COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

THE OFFICE OF APPEALS AND DISPUTE RESOLUTION

October 16, 2019

In the Matter of	OADR Docket No. WET-2016-025 File No. SE 81-1170
Algonquin Gas Transmission LLC	Weymouth, MA

RECOMMENDED FINAL DECISION

I. INTRODUCTION

In this appeal, The Town of Weymouth Conservation Commission ("the Petitioner" or "the Commission") challenges a Superseding Order of Conditions ("SOC") that the Southeast Regional Office of the Massachusetts Department of Environmental Protection ("MassDEP" or "the Department") issued to Algonquin Gas Transmission, LLC ("Algonquin") on September 7, 2016 pursuant to the Massachusetts Wetlands Protection Act, G.L. c. 131, § 40 ("MWPA"), and the Wetlands Regulations, 310 CMR 10.00 et seq. ("the Wetlands Regulations"). The SOC authorized Algonquin's construction of a natural gas compressor station, an auxiliary building, associated auxiliary structures, pipelines, site work, and a stormwater management system ("the Project") at 6 & 50 Bridge Street in Weymouth. On October 12, 2016 a group of citizens ("Intervenors" or "Intervenor Group") filed a Motion to Intervene in the appeal to Protect the Environment pursuant to 310 CMR 10.05(7)(j)5 and M.G.L. c 30A, § 10A. The Intervenors support the Commission's position.

I conducted an evidentiary adjudicatory hearing over the course of four days ("Hearing") on August 9, 10 and 14, 2018 and June 4, 2019 at which witnesses who had filed testimony in advance of the Hearing were available for cross-examination. After reviewing the administrative record, I recommend that MassDEP's Commissioner issue a Final Decision affirming the SOC, as modified by the draft Final Order of Conditions attached to MassDEP's Closing Brief, which reflects changes based on evidence presented during the Hearing, including a revised Plan of Record. I also recommend that a new Special Condition be added that prohibits alterations of, and requires maintenance of, the restoration area in the Riverfront Area, as a continuing condition.

II. PROCEDURAL BACKGROUND

A. The Proceedings

On February 22, 2016, Algonquin submitted its Notice of Intent ("NOI") for the Project to the Commission. On June 15, 2016, the Commission issued an Order of Conditions denying approval for the Project. On June 29, 2016, Algonquin filed its Request for an SOC with MassDEP. On September 7, 2016, MassDEP issued the SOC approving the Project's proposed activities within the Project Workspace. On September 21, 2016, the Commission filed a Notice of Claim ("Appeal Notice") with the Office of Appeals and Dispute Resolution ("OADR"), challenging the SOC. On October 12, 2016, the Intervenor Group moved to intervene, which I allowed on October 17, 2016. On October 28, 2016, MassDEP filed a Motion to Stay the proceedings in the appeal pending the Federal Energy Regulatory Commission's ("FERC") issuance of a Certificate and a determination that the Commission's denial of the Project under Weymouth's local wetlands bylaw was preempted by the Natural Gas Act. The proceedings were stayed until February 2, 2018. The Commission filed a motion for summary decision on

February 26, 2018, arguing that changes to the delineation of the portion of the Riverfront Area that is exempt due to waterways licensing under G.L. c. 91 and the Waterways Regulations required Algonquin to file a new NOI for the Project. The changes arose from the Department's request in the related waterways licensing proceedings that Algonquin adopt its presumptive Chapter 91 jurisdictional lines on its waterways license plans. I denied the Commission's motion on April 20, 2018.

On May 7, 2019, while this Recommended Final Decision ("RFD") was pending and over the objection of Algonquin, I allowed the Commission's motion to admit a Notice of Audit Findings/Notice of Noncompliance ("NOAF/NON") issued to Algonquin by MassDEP's Bureau of Waste Site Cleanup ("BWSC") to be part of the administrative record in this appeal. The NOAF/NON rejected Algonquin's characterization of fill at the Project site as "Historic Fill" as that term is defined in the BWSC regulations at 310 CMR 40.000. I afforded Algonquin and the Commission the opportunity to submit supplemental testimony from witnesses on the issue of the impact of the NOAF on Issue 4 regarding the stormwater management system proposed as part of the Project. I conducted a half-day hearing on June 4, 2019 on this issue.

