this Agreement to the contrary, HAC shall not under any circumstance be liable for any consequential damages of Claybourne, and Claybourne shall not under any circumstance be liable for any consequential damages of HAC.
10. **Waiver or Breach.** The failure of any Party to require the performance of the provisions herein by any other Party shall not affect the respective rights of any other Party to enforce those rights, nor shall waiver by any Party of any breach of any provision of the Cooperative Development Agreement be construed as an authorization or waiver of any succeeding breach or modification of the provisions of the Cooperative Development Agreement.
11. The following sentence is added to Paragraph 12 of the Agreement: Each Party shall have the right to assign all or any portion of its interests in the Cooperative Development Agreement, without the need for consent of the other Party, provided such consent is in connection with the bona fide sale of either the HAC parcel or the Claybourne Parcel.
12. Except as specifically modified hereby, the Cooperative Development Agreement is hereby ratified and confirmed in all respects.

[Continued Next Page for Signatures] 6

IN WITNESS WHEREOF, the HOUSING ASSISTANCE CORPORATION, acting by and through its duly authorized representative, and DRAKE G. BEHRAKIS, TRUSTEE OF CLAYBOURNE TRUST, have executed this Agreement as a sealed instrument as of the day and year first written above.

HOUSING ASSISTANCE CORPORATION
Frederic)J. Presbrey, CEO/President

CLAYBOURNE TRUST
Drake G. Behrakis, Trustee and not
Individually

Appendix B

Draft Groundwater Discharge Permit 0-852
Residences at Canal Bluffs

Response to Comments

MassDEP issued a draft groundwater discharge permit (0-852) to the Housing Assistance Corporation (the "HAC") for its wastewater treatment facility (the "Facility") on June 22, 2011. A public notice was published in the Cape Cod Times on May 12, 2011. MassDEP received comments on the draft permit from the applicant and the Coalition for Buzzards Bay ("CBB"). This document provides background on the permit and addresses the specific comments received.

INTRODUCTION:

The HAC has proposed an affordable housing complex at 6 Otis Park Drive in Bourne, Massachusetts. It is located in the Phinneys Harbor watershed for which a nitrogen Total Maximum Daily Load (TMDL) has been approved by the US EPA. Accordingly, the project must offset any nitrogen load generated by the facility so that there is a net zero nitrogen discharge. HAC proposes to accommodate the required nitrogen offset by providing capacity for and treating wastewater generated by a neighboring shopping center (the "Claybourne Parcel") which formerly housed a supermarket.

As part of the offset calculations, the facility is given credit for historical nitrogen loads from the Claybourne Parcel. Therefore, HAC's obligation to treat the shopping center's wastewater commences once it exhausts the offset from the historical nitrogen load.

Phase 1 of the project has been constructed generating less than 10,000 gallons per day (gpd) of wastewater and has been served by a system constructed according to Title 5 (310 CMR 15.000) design criteria.

RESPONSE TO SPECIFIC COMMENTS:

The Coalition for Buzzards Bay

CBB's comments are primarily concerned with the calculation of flow and how it affects the nitrogen offset calculations. The offset calculations were carefully reviewed by MassDEP and its findings were that the nitrogen loads were developed consistent with the methodology employed by the Massachusetts Estuaries Project (MEP) in its report on the Phinney's Harbor system. CBB notes in its comment letter that in order for the offsets to be met the average daily flow cannot be greater than 16,828 gpd. HAC's consultant calculated the nitrogen loads based

on average daily flows whereas the 31,994 gpd flow limit in the groundwater discharge permit represents a maximum day load. The ratio between the permitted maximum day flow and the theoretical average day flow limit is 1.9 which is within reasonable limits.

CBB also requested that the Cooperative Development Agreement (the "CDA") between HAC and the Claybourne Trust (owners of the Claybourne Parcel) must be recorded on the deed for the property. MassDEP has added a condition (E. Supplemental Conditions, 12 on page 9) of the final permit which requires that the CDA to be recorded in Claybourne Trust's chain of title.

HAC

HAC requested the Total Organic Carbon (TOC) effluent limit of 10 mg/L rather than the 3 mg/L listed in the draft permit. MassDEP, exercising its discretion in accordance with 314 CMR 5.10 (4A), has amended the final permit to allow a TOC effluent limit of 5 mg/L.

CONCLUSION:

MassDEP has given careful consideration to all comments received and made changes to the permit as has been determined to be appropriate. The permit is consistent with the Groundwater Discharge Permit regulations (314 CMR 5.00) and will adequately protect affected resource as well as the public health and safety.

Horsley Witten Group*Sustainable Environmental Solutions*90 Route 6A • Sandwich, MA • 02563
Tel: 508-833-6600 • Fax: 508-833-3150 • www.horsleywitten.com

April 28, 2011

Mr. Brian Dudley
Department of Environmental Protection
Southeast Region
20 Riverside Drive
Lakeville, MA 02347

Re: Revised Nitrogen Offset Calculations for Canal Bluffs, Bourne, Massachusetts

Dear Mr. Dudley:

Thank you for meeting with me a few weeks ago to discuss the above referenced calculations. I have evaluated the questions you asked, and have prepared a revised set of calculations shown on the attached summary sheet and the individual nitrogen loading calculation sheets that are also attached. The changes I have made still demonstrate that the proposed nitrogen offset provided to Canal Bluffs is sufficient to achieve a no-net increase in nitrogen loading for this project. The changes I made to the calculations are summarized below;

You asked me to document why I used a flow rate of 10,936 gallons per day (gpd) for the average flow at Canal Bluffs at full buildout of the community. This is based on the following:

73 Apartments at 60 gpd average flow	=	4,380 gpd
44 Townhouse units at 149 gpd average flow	=	6,556 gpd
Total		10,936 gpd

The 60 gpd flow rate for the apartment buildings is based on measured flows from the 28 unit complex constructed in Phase I.

The nitrogen concentration for the supermarket complex was adjusted from 57 mg/l to 40.54 mg/l. This was based on removing an outlier data point from the data provided for the Yarmouth Shaw's Supermarket. Removing this outlier lowered the average concentration from the three supermarkets used as examples to 50.67 mg/l. Taking 80% of this value as you requested results in a nitrogen concentration of 40.54 mg/l.

The nitrogen concentration for the current use of the supermarket property was lowered from 35 mg/l to 23.63 mg/l as you requested. This lowers the current nitrogen loading from the site from 22 lbs N/year to 15 lbs N/year.

The changes do not alter the fact that the proposed nitrogen offsets allow the Canal Bluffs treatment plant to be built, while maintaining a no-net increase in nitrogen loading to the

Mr. Brian Dudley
April 28, 2011
Page 2 of 2

Phinneys Harbor watershed. As the summary sheet shows, this is still the case even with the potential 15,000 square foot expansion at the supermarket site.

Thank you for your attention to this matter and please let me know if you have any questions or need additional information.

Sincerely,

HORSLEY WITTEN GROUP, INC.



Mark E. Nelson, P.G.
Principal

Cc: Gisele Gauthier, Housing Assistance Corporation
Julie Creamer, Housing Investments Inc.