B. The Petitioner's and Intervenors' Claims

In issuing the SOC, MassDEP determined that the Project will not adversely affect the interests of the MWPA within the Weymouth Fore River Designated Port Area ("DPA").[1] MassDEP also determined that the Project meets the requirements for Redevelopment within Previously Developed Riverfront Area in 310 CMR 10.58(5).

[1] The Commonwealth of Massachusetts established ten DPAs to promote and protect water-dependent industrial uses. "State policy seeks to preserve and enhance the capacity of the DPAs to accommodate water-dependent industrial uses and prevent significant impairment by non-industrial or non-water-dependent types of development, which have a far greater range of siting options." https://www.mass.gov/service-details/czm-port-and-harbor-planning-program-designated-port-areas

The Petitioner disputes the Department's determination that the Project impacts only degraded Riverfront Areas and resource areas within the DPA that are not significant to the interests of the WPA. Notice of Claim ("NOC") at p.2, ¶ A.1; NOC at p.4, ¶¶ B-E (affected resource areas should include Land Under a River, Land Under a River that Underlies an Anadromous Fish Run, Coastal Beach, Land Containing Shellfish, Land Subject to Coastal Storm Flowage, and Coastal Bank); Petitioner's Pre-Hearing Statement at 4. The Petitioner claims that the SOC failed to address recently discovered soil and groundwater contamination at the property, and that the stormwater management design for the Project fails to comply with the applicable regulations. NOC at 7. The Petitioner disputes that the Project can be adequately conditioned to protect the interests of the MWPA and to ensure compliance with 310 CMR 10.58(5), Redevelopment within Previously Developed Riverfront Area. The Commission seeks a Final Order of Conditions denying the Project.

The Intervenors' Motion for Intervention to Protect the Environment pursuant to M.G.L. c. 30A, Section 10A supported the claims of the Petitioner, alleging that the Project poses a threat to the environment of the Fore River Basin. They alleged that the Project site is a former dumping ground for coal ash from the historic Boston Edison Plant, and the compressor station will disrupt arsenic, asbestos, and PCBs alleged to be present in the ground. They also asserted claims relating to air pollution and health impacts, which I later determined are not within the scope of the MWPA. They seek to have the wetlands permit denied.

III. WITNESSES[2]

The following witnesses submitted pre-filed testimony on behalf of the Town of Weymouth Conservation Commission:

Kevin D. Trainer. Mr. Trainer is a senior geologist and Licensed Site Professional ("LSP")[3] at GeoInsight, Inc. He has a Bachelor of Arts degree in geology and a Master of Science in geology, and has worked as a geologist and environmental consultant for approximately 25 years. Trainer PFT at ¶¶ 1-2.

Thomas G. Hughes. Mr. Hughes is the principal of Hughes Environmental Consulting. He holds a Bachelor of Science degree in biology and a Master of Arts degree in Public Policy and Management. Mr. Hughes has served as the Conservation Agent for the City of Amesbury and as a Natural Resources Planner for the Town of Concord, MA. His employment has also included service for the Maine Department of Environmental Protection as a wetlands permitting specialist and as the supervisor for Southern Maine licensing and enforcement in the Bureau of Solid Waste Management. Additionally, he was a Policy Coordinator for Waste Prevention for MassDEP. He was a member of the Salisbury Conservation Commission for five years. Mr. Hughes has 13 years of experience performing wetlands evaluations in Massachusetts, including wetland delineations, Riverfront Area determinations, wetlands permitting, flood map revisions, review of stormwater management plans, and peer review of wetlands notices of intent. Hughes PFT at ¶¶ 1-3.