Table 1: Summary of Nitrogen Loading Offsets at Canal Bluffs

CANAL BLUFFS NITROGEN LOADING		Units	Comments
Buildout			
Number of Units	117		
Design Flow	23,316	gpd	
Actual Flow (measured or estimated)	10,936	gpd	
Buildout Nitrogen Load	364	lbs N/yr	Assumes 60 gpd/unit for apartments and 149 gpd/unit for townhouses
Shopping Center Offset	547	lbs N/yr	WWTP Connection Offset
Amount Over/Under Offset	(183)	lbs N/yr	
SHOPPING CENTER NITROGEN LOADING		Units	Comments
Baseline - Full Occupancy (2003-2004)			
Design Flow			
Actual Flow	4,437	gpd	From 2003-4 Meter Readings
Effluent Nitrogen Concentration	40.54	mg/L	
Nitrogen Load	547	lbs N/yr	
Current Vacancy Offset			
Actual Flow	210	gpd	
Current Nitrogen Load	15	lbs N/yr	
Offset From Current Vacancies	532	lbs N/yr	
Full Occupancy with Sewer Connection			
Actual Flow	4,437	gpd	
Nitrogen Load with Treatment to 10 mg/L	135	lbs N/yr	
Offset Provided	412	lbs N/yr	
Additional Supermarket Occupancy Possible Prior to Sewer Connection			
Actual Flow	2,600	gpd	
Nitrogen Load	180	lbs N/yr	
Remaining Offset	367	lbs N/yr	
Supermarket Expansion Potential Following Sewer Connection			
Full Occupancy Flow	4,437	gpd	
15,000 sq ft Expansion Flow	1,455	gpd	
Total Load	179	lbs N/yr	
Remaining Offset	368	lbs N/yr	

Nitrogen Loading Calculations
The Residences of Canal Bluffs, Bourne, MA
Predevelopment Conditions

INPUT FACTORS

Number of Residential units	0
Wastewater Treatment Plant Design Flow	0
Treatment Plant N-conc. in effluent (mg/l)	10
Lawn area (square feet)	0
Landscaped area (square feet)	0
Pavement (square feet)	0
Road area (square feet)	0
Road runoff N-conc. (mg/L) ¹	1.5
Roof area (square feet)	18,900
Roof runoff N-conc. (mg/L) ¹	0.75
Total recharge area (acres)	17.16
Recharge rate for pervious area (in/yr) ¹	27.25
Recharge rate for Impervious area (in/yr) ¹	40

¹ From Cape Cod Commission Nitrogen Loading
 Technical Bulletin 91-001

INPUT	CALCULATIONS	RESULTS
Sewage (gal/day)		CALCULATED LOADING (LBS/YR)
0	$\times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} \times 365 \text{ days/yr} + 454000 \text{ mg/lb}$	0
Lawn area (sq ft)		
0	$\times 0.00075 \text{ lb N/sq ft (3 lbs/1000 ft}^2 \times 0.25)$	0
Pavement area (sq ft)		
0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
Roof area (sq ft)		
18,900	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	3
Natural Area		
728,590		7
	TOTAL NITROGEN LOADING (LBS/YR)	10

PREPARED BY HORSLEY WITTEN GROUP, INC.
 November 16, 2010

Nitrogen Loading Calculations
The Residences of Canal Bluffs, Bourne, MA
Residential Buildout
Treatment Plant Discharge at 10 mg/l

INPUT FACTORS

Number of Residential units	73
Wastewater Treatment Plant Average Design Flow	10,936
Treatment Plant N-conc. in effluent (mg/l)	10
Lawn area (square feet)	50,000
Landscaped area (square feet)	0
Pavement (square feet)	103,000
Road area (square feet)	0
Road runoff N-conc. (mg/l) ¹	1.0
Roof area (square feet)	56,096
Roof runoff N-conc. (mg/l) ¹	0.75
Total recharge area (acres)	17.16
Recharge rate for pervious area (in/yr) ¹	27.25
Recharge rate for impervious area (in/yr) ¹	40

¹ From Cape Cod Commission Nitrogen Loading
 Technical Bulletin 91-001

INPUT	CALCULATIONS	RESULTS
Sewage (gal/day)		CALCULATED LOADING (LBS/YR)
10,936		333
Lawn area (sq ft)	1.08 lbs/5,000 sq ft	11
50,000		
Pavement area (sq ft)	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ L/gal} + 454000 \text{ mg/lb}$	21
103,000		
Roof area (sq ft)	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ L/gal} + 454000 \text{ mg/lb}$	9
56,096		
TOTAL NITROGEN LOADING (LBS/YR)		374
OFFSET REQUIRED		364

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 November 16, 2010

INPUT FACTORS

Number of Commercial units	1	Average of 2003 and 2004 Water Use
Septic System Title 5 Design Flow	4,437	
Treatment Plant N-conc. In effluent (mg/l)	40.54	
Lawn area (square feet)	0	
Landscaped area (square feet)	0	
Pavement (square feet)	0	
New road area (square feet)	0	
Road runoff N-conc. (mg/L) ¹	0.0	
Roof area (square feet)	0	
Roof runoff N-conc. (mg/L) ¹	0.00	
Total recharge area (acres)	0	
Recharge rate for pervious area (in/yr) ¹	0	
Recharge rate for impervious area (in/yr) ¹	0	

¹From Cape Cod Commission Nitrogen Loading Technical Bulletin 91-001

INPUT	CALCULATIONS	RESULTS
Sewage (gal/day) 4,437	$x \text{ N-conc (mg/l)} \times 3.785 \text{ V/gal} \times 365 \text{ days/yr} + 454000 \text{ mg/lb}$	CALCULATED LOADING (LBS/YR) 547
Lawn area (sq ft) 0	$x 0.00075 \text{ lb N/sq ft (3 lbs/1000 ft}^2 \times 0.25)$	0
Pavement area (sq ft) 0	$x 40 \text{ lb/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ V/gal} + 454000 \text{ mg/lb}$	0
Roof area (sq ft) 0	$x 40 \text{ lb/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ V/gal} + 454000 \text{ mg/lb}$	0
	TOTAL NITROGEN LOADING (LBS/YR)	547

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November 16, 2010

Nitrogen Loading Calculations
Bourne Shopping Center, Bourne, MA
Treatment Plant Discharge at 10 mg/l
Full Occupancy of Buildings

INPUT FACTORS

Number of Residential units	1
Wastewater Treatment Plant Design Flow	4,437
Treatment Plant N-conc. in effluent (mg/l)	10
Lawn area (square feet)	0
Landscaped area (square feet)	0
Pavement (square feet)	0
Road area (square feet)	0
Road runoff N-conc. (mg/L) ¹	0.0
Roof area (square feet)	0
Roof runoff N-conc. (mg/L) ¹	0.00
Total recharge area (acres)	0
Recharge rate for pervious area (in/yr) ¹	0
Recharge rate for impervious area (in/yr) ¹	0

¹ From Cape Cod Commission Nitrogen Loading
 Technical Bulletin 91-001

INPUT	CALCULATIONS	RESULTS
Sewage (gal/day)		CALCULATED LOADING (LBS/YR)
4,437	$\times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} \times 365 \text{ days/yr} + 454000 \text{ mg/lb}$	135
Lawn area (sq ft)		
0	$\times 0.00075 \text{ lb N/sq ft (3 lbs./1000 ft}^2 \times 0.25)$	0
Pavement area (sq ft)		
0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
Roof area (sq ft)		
0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
TOTAL NITROGEN LOADING (LBS/YR)		135
NITROGEN OFFSET PROVIDED		412

PREPARED BY HORSLEY WITTEN GROUP, INC.
 November 16, 2010

Nitrogen Loading Calculations
Bourne Shopping Center, Bourne, MA
Treatment Plant Discharge at 35 mg/l
Offset Provided by Building Vacancy

INPUT FACTORS

Number of Commercial units	1
Septic System Title 5 Design Flow	210
Treatment Plant N-conc. in effluent (mg/l)	23.63
Lawn area (square feet)	0
Landscaped area (square feet)	0
Pavement (square feet)	0
New road area (square feet)	0
Road runoff N-conc. (mg/L) ¹	0.0
Roof area (square feet)	0
Roof runoff N-conc. (mg/L) ¹	0.00
Total recharge area (acres)	0
Recharge rate for pervious area (in/yr)	0
Recharge rate for impervious area (in/yr)	0

2010 Water Use

¹ From Cape Cod Commission Nitrogen Loading
 Technical Bulletin 91-001

INPUT	CALCULATIONS	RESULTS
Sewage (gal/day) 210	$\times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} \times 365 \text{ days/yr} + 454000 \text{ mg/lb}$	CALCULATED LOADING (LBS/YR) 15
Lawn area (sq ft) 0	$\times 0.00075 \text{ lb N/sq ft (3 lbs./1000 ft}^2 \times 0.25)$	0
Pavement area (sq ft) 0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
Roof area (sq ft) 0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
	TOTAL NITROGEN LOADING (LBS/YR)	15

NITROGEN OFFSET PROVIDED

532

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 November 16, 2010

Nitrogen Loading Calculations
Bourne Shopping Center, Bourne, MA
Septic System Effluent at 23.62 mg/l
Additional Occupancy Prior to Sewer Connection

INPUT FACTORS

Number of Commercial units	1
Septic System Title 5 Design Flow	2,500
Treatment Plant N-conc. In effluent (mg/l)	23.62
Lawn area (square feet)	0
Landscaped area (square feet)	0
Pavement (square feet)	0
New road area (square feet)	0
Road runoff N-conc. (mg/L) ¹	0.0
Roof area (square feet)	0
Roof runoff N-conc. (mg/L) ¹	0.00
Total recharge area (acres)	0
Recharge rate for pervious	0
Recharge rate for impervious area (in/yr) ¹	0

¹ From Cape Cod Commission Nitrogen Loading
 Technical Bulletin 91-001

INPUT	CALCULATIONS	RESULTS
Sewage (gal/day)		CALCULATED LOADING (LBS/YR)
2,500	$\times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} \times 365 \text{ days/yr} + 454000 \text{ mg/lb}$	180
Lawn area (sq ft)		
0	$\times 0.00075 \text{ lb N/sq ft (3 lbs/1000 ft}^2 \times 0.25)$	0
Pavement area (sq ft)		
0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
Roof area (sq ft)		
0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
TOTAL NITROGEN LOADING (LBS/YR)		180
NITROGEN OFFSET PROVIDED		367

572

PREPARED BY HORSLEY WITTEN GROUP, INC.
 November 16, 2010

Nitrogen Loading Calculations
Bourne Shopping Center, Bourne, MA
Treatment Plant Discharge at 10 mg/l
Expansion of Site by 15,000 sq. ft.

INPUT FACTORS

Number of Residential units	1	
Wastewater Treatment Plant Design Flow	5,892	4,437 gpd (full occupancy water use) plus 1,455 gpd for 15,000 sq ft expansion
Treatment Plant N-conc. in effluent (mg/l)	10	
Lawn area (square feet)	0	
Landscaped area (square feet)	0	
Pavement (square feet)	0	
Road area (square feet)	0	
Road runoff N-conc. (mg/L) ¹	0.0	
Roof area (square feet)	0	
Roof runoff N-conc. (mg/L) ¹	0.00	
Total recharge area (acres)	0	
Recharge rate for pervious area (in/yr) ¹	0	
Recharge rate for impervious area (in/yr) ¹	0	

¹ From Cape Cod Commission Nitrogen Loading
 Technical Bulletin 91-001

INPUT	CALCULATIONS	RESULTS
Sewage (gal/day)		CALCULATED LOADING (LBS/YR)
5,892	$\times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} \times 365 \text{ days/yr} + 454000 \text{ mg/lb}$	179
Lawn area (sq ft)		
0	$\times 0.00075 \text{ lb N/sq ft (3 lbs/1000 ft}^2 \times 0.25)$	0
Pavement area (sq ft)		
0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
Roof area (sq ft)		
0	$\times 40 \text{ in/yr} + 12 \times 7.48 \text{ gal/ft}^3 \times \text{N-conc (mg/l)} \times 3.785 \text{ l/gal} + 454000 \text{ mg/lb}$	0
	TOTAL NITROGEN LOADING (LBS/YR)	179
	NITROGEN OFFSET PROVIDED	368

PREPARED BY HORSLEY WITTEN GROUP, INC.
 November 16, 2010

Summary of Existing Influent Data for Comparable Supermarket Complexes
Canal Bluffs, Bourne, Massachusetts

SANDWICH STOP & SHOP PLAZA

Stop & Shop Supermarket with restaurant and a variety of retail stores

DATE	NITRITE		NITRATE		TKN		TOTAL N	
	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
01/26/09	0.025	0.14	0.01	0.01	68.3	7.14	68.34	7.29
2/19/2009	<0.05	<0.05	<0.02	<0.02	45.1	10.4	45.1	10.4
3/11/2009	<0.05	1.04	<0.02	<0.02	50.4	7.7	50.4	8.74
4/14/2009	<0.05	1.13	<0.02	0.695	58.8	5.74	58.8	7.57
5/15/2009	0.16	<0.05	<0.02	<0.02	69.7	4.48	69.86	4.48
6/29/2009	<0.05	0.32	<0.02	0.22	61	12.5	61	13.00
7/22/2009	<0.05	1.16	<0.02	<0.02	72	5.88	72	7.04
8/24/2009	<0.05	1.92	<0.02	0.205	68.3	6.02	68.3	8.15
9/16/2009	<0.05	3.22	<0.02	0.26	73.4	7	73.4	10.48
10/21/2009	<0.05	3.1	<0.02	0.28	71.7	4.76	71.7	8.14
11/17/2009	<0.05	6.44	<0.02	0.2	65.8	4.9	65.8	11.54
12/16/2009	0.2	4.38	<0.02	0.33	63.3	7	63.5	11.71

Average Total Nitrogen 64.02

YARMOUTH SHAW'S SUPERMARKET

Stand alone supermarket

DATE	NITRITE		NITRATE		TKN		TOTAL N	
	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
Limit >								
1/24/2008	<0.06	<0.06	<0.05	<0.05	37.0	11.0	37.00	11.00
2/21/08	<0.02	<0.02	<0.05	<0.05	28.3	7.6	28.30	7.60
3/28/2008	<0.02	<0.02	<0.05	<0.05	27.4	5.70	27.40	5.70
4/24/2008	<0.02	0.4	<0.05	4.55	35	5.9	35.00	10.85
5/29/2008	<0.02	<0.02	<0.05	<0.05	31.1	4.2	31.10	4.20
6/26/2008	0.03	0.03	<0.02	0.02	44	7.8	44.03	7.85
7/24/2008	<0.02	<0.02	<0.05	2.67	34.7	2.9	34.70	5.57
8/28/2008	<0.02	<0.02	<0.05	1.74	33	2	33.00	3.74
9/23/2008	NT	0.07	NT	0.46	36	3.9	36.00	4.43
10/23/2008	0.07	0.03	<0.02	0.04	47	3.3	47.07	3.37
11/25/2008	<0.02	<0.02	1.23	7.39	272	10.8	273.23	18.19
12/17/2008	<0.02	<0.02	<0.05	0.14	29.4	4.06	29.40	4.20