David J.P. Foss. Mr. Foss is a Senior Vice-President and Principal Hydrogeologist at Wilcox & Barton, Inc., and environmental consulting and civil engineering firm. He has worked as a hydrogeologist and environmental consultant for approximately 25 years, mostly focusing on assessment and remediation of contaminated waste sites. He holds a Bachelor of Arts degree in Geology and a Master of Science degree in Geology and Geophysics. He is a Certified Professional Geologist and a Licensed Site Professional. Foss PFT at ¶¶ 1-3.

The following witnesses submitted pre-filed testimony on behalf of the Intervenors:

[2] Throughout this RFD, the witnesses' Pre-Filed Direct Testimony will be referred to as "[Witness] PFT at ¶ "; Pre-Filed Rebuttal Testimony will be referred to as "[Witness] PFR at ¶ ". The Hearing Transcript will be referred to as "Tr. [day] at page:line"

[3] An LSP is a "Hazardous Waste Site cleanup professional", which is defined in M.G.L. c. 21A, § 19 as "an individual who, by reason of appropriate education, training, and experience, is qualified, as attested by being licensed by the board, to render waste site cleanup activity opinions that can be relied on as sufficient to protect public health, safety, welfare, and the environment."

Dr. Curtis Nordgaard, M.D. Dr. Nordgaard is a pediatrician with a practice in Dorchester, MA. Tr. 1 at 138:2-4. He holds graduate research degrees in biology and psychology, and a medical degree. Nordgaard PFT at p. 1, first paragraph.

Becky Haugh. Ms. Haugh is a member of the Weymouth Town Council. She holds a bachelor's degree in economics. Haugh PFT at p. 1, first paragraph.

Linda DiAngelo. Ms. DiAngelo has served as the President of the Back River Watershed Association since 2012, and has been involved with the Association since 1999. She has been a resident of North Weymouth for 59 years. DiAngelo PFT at p. 1, first paragraph.

Frank Singleton. Mr. Singleton is a resident of Weymouth and currently serves on the city's Conservation Commission. He holds an undergraduate degree in biology and a Master's Degree in environmental health. He has fifty years of environmental code enforcement experience, including as Director of Environmental Health for the Greenwich, Connecticut Health Department; Director of Health for the Chelsea, Massachusetts Department of Health; and Director of Health for the Lowell, Massachusetts Health Department. Singleton PFT at p. 1, first paragraph.

Laura West. Ms. West holds a Bachelor of Science degree in biochemistry and has pursued graduate level work in organic chemistry. She is employed by the Novartis Institutes of BioMedical research as a medicinal chemist. West PFT at p. 1, paragraphs 1-3.

Rachel Wencek. Ms. Wencek has a degree in Marine Science with a concentration in biology. She is employed as a part-time seasonal research technician collecting data on recreational fisheries. She volunteers as a herring counter on the south shore of Massachusetts. Wencek PFT at p. 1, first paragraph.

The following witnesses submitted pre-filed testimony on behalf of the Applicant:

Richard C. Paquette, Jr. Mr. Paquette holds a Bachelor of Science in Wildlife Biology and a Master of Science in Environmental studies. He has been employed at TRC Environmental Corporation since 2002; he is currently a Senior Project Manager. For the Atlantic Bridge Project, his work has included planning and executing biological resource surveys, analyzing environmental constraints, agency consultation, permit application preparation, and mitigation development. He has extensive experience permitting natural gas projects under the Massachusetts Wetlands Protection Act in both coastal and inland areas. Paquette PFT at ¶¶ 1-3.

Mark A. Costa. Mr. Costa is a water resources and civil engineer with Vanasse Hangen Brustlin, Inc. ("VHB"). He holds a Bachelor of Science in Civil/Environmental Engineering and is a registered professional civil engineer in

Massachusetts with 11 years of professional experience. He focuses on hydrology, hydraulics, stormwater management, and climate change for a wide range of land development, energy, and transportation improvements projects. For the compressor station project he is responsible for the grading, stormwater management and erosion control design. Costa PFT at ¶¶ 1-3.