After 2008 sampling was reduced to effluent total nitrogen only

Average Total Nitrogen (outlier removed) 34.82

HARWICH SHAW'S SUPERMARKET

Stand alone Shaw's Supermarket

DATE	NITRITE		NITRATE		TKN		TOTAL N	
	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
Limit >				15				15
1/22/2009	0.19	<0.01	0.59	0.02	63.0	2.7	63.40	2.72
2/18/2009	<0.01	<0.01	0.05	1.4	50.0	3.3	50.05	4.70
3/18/2009	<0.01	0.12	0.04	7.7	56	2.5	56.04	10.32
4/2/2009	<0.01	0.39	<0.01	0.77	39	1.7	39.00	2.86
5/12/2009	<0.01	<0.01	0.04	0.14	42	2.6	42.04	2.74
6/16/2009	<0.01	<0.01	<0.01	2.5	54	2.9	54.00	5.40
7/29/2009	<0.01	<0.01	0.04	0.15	75	24	75.04	24.15
8/21/2009	<0.01	<0.01	<0.01	2	49	5.5	49.00	7.50
9/29/2009	<0.01	0.39	<0.01	0.23	48	2.6	48.00	3.22
10/20/2009	<0.01	<0.01	0.04	0.19	72	5.9	72.04	6.09
11/18/2009	<0.01	<0.01	0.17	3.3	54	1.9	54.17	5.20
12/2/2009	<0.01	<0.01	0.41	4.5	35	2.1	35.41	6.60

Average Total Nitrogen 53.18

Average of Three Sites 50.67

80% of Average to reflect septic system discharge to QW 40.54

Exhibit 2



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

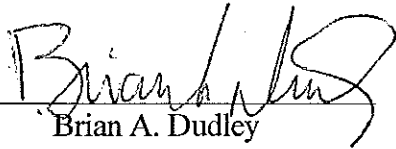
GROUNDWATER DISCHARGE PERMIT

Name and Address of Applicant: Cotuit Equitable Housing, LLC, c/o Bayside Building, 1645
Route 28, Centerville, Massachusetts 02632

Date of Application: June 22, 2007
Application/Permit No. SE #0-850
Date of Issuance: *September 14, 2010*
Date of Expiration: *September 14, 2015*
Effective Date: *September 14, 2010*

AUTHORITY FOR ISSUANCE

Pursuant to authority granted by Chapter 21, Sections 26-53 of the Massachusetts General Laws, as amended, 314 CMR 2.00, and 314 CMR 5.00, the Massachusetts Department of Environmental Protection (the Department) hereby issues the following permit to: Cotuit Equitable Housing, LLC (hereinafter called "the permittee") authorizing discharges from the on-site wastewater treatment facility to the ground located at Cotuit Meadows Subdivision, 9999 Falmouth Road, Cotuit, Massachusetts (a 124 lot, single family residential subdivision) such authorization being expressly conditional on compliance by the permittee with all terms and conditions of the permit hereinafter set forth.


Brian A. Dudley
Bureau of Resource Protection

September 14, 2010
Date

This information is available in alternate format. Call Donald M. Gomes, ADA Coordinator at 617-556-1057. TDD Service - 1-800-298-2207.

DEP on the World Wide Web: <http://www.mass.gov/dep>



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I. SPECIAL CONDITIONS

A. Effluent Limits

The permittee is authorized to discharge into the ground from the wastewater treatment facilities for which this permit is issued a treated effluent whose characteristics shall not exceed the following values within one month of startup and continuing thereafter:

Effluent Characteristics	Discharge Limitations
Flow	59,000 GPD
Oil and grease	15 mg/l
Total Suspended Solids (TSS)	30 mg/l
Biochemical Oxygen Demand, 5-day @20°C (BOD ₅)	30 mg/l
Total Nitrogen (NO ₂ + NO ₃ + TKN)*	10 mg/l (maximum day) 7 mg/L (annual average)
Nitrate-Nitrogen*	10 mg/l (maximum day) 7 mg/L (annual average)

* Refer to section C. Nitrogen Offset and Appendix A

- a) The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time or not more than 0.2 standard units outside the naturally occurring range.
- b) The discharge of the effluent shall not result in any demonstrable adverse effect on the groundwater or violate any water quality standards that have been promulgated.
- c) The monthly average concentration of BOD and TSS in the discharge shall not exceed 15 percent of the monthly average concentrations of BOD and TSS in the influent into the permittee's wastewater treatment facility.
- d) When the average annual flow exceeds 80 percent of the permitted flow limitations, the permittee shall submit a report to the Department describing what steps the permittee will take in order to remain in compliance with the permit limitations and conditions, inclusive of the flow limitations established in this permit.

B. Monitoring and Reporting

INFLUENT:

The permittee shall monitor and record the quality of the **influent** waste stream to the facility according to the following schedule and other provisions:

Parameter	Minimum Frequency of Analysis	Sample Type
BOD ₅	Monthly	24-Hour Composite
Total Suspended Solids	Monthly	24-Hour Composite
Total Solids	Monthly	24-Hour Composite
Ammonia Nitrogen	Monthly	24-Hour Composite
pH	Daily	Grab
Oil & Grease	Monthly	Grab
Volatile Organic Compounds*	Annually	Grab

* (USEPA Method #624)

EFFLUENT:

The permittee shall monitor and record the quality and quantity of **effluent** at the effluent pump chamber to the leaching area according to the following schedule and other provisions:

Parameter	Minimum Frequency of Analysis	Sample Type
Flow	Daily	Meter reading
pH	Daily	Grab
Total Suspended Solids	Monthly	24-Hour Composite
Total Solids	Monthly	24-Hour Composite
Oil & Grease	Monthly	Grab

BOD ₅	Monthly	24-Hour Composite
Nitrate Nitrogen	Monthly	24-Hour Composite
Total Nitrogen (NO ₂ + NO ₃ + TKN)	Monthly	Calculation
Total Phosphorus ¹ (as P)	Quarterly	Grab
Orthophosphate ¹ (as P)	Quarterly	Grab
Volatile Organic Compounds ²	Annually	Grab

¹After one full year of monitoring the Total Phosphorus and Orthophosphate results, the Department may determine, upon the request of the permittee, that the frequency of monitoring may be reduced if, in the judgment of the Department, the results of the sampling indicate that existing phosphorus levels will not adversely impact downgradient receptors.

²USEPA Method #624

- 2) The permittee shall install the approved monitoring wells at least 90 days prior to treatment facility start-up. The permittee shall sample the upgradient monitoring well MW-4, and the downgradient monitoring wells MW-1, MW-2 and MW-5 as shown on a plan dated April 27, 2010, prepared by SGC Engineering and titled "Figure 1, Monitoring Well Exhibit, Cotuit Meadows, 9999 Falmouth Road, Cotuit-Barnstable, Massachusetts". Labels identifying each monitoring well's identification in accordance with the above-referenced approved plan shall be affixed to the steel protective casing of each monitoring well.

The permittee shall monitor, record and report the quality of water in the monitoring wells according to the following schedule and other provisions:

Parameter	Frequency of Analysis
Static Water Level ¹	Monthly
Specific Conductance	Monthly
pH	Monthly
Total Nitrogen (NO ₂ +NO ₃ +TKN)	Quarterly
Nitrate-Nitrogen	Quarterly
Total Phosphorus ² (as P)	Quarterly

Orthophosphate ² (as P)	Quarterly
Volatile Organic Compounds ³	Annually

¹Static Water Level shall be expressed as an elevation and shall be referenced to the surveyed datum established for the site. It shall be calculated by subtracting the depth to the water table from the surveyed elevation of the top of the monitoring well's PVC well casing/riser.

²After one full year of monitoring the Total Phosphorus and Orthophosphate results, the Department may determine, upon the request of the permittee, that the frequency of monitoring may be reduced if, in the judgement of the Department, the results of the sampling indicate that existing phosphorus levels will not adversely impact downgradient receptors.

³ USEPA Method #624

- 3) Any grab sample or composite sample required to be taken less frequently than daily shall be taken during the period of Monday through Friday inclusive. All composite samples shall be taken over the operating day.

The permittee shall submit all monitoring reports within 30 days of the last day of the reporting month. Reports shall be on an acceptable form, properly filled and signed and shall be sent to the Department of Environmental Protection, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347, and to the Director of Watershed Permitting, Department of Environmental Protection, Watershed Permitting Group, One Winter Street, Boston, MA 02108 and to the Barnstable Board of Health, 200 Main Street, Barnstable, Massachusetts 02601. Submission of monitoring reports in electronic format is available through eDEP and serves as data submission to both the Regional and Boston offices. To register for electronic submission go to: <http://www.mass.gov/dep/service/compliance/edeponlf.htm>

C. Nitrogen Offset

It has been determined that the Popponesset Bay estuarine system is impaired due to nitrogen, and a Total Maximum Daily Load (TMDL) has been developed for this watershed. Based on surface water quality impacts within the watershed the permit includes the following measure which is expected to achieve a no net nitrogen load impact as a result of the discharge:

The permittee will accept and treat sewage from Mashpee Healthcare, LLC (d/b/a Mashpee Care and Rehabilitation Center), 161 Falmouth Road, Mashpee, Massachusetts, which is currently served by an onsite-site sewage treatment and disposal system, pursuant to the agreement shown as Appendix A. The reduction in nitrogen from this facility by abandoning the Title 5 system and connecting to and having sewage treated at the wastewater treatment facility will offset the load from the proposed subdivision.

D. Supplemental Conditions

1. The permittee shall notify the Department at least thirty (30) days in advance of the proposed transfer of ownership of the treatment works for which this permit is written. Said notification shall include a written agreement between the existing and new permittees containing a specific date for transfer of permit, responsibility, coverage and liability between them.
2. A staffing plan for the treatment works shall be submitted to the Department once every two years and whenever there are staffing changes. The staffing plan shall include the following components:
 - a) The operator(s)'s name(s), operator grade(s) and operator license number(s);
 - b) The number of operational days per week;
 - c) The number of operational shifts per week;
 - d) The number of shifts per day;
 - e) The required personnel per shift;
 - f) Saturday, Sunday and holiday staff coverage;
 - g) Emergency operating personnel
3. The permittee is responsible for the operation and maintenance of all sewers, pump stations, grease traps and treatment units for the permitted facility, which shall be operated and maintained under the direction of a properly certified wastewater operator.
4. The permittee shall contract to have any and all solids and sludges generated by the treatment works for which this permit is issued removed off site by a properly licensed waste hauler for disposal at an EPA/DEP approved facility. The name and license number of the hauler along with the quantity of wastes removed and the date(s) of removal shall be reported by the permittee in writing to the Department.
5. Operation and maintenance of the proposed facility must be in accordance with 314 CMR 12.00, "Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges", and, 257 CMR 2.00, "Rules and Regulations for Certification of Operators of Wastewater Treatment Facilities."
 - a. The facility has been rated (in accordance with 257 CMR 2.00), to be a Grade 4 facility. Therefore, the permittee shall provide for oversight by a Massachusetts Certified Wastewater Treatment plant operator (Chief Operator) Grade 4. The permittee will also provide for a backup operator who shall possess at least a valid Grade 4 license.
 - b. The date and time of the operator's inspection along with the operator's name and certification shall be recorded on the required monthly monitoring reports.
6. If the operation and maintenance of the facility is to be contracted to a private concern, the permittee shall submit a copy of the contract, consistent with what is required by the approved Operation & Maintenance manual and signed only by the contractor, to

MassDEP Regional Office within ninety (90) days prior to request for authorization to operate the PWTF. Along with the contract, a detailed listing of all contract operation obligations of the proposed contractor at other facilities shall also be submitted.

7. Any connections to the sewer system, shall be approved by MassDEP and the local Board of Health prior to the construction.
8. All tests or analytical determinations to determine compliance with permit standards and requirements shall be done using tests and procedures found in the most recent version of *Standard Methods for the Examination of Water and Wastewater* and shall be performed by a Massachusetts certified laboratory.
9. The permittee shall notify the Department, in writing, within thirty (30) days of the following events:
 - a. Any interruption of the treatment system operation, other than routine maintenance.
 - b. Final shutdown of the treatment system.
 - c. The date of wastewater treatment plant start up.
10. The permittee shall establish and maintain a financial assurance mechanism that provides for the continued availability of an immediate repair and replacement account to be used by the permittee solely for the immediate repair and replacement of any failing components of the PWTF. To create an immediate repair and replacement account, the permittee shall deposit at least 15% of the estimated construction cost of the PWTF into an interest bearing escrow account in accordance with the financial assurance mechanism and 314 CMR 5.15. The permittee shall also establish and maintain a financial assurance mechanism in accordance with 314 CMR 5.15 that provides for the accumulation in a capital reserve account of sufficient funds to make any necessary modifications to the PWTF and other related equipment within twenty years from the date the PWTF commenced operation or such other period determined to be appropriate by the Department based on the age and condition of the PWTF. The financial assurance mechanism shall provide for the accumulation in the capital reserve account of an amount equal to at least 25% of the estimated construction cost of the PWTF. On or before January 31st of each year, the permittee shall submit an annual financial report identifying the initial and current balances in the immediate repair and replacement account and the capital reserve account and confirming the continuing availability of the funds in said account for the purposes specified in the permit and 314 CMR 5.15. Said report shall be prepared in accordance with generally accepted accounting principles. Reports pertaining to the required financial assurance mechanism(s) shall be sent to the Wastewater Management Section Chief at the appropriate Regional Office.
11. The permittee shall meet the obligation to establish all required financial assurance mechanisms by using Department-approved form documents and shall submit said Department-approved form documents to the Department for its review and approval as follows:

- a. A permittee that constructs the wastewater treatment facility after the issuance of the individual permit may submit the financial assurance mechanism(s) to the Department for its review and approval no later than ninety (90) days prior to the start-up of the facility. Such a permittee shall not operate the facility unless and until the Department has approved the required financial assurance mechanism(s), the financial assurance mechanisms are in full force and effect, and the permittee has made all contributions required thirty (30) days prior to the start-up of the facility.
 - b. A permittee with a wastewater treatment facility in existence prior to the submission of the individual permit renewal application may submit the financial assurance mechanisms to the Department for its review and approval no later than ninety (90) days from the date of submission of the individual permit renewal application. Said permittee shall be in compliance with the provision of each approved financial assurance mechanism requiring contributions to the immediate repair and replacement account and the capital reserve account no later than thirty (30) days prior to the date on which the renewal is issued.
12. The permittee shall maintain the current form documents evidencing all required financial assurance mechanisms approved by the Department. The permittee shall perform all its obligations under the required financial assurance mechanisms as approved by the Department.
13. For purpose of the financial assurance mechanism requirement, the estimated construction cost of the wastewater treatment facility shall include the cost of constructing the wastewater treatment plant, collection system, associated mechanical equipment, but not including the land, ground and disposal area.
14. In the event that effluent limits are not met, the permittee may be obligated to modify, supplement or replace the permitted treatment process so as ensure compliance with the groundwater discharge permit and 314 CMR 5.00.
15. In the event that the groundwater quality in the downgradient monitoring wells does not meet the groundwater discharge permit and 314 CMR 5.00, the permittee may be obligated to conduct an engineering evaluation to determine what if any modifications are needed to return to compliance.
16. All future sewer extensions and connections shall comply with the provisions of 314 CMR 7.00 or any successor code.
17. The permit is subject to applicant submitting to MassDEP ninety (90) days prior to commencing construction of the treatment facility sufficient information to demonstrate to MassDEP's satisfaction that the requirements established under 314 CMR 5.15 have been met.
18. Ninety (90) days prior to commencing construction of the effluent disposal area, for the discharge from the proposed wastewater treatment facility, arrangements must be made with

the MassDEP Southeast Regional Office to witness percolation tests and deep observation test pits.

19. Ninety (90) days prior to commencing start-up of the proposed wastewater treatment facility final plans and specification that are consistent with the permit application package application must be submitted the MassDEP Southeast Regional Office.