Kelley Race. Ms. Race holds Bachelor of Science and Master of Science degrees in Geology, and completed post-graduate studies in hydrogeology. She has been an LSP since 1994, and served multiple terms on the Board of Registration of Hazardous Waste Site Cleanup Professionals ("LSP Board").[4] She also is a Professional Geologist licensed by the State of New Hampshire. Ms. Race was employed by TRC Environmental Services, Inc. from 2011 to 2018, where her role was as a Brownfields Program Manager. Race PFT at ¶¶ 1-2.

James Doherty. Mr. Doherty is a Senior Project Manager and Technical Specialist at TRC Environmental Services, Inc.. He has 27 years of experience in hydrogeological investigation and remediation of contaminated sites. He holds a Bachelor of Science, a Master of Science in Hydrogeology, and a PhD in Civil and Environmental Engineering. He is a Licensed Site Professional and a licensed Professional Engineer. Doherty PFT at ¶¶ 1-2.

The following witness submitted pre-filed testimony on behalf of the:

Daniel Gilmore. Mr. Gilmore is a biologist who has been employed by the Department since 1989. He holds a Bachelor of Science degree in marine biology and has pursued graduate studies in coastal zone management and environmental planning. He has been certified by the Commonwealth of Massachusetts as a Soil Evaluator and by the State of New Hampshire as a Wetland Scientist. He works as an Environmental Analyst in the Wetlands and Waterways Program, where his duties include administering and enforcing the provisions of the MWPA. He was designated as a member of the Rivers Outreach and Education Team, and is the Southeast Region's subject matter expert on the interpretation and implementation of the Riverfront Area regulations.

IV. BACKGROUND

A. The Project and the Project Site

The proposed Project is located on a triangular peninsula (the "Site") within the

[4] The LSP Board was established by M.G.L. c 21A, § 19A. The LSP Board licenses LSPs, establishes rules of conduct for LSPs, issues advisory rulings related to the rules of conduct, approves continuing education credits for LSPs, and exercises disciplinary authority over LSPs. See 309 CMR 2.00, 309 CMR 3.00, 309 CMR 4.00, 309 CMR 5.00, 309 CMR 6.00, 309 CMR 7.00, 309 CMR 8.00 and 309 CMR 9.00 (the LSP Board's regulations).

Weymouth Fore River DPA. The peninsula is surrounded on the north and west by the Weymouth Fore River, and on the east by Kings Cove. Wetlands resource areas at the Site include Land Subject to Coastal Storm Flowage ("LSCSF"),[5] Riverfront Area ("RFA"), [6] and Coastal Bank.[7] A Massachusetts Water Resources Authority ("MWRA") sewage pumping station is to the northeast, and the King's Cove conservation area, which borders King's Cove, is to the east. Portions of the Project Workspace are located in LSCSF and RFA on the western side of the peninsula, and within the 100-foot Buffer Zone[8] of Coastal Bank associated with the Fore River and King's Cove on the eastern side of the peninsula. MassDEP Basic Documents 4, Request for SOC, Exhibit C (Algonquin's Notice of Intent Public Hearing Presentation, April 6, 2016). Portions of the project site are a Disposal Site as defined by M.G.L. c. 21E and 310 CMR 40.000, the Massachusetts Contingency Plan ("MCP").[9]

[5] "Land Subject to Coastal Storm Flowage" means land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater. 310 CMR 10.04.

[6] "Riverfront Area" is the area of land between a river's mean annual high water line and a parallel line measured horizontally. It may overlap other resource areas or their Buffer Zones. 310 CMR 10.58(2). The Riverfront Area does not have a Buffer Zone.

[7] "Coastal Bank" means the seaward face or side of any elevated land form, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetlands. 310 CMR 10.30(2).

[8] "Buffer Zone" means that area of land extending 100 feet horizontally outward from the boundary of any area specified in 310 CMR 10.02(1)(a).