E. Appeal Rights

This Permit is an action of the Department. Any person aggrieved by this action may request an Adjudicatory Hearing. A request for a hearing must be made in writing and postmarked within thirty (30) days of the Permit issuance date. Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought.

The Hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. The Department may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

II. GENERAL PERMIT CONDITIONS

The following conditions apply to all individual and general permits:

- (1) No discharge authorized in the permit shall cause or contribute to a violation of the Massachusetts Surface Water Quality Standards (314 CMR 4.00) or any amendments thereto. Upon promulgation of any amended standard, this permit may be revised or amended in accordance with such standard and 314 CMR 2.10 and 3.13 or 5.12. Except as otherwise provided in 314 CMR 5.10 (3)(c), 310 CMR 5.10(4)(a)2 and 314 CMR 5.10(9), no discharge authorized in the permit shall impair the ability of the ground water to act as an actual or potential source of potable water. Evidence that a discharge impairs the ability of the ground water to act as an actual or potential source of potable water includes, without limitation, analysis of samples taken in a downgradient well that shows one or more exceedances of the applicable water quality based effluent limitations set forth in 314 CMR 5.10. In those cases where it is shown that a measured parameter exceeds the applicable water quality based effluent limitations set forth in 314 CMR 5.10 at the upgradient monitoring well, evidence that a discharge impairs the ability of the ground water to act as an actual or potential source of potable water is deemed to exist if a measured parameter in any downgradient well exceeds the level of that same measured parameter in the upgradient well for the same sampling period. A statistical procedure approved by the Department shall be used in determining when a measured parameter exceeds the allowable level.
- (2) Duty to comply. The permittee shall comply at all times with the terms and conditions of the permit, 314 CMR 5.00, M.G.L. c. 21, §§ 26 through 53 and all applicable state and federal statutes and regulations.
- (3) Standards and prohibitions for toxic pollutants. The permittee shall comply with effluent standards or prohibitions established under § 307(a) of the Federal Act, 33 U.S.C § 1317(a), for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- (4) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and equipment installed or used to achieve compliance with the terms and conditions of the permit, and the regulations promulgated at 314 CMR 12.00 entitled "Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges, and 257 CMR 2.00, Rules and Regulations for Certification of Operators of Wastewater Treatment Facilities".
- (5) Duty to halt or reduce activity. Upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or discharges or both until the facility is restored or an alternative method of treatment is provided. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

(6) Power Failure. In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- (a) provide an alternative power source sufficient to operate the wastewater control facilities;
or
- (b) halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

(7) Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any adverse impact on human health or the environment resulting from non-compliance with the permit.

(8) Duty to provide information. The permittee shall furnish to the Department within a reasonable time as specified by the Department any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine whether the permittee is complying with the terms and conditions of the permit.

(9) Inspection and entry. The permittee shall allow the Department or its authorized representatives to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records required by the permit are kept;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (c) Inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit; and
- (d) Sample or monitor at reasonable times for the purpose of determining compliance with the terms and conditions of the permit.

(9A) The permittee shall physically secure the treatment works and monitoring wells and limit access to the treatment works and monitoring wells to those personnel required to operate, inspect and maintain the treatment works and to collect samples.

(9B) The permittee shall identify each monitoring well by permanently affixing to the steel protective casing of the well a tag with the identification number listed in the permit.

(10) Monitoring. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 unless other test procedures are specified in the permit.

(11) Recordkeeping. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and all records of all data used to complete the application for the permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be

extended by request of the Department at any time. Records of monitoring information shall include:

- (a) The date, exact place, and time of sampling or measurements;
- (b) The individual(s) who performed the sampling or measurement;
- (c) The date(s) analyses were performed;
- (d) The individual(s) who performed the analyses;
- (e) The analytical techniques or methods used; and
- (f) The results of such analyses.

(12) Prohibition of bypassing. Except as provided in 314 CMR 5.16(13), bypassing is prohibited, and the Department may take enforcement action against a permittee for bypassing unless:

- (a) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- (c) The permittee submitted notice of the bypass to the Department:
 - 1. In the event of an anticipated bypass, at least ten days in advance, if possible; or
 - 2. In the event of an unanticipated bypass, as soon as the permittee has knowledge of the bypass and no later than 24 hours after its first occurrence.

(13) Bypass not exceeding limitations. The permittee may allow a bypass to occur which does not cause effluent limitations to be exceeded, but only if necessary for the performance of essential maintenance or to assure efficient operation of treatment facilities.

(14) Permit actions. The permit may be modified, suspended, or revoked for cause. The filing of a request by the permittee for a permit modification, reissuance, or termination, or a notification of planned changes or anticipated non-compliance does not stay any permit condition.

(15) Duty to reapply. If the permittee wishes to continue an activity regulated by the permit after the expiration date of the permit, the permittee must apply for and obtain a new permit. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department in writing.

(16) Property rights. The permit does not convey any property rights of any sort or any exclusive privilege.

(17) Other laws. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, nor does it relieve the permittee of its obligation to comply with any other applicable Federal, State, and local laws and regulations.

(18) Oil and hazardous substance liability. Nothing in the permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Federal Act, 33 U.S.C. § 1321, and M.G.L. c. 21E.

(19) Removed substances. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed in a manner consistent with applicable Federal and State laws and regulations including, but not limited to, the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53 and the Federal Act, 33 U.S.C. § 1251 *et seq.*, the Massachusetts Hazardous Waste Management Act, M.G.L. c. 21C, and the Federal Resource Conservation and Recovery Act, 42 U.S.C. § 6901, *et seq.*, 310 CMR 19.000 and 30.000, and other applicable regulations.

(20) Reporting requirements.

- (a) Monitoring reports. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) at the intervals specified elsewhere in the permit. If the permittee monitors any pollutant more frequently than required by the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- (b) Compliance schedules. Reports of compliance or non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date.
- (c) Planned changes. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility or activity which could significantly change the nature or increase the quantity of pollutants discharged. Unless and until the permit is modified, any new or increased discharge in excess of permit limits or not specifically authorized by the permit constitutes a violation.
- (d) Anticipated non-compliance. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in non-compliance with permit requirements.
- (e) 24 hour reporting. The permittee shall report any non-compliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance. The following shall be included as information which must be reported within 24 hours:
 - 1. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - 2. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit to be reported within 24 hours.
- (f) Other non-compliance. The permittee shall report all instances of non-compliance not reported under 314 CMR 5.16(20)(a), (b), or (e) at the time monitoring reports are submitted. The reports shall contain the information listed in 314 CMR 5.16(20)(e).
- (g) Toxics. All manufacturing, commercial, mining, or silvicultural dischargers must notify the Department as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant listed in 314 CMR 3.17 which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - a. 100 micrograms per liter (100 ug/l);
 - b. 200 micrograms per liter (200 ug/l) for acrolein and acrylonitrile; 500 micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - c. Five times the maximum concentration value reported for that pollutant in the permit application; or
 2. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
- (h) Indirect dischargers. All Publicly Owned Treatment Works shall provide adequate notice to the Department of the following:
1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to § 301 or 306 of the Federal Act, 33 U.S.C. § 1311 or 1316, if it were directly discharging those pollutants; and
 2. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- (i) Information. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
- (21) Signatory requirement. All applications, reports, or information submitted to the Department shall be signed and certified in accordance with 314 CMR 3.15 and 5.14.
- (22) Severability. The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.
- (23) Reopener clause. The Department reserves the right to make appropriate revisions to the permit in order to establish any appropriate effluent limitations, schedules of compliance, or other provisions which may be authorized under the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26 through 53 or the Federal Act, 33 U.S.C. §1251 *et seq* in order to bring all discharges into compliance with said statutes.
- (24) Approval of treatment works. All discharges and associated treatment works authorized herein shall be consistent with the terms and conditions of this permit. Any modification to the approved treatment works shall require written approval of the Department prior to the construction of the modification.

(25) Transfer of Permits.

- (a) RCRA facilities. Any permit which authorizes the operation of a RCRA facility which is subject to the requirements of 314 CMR 8.07 shall be valid only for the person to whom it is issued and may not be transferred.
- (b) Transfers by modification. Except as provided in 314 CMR 5.16(25)(a) and (c), a permit may be transferred by the permittee to a new owner or operator provided that the permit has been modified or revoked and reissued or a minor modification is made to identify the new permittee in accordance with 314 CMR 5.12(3) and (4).
- (c) Automatic transfers. For facilities other than Privately Owned Wastewater Treatment Facilities (PWTFs) that treat at least some sewage from residential uses, hospitals, nursing or personal care facilities, residential care facilities, and/or assisted living facilities, PWTFs that have been required to establish financial assurance mechanism(s) pursuant to 314 CMR 5.15(6), and RCRA facilities subject to the requirements of 314 CMR 8.07, a permit may be automatically transferred in accordance with 314 CMR 5.12(5).

(26) Permit Compliance Fees and Inspection Information. Except as otherwise provided, any permittee required to obtain a surface water or ground water discharge permit pursuant to M.G.L. c. 21, § 43 and 314 CMR 3.00 and 5.00, shall be required to submit the annual compliance assurance fee established in accordance with M.G.L. c. 21A, § 18 and 310 CMR 4.00 as provided in 314 CMR 2.12. The requirement to submit the annual compliance fee does not apply to any local government unit other than an authority. Any permittee required to obtain a surface water or ground water discharge permit pursuant to M.G.L. c. 21, §43 and 314 CMR 3.00 and 5.00 may be required to submit inspection information annually as a condition of the permit as provided in 314 CMR 2.12.

Appendix A: Agreement with Cotuit Equitable Housing, LLC; Cotuit Meadows Homeowner's Association, Inc.; Ohima, Inc.; and Mashpee Healthcare, LLC

AGREEMENT

WHEREAS, COTUIT EQUITABLE HOUSING, LLC, a Massachusetts limited liability company with an address of 1645 Falmouth Road, Centerville, Barnstable County, Massachusetts 02632 (hereinafter "CEH") is the developer of a residential subdivision known as Cotuit Meadows, being shown on a plan of land entitled "Cotuit Meadows Subdivision 9999 Falmouth Road (Route 28) Cotuit - Barnstable, Massachusetts Prepared for Cotuit Equitable Housing, LLC P.O. Box 95, Centerville, MA, 02632 Title Key Plan Baxter Nye Engineering & Surveying Scale 1"= 100' dated 4/11/07 Revised 5/2/07" and recorded with the Barnstable Registry of Deeds in Plan Book 617, Pages 69-75; and

WHEREAS, COTUIT MEADOWS HOMEOWNER'S ASSOCIATION, INC., is a Massachusetts non-profit corporation with an address of P.O. Box 95, Centerville, Barnstable County, Massachusetts 02632, and is the organization of owners of lots located in Cotuit Meadows subdivision; and

WHEREAS, OHIMA, INC., a Massachusetts corporation with an address of 200 International Circle, #3500, Hunt Valley, MD 21030 (hereinafter "OHIMA"), is the owner of a certain parcel of land located at 161 Falmouth Road, Mashpee, Barnstable County, Massachusetts; and

WHEREAS, MASHPEE HEALTHCARE, LLC, a Delaware limited liability company with an address of 101 Sun Avenue, NE, Albuquerque, New Mexico (hereinafter "Mashpee Healthcare"), is the operator of a 120 bed healthcare facility located at 161 Falmouth Road, Mashpee, Barnstable County, Massachusetts (hereinafter "the Healthcare Facility"); and

WHEREAS, CEH as part of the development of the subdivision known as Cotuit Meadows is required to build an on-site private sewer treatment plant "Wastewater Facilities"); and

WHEREAS, the property owned by OHIMA upon which Mashpee Healthcare operates the Healthcare Facility has an on-site septic system which requires repair or replacement; and

WHEREAS, OHIMA and Mashpee Healthcare desire to connect the property located at 161 Falmouth Road, Mashpee, Barnstable County, Massachusetts to the private Wastewater Facilities located in the Cotuit Meadows subdivision instead of repairing or replacing the on-site septic system located thereon;

NOW, THEREFORE, the parties hereto agree as follows:

1. CEH shall be solely responsible for construction of the on-site Wastewater Facilities located in Cotuit Meadows. The Wastewater Facilities shall be built in accordance with the plans and specifications submitted to the

Massachusetts Department of Environmental Protection entitled "Plan in Support of Groundwater Discharge Permit Application and the Wastewater Facilities for the Full Build-Out of Cotuit Meadows 124 Lot Subdivision Located on 9999 Falmouth Road, Mashpee-Barnstable, Massachusetts May 2008 Amended March 2010" and the Groundwater Discharge Permit Application submitted to the Massachusetts Department of Environmental Protection dated March 4, 2010 as they may be amended and finally approved by the Massachusetts Department of Environmental Protection;

2. OHIMA and Mashpee Healthcare shall be solely responsible for installing and maintaining any necessary holding tanks, pump stations, appurtenant equipment, and piping necessary to bring the septic tank effluent (as used herein meaning and intending grey water only, not solids) generated by the Healthcare Facility located at 161 Falmouth Road, Mashpee, Barnstable County, Massachusetts from said location to the private Wastewater Facilities located in Cotuit Meadows subdivision;
3. OHIMA and Mashpee Healthcare shall be solely responsible for any and all costs associated with connecting the Healthcare Facility to the Wastewater Facilities, including obtaining Town of Mashpee Conservation Commission approval, easements, and permits;
4. Upon completion of construction, CEH hereby agrees to allow OHIMA and Mashpee Healthcare to discharge septic tank effluent from the Healthcare Facility located on the property at 161 Falmouth Road, Mashpee, Massachusetts, to the private on-site Wastewater Facility in Cotuit Meadows to treat septic tank effluent generated by the Healthcare Facility;
5. OHIMA and Mashpee Healthcare hereby agree to connect the healthcare facility located at 161 Falmouth Road, Mashpee, Barnstable County, Massachusetts, to the Wastewater Facilities plant located in Cotuit Meadows within fourteen (14) days of receipt of a written notice from CEH to OHIMA and Mashpee Healthcare that the Wastewater Facilities are ready for the connection, excepting from that timeframe, delays caused by or resulting from Act of God, war, civil commotion, fire or other casualty, labor difficulties, general shortages of labor, materials or equipment, weather, government regulations or other causes beyond such party's reasonable control;
6. Mashpee Healthcare agrees to pay CEH \$575,000.00 as its contribution toward the cost of constructing the Wastewater Facilities, contingent upon Mashpee Healthcare and OHIMA obtaining an easement over the abutting Shellback Place property to install the connection from the Healthcare Facility. If Mashpee Healthcare and OHIMA are not able to obtain an easement over the abutting Shellback Place property, then Mashpee Healthcare and CEH agree to negotiate, in good faith, a reduction in the amount to be paid by Mashpee Healthcare to CEH.

7. Payment of \$575,000.00 (or if a reduced amount as provided in paragraph 6, the amounts set forth in this paragraph shall be reduced pro rata) shall be made in accordance with the following schedule:

a. \$175,000.00 to be paid upon the first to occur of a) September 30, 2010; or b) the recording of an Easement Agreement by and between OHIMA and Shellback Place Professional Condominium Trust allowing construction of a sewer force main to connect the Healthcare Facility to the Wastewater Facilities (the "Effective Date");

b. \$200,000.00 to be paid thirty (30) days after the Effective Date;

c. \$100,000.00 to be paid sixty (60) days after the Effective Date; and

d. \$100,000.00 to be paid upon connection of the Healthcare Facility to the Wastewater Facilities and the issuance of a Certificate of Compliance by the Massachusetts Department of Environmental Protection;

8. Cotuit Meadows Homeowner's Association, Inc., OHIMA, and Mashpee Healthcare hereby agree to negotiate in good faith the terms of an operating agreement for the limited liability company that will own and operate the Wastewater Facilities and to enter into and be bound by all the provisions of such agreement as the same may be amended from time to time; and

9. Within thirty (30) days of completion of construction and final permitting of the Wastewater Facilities, CEH agrees to transfer ownership of the Wastewater Facilities to the limited liability company referred to in paragraph 8 above.

EXECUTED this 16th day of September, 2010.

Cotuit Equitable Housing, LLC

By:

Brian T. Dacey

Its: Manager

OHIMA, Inc.

By:

Daniel J. Booth

Its:

Chief Operating Officer

Mashpee Healthcare, LLC

By: Mike Berg

Its: MIKE BERG
SECRETARY

Cotuit Meadows Homeowner's
Association, Inc.

By: Brian T. Dacey

Its: Brian T. Dacey
President and Treasurer

Exhibit 3

ANDREW R. GOTTLIEB

119 Pickerel Cove Rd
Mashpee MA 02649
(617) 797-3302
argottlieb@gmail.com

PROFESSIONAL EXPERIENCE

Association to Preserve Cape Cod

Executive Director

2017- present

Oversee policy, operating strategy, and financial management for the region's oldest and most influential environmental education and advocacy organization. Manage a full-time staff of 8 and numerous seasonal employees and volunteers. Raise and manage a budget of \$1.7 million and responsible for all aspects of the fiscal health of the organization. Ensure that APCC is a leader the effort to improve the Cape's water quality, habitat, response to climate change and other major challenges as they arise.

Clean Water Associates

Principal

2008-2017

Provide creative and experienced consulting expertise to clients seeking support for water resources management challenges and project development including financing, strategic planning and overall environmental permitting and compliance. Specialize in the development of practical solutions to complex environmental problems involving multiple layers of local, state and federal requirements as well as funding opportunities.

RainBank Corporation

Vice-President, Business Development

2010-2017

Provide leadership in the identification and pursuit of new clients with storm water management needs who would benefit from RainBank technology. Develop relationships with potential clients and tailor RainBank offerings to meet their unique needs.

Cape Cod Water Protection Collaborative

Executive Director

2007-2017

Guided the Barnstable County effort to protect and restore water quality on Cape Cod, including ongoing update of federal 208 Area Wide Water Quality Plan update. Provided legislative, financial and strategic guidance and support to the 15 member communities and the County Commissioners. Responsible for budget development and oversight, coordination and management of grants, manage inter-departmental coordination, develop and pursue legislative agenda and implement public outreach strategies.

Serrafix Corporation

Principal

2007-2013

Provided leading edge consulting expertise to clients seeking development of sustainable business models to promote and finance large-scale energy conservation. Specialized in working with medium to large size cities and other organizations seeking assistance in the creation of management and finance structures needed to attract financing and to ensure implementation of efficiency. Clients successfully supported include New York City, Steward for Affordable Housing for the Future, Center on Wisconsin Strategies, and South Carolina Coastal League, Natural Resources Defense Council, City of Boston, Barr Foundation, City of Somerville, Ma and Charleston, SC.

Renew Energy Partners

Public Finance Strategies

2013

Directed the development of public finance strategies for REP, a company specializing in building energy upgrade analysis and optimization, energy efficiency programs, project management and implementation, and finance.

Office for Commonwealth Development

Chief

2006-2007

Oversaw and managed a Cabinet level agency charged by the Governor of the Commonwealth of Massachusetts with overseeing and coordinating the Executive Office of Environmental Affairs, the Executive Office of Transportation, the Department of Housing and Community Development. Developed and implemented policies and spending priorities intended to enable Massachusetts to develop wisely in a sustainable way. Provided direct policy advice regarding spending and development to the Governor. Directed and prioritized allocation of \$550 million in capital funds annually. Negotiated settlement of Big Dig related Clean Air Act lawsuit regarding expansion of mass transit services in the metropolitan Boston area.

Undersecretary

2004-2005

Oversaw and coordinated the implementation of the Commonwealth's Smart Growth Initiative in the agencies of the Executive Office of Environmental Affairs, Executive Office of Transportation and the Department of Housing and Community Development. Managed the development and implementation of capital spending plans. Developed finance plans to support the expansion of the Commonwealth's affordable housing supply. Provided program and policy support on the oversight and operation of OCD line agencies.

Department of Environmental Protection

Assistant Commissioner, Bureau of Policy and Planning

2000-2004

Senior manager and member of leadership team of a regulatory agency overseeing 1,200 staff. Managed development and implementation of new policy and information technology initiatives designed to keep Massachusetts at the forefront of environmental protection. Responsible for

negotiating terms and conditions of EPA financial assistance to DEP through the annual federal Performance Partnership Agreement. Managed the development of DEP's annual work plan, including establishment of performance measures of success. Provided staff support to the Fees and Program Improvement Advisory Committee, including development of budget strategy and alternatives analyses.

Director, Division of Municipal Services

1996-2000

Administered the State Revolving Fund, a \$1.5 billion loan fund for the benefit of municipalities abating water pollution and improving water supply systems. Oversaw and managed the provision of technical and financial assistance to municipalities.

Director, Office of Watershed Management

1993-1996

Managed statewide water resources management programs. Developed and oversaw implementation of watershed approach, set policy, directed development of resource management plans and oversaw water resources evaluation procedure. Supervised 43 professionals. Collaborated with state and federal environmental agencies, industries, local groups, municipalities and non-profits to manage water resources. Among other duties:

- ' Managed integration of water quality assessment, planning and implementation efforts
- ' Developed and managed OWM permit streamlining and regulatory reform initiatives, including changes to water quality standards and pursuit of NPDES delegation.
- ' Devised and monitored annual budget of \$4.2 million
- ' Developed BRP annual consolidated federal grant application and negotiate federal grant terms and conditions
- ' Issued water withdrawal and wastewater discharge permits
- ' Awarded water quality planning and water pollution control mitigation grants

Manager, Water Management Program

1988-1993

Responsible for implementation of the Water Management Act governing allocation of state water resources.

- ' Developed policy and operating procedures for permitting of major water withdrawals
- ' Recommended permit decisions for approval and disapproval
- ' Supervised staff of planners and hydrologists
- ' Chaired Water Management Advisory Committee

Legislative Commission on Water Supply

Executive Director

1986-1988

Provided professional support to legislative commission established to investigate the quality and quantity of drinking water in the Commonwealth.

- ' Researched, drafted and reviewed legislation
- ' Coordinated legislative agenda
- ' Produced three annual reports of Commission
- ' Edited extensive study of private well contamination in Massachusetts
- ' Authored 160-page report on municipal water supply contamination

COMMUNITY SERVICE

Massachusetts Climate Action Network 2009-2012
Board of Directors

Cape Cod Community College 2006-2009
Board of Trustees

Town of Mashpee
Mashpee/Wakeby Lake Management Committee 2012-2014
Chairman

Select Board 2014-2022
1987-1991

Board of Water Commissioners 1987-1988

Sewer Committee 1987-1988

Massachusetts Municipal Association
Environmental Committee 1987-1991, 2020-2022

EDUCATION

Boston University School of Management, MBA in Public Management, 1995.

Harvard College, B.A. (cum laude) in American Government, 1985; Dean's List.
Manager, Varsity Hockey, 1980-1984

References Available upon Request