[9] "Disposal Site means any structure, well, pit, pond, lagoon, impoundment, ditch, landfill or other place or area, excluding ambient air or surface water, where uncontrolled oil and/or hazardous material has come to be located as a result of any spilling, leaking, pouring, abandoning, emitting, emptying, discharging, injecting, escaping, leaching, dumping, discarding or otherwise disposing of such oil and/or hazardous material. The term shall not include any site containing only oil or hazardous materials which: are lead-based paint residues emanating from a point of original application of such paint; resulted from emissions from the exhaust of an engine; are building materials still serving their original intended use or emanating from such use; or resulted from release of source, byproduct or special nuclear material from a nuclear incident, as those terms are defined in 42 U.S.C. § 2014, if such release was subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under 42 U.S.C. § 2210." 310 CMR 40.0006.

The Project involves the construction and operation of a natural gas compressor station, auxiliary buildings, associated accessory structures, pipelines, site work, an access road, stormwater management systems, and temporary construction activities within the Project workspace shown on the Plan of Record. Fill will be added to the Project site to raise the elevation of the compressor station five feet from the existing grade, and the Project site will be extensively regraded.[10]

The Plan of Record, as designated by Algonquin on May 2, 2018, consists of the plans identified on WPA Form 5, Section A.8.a. to A.8.g in the SOC; Temporary Workspace Exhibit – RFA & Filled Tidelands Atlantic Bridge Project, Rev. September 2016 (replacing an exhibit of the same name dated June 21, 2016 and identified in the SOC); and Temporary Workspace Exhibit – RFA & Filled Tidelands Atlantic Bridge Project, Rev. March 8, 2018. In addition, of particular relevance to the proceedings in this appeal are Plan Sheets WEYM-A-3002 (Overall Site Plan) and WEYM-A-3005 (Grading, Drainage, Erosion Control and Utility Plan).

V. ISSUES FOR RESOLUTION IN THE APPEAL[11]

[10] MassDEP Basic Documents 1, Notice of Intent, p. 11; May 2016 Submittal plan set.

[11] In its appeal and pre-hearing statement, Weymouth alleged claims relating to air pollution, the risk of explosion, noise, vibrations and increased lighting. I determined that those claims were beyond the scope of this wetlands proceeding. Weymouth moved to amend the Pre-hearing Conference Report & Order to include the following issue:

> Whether the Applicant's proposed Project meets the Performance Standards for Land Under the Ocean, Coastal Beach, Land Containing Shellfish, Land Under Any River, and Land Under Rivers that Underlie an Anadromous Fish Run.

Town of Weymouth Conservation Commission's Motion to Amend the Pre-Screening/Pre-Hearing Conference Report and Order, November 4, 2016, at p. 1. The Town asserted that impacts on the adjacent wetlands resource areas from deposition of contaminants released to the air, natural gas explosions, and stormwater runoff fall within the scope of the MWPA; that the MWPA requires consideration of low probability events such as explosions; and that 310 CMR 10.24(2) mandates the Department to consider adverse impacts to nearby resource areas.

The Department and the Applicant objected to the Town's Motion; the Ten Residents Group supported it. I denied the Motion to Amend verbally on November 21, 2016, while meeting with the parties for oral argument on the Motion to Stay. I denied the Motion for the same reasons I excluded this issue originally:

As a result of the parties' positions at the Pre-Hearing Conference and their Pre-Hearing Statements, the Issues for Resolution at the Hearing were the following:

1. Whether Project activities within Buffer Zone to the Coastal Bank will alter any wetland resource area.;

2. Whether the Project meets the Performance Standards for DPA at 310 CMR 10.26;

3. Whether the Project meets the criteria for redevelopment within a previously developed Riverfront Area at 310 CMR 10.58(5); and

4. Whether the Project meets the Stormwater Management Standards at 310 CMR 10.05(6)(k) – (q).

a. Whether the SOC adequately addresses the Property's status as a Disposal Site pursuant to M.G.L. c. 21E and 310 CMR 40.000, the Massachusetts Contingency Plan.

VI. BURDEN OF PROOF AT THE HEARING & STANDARD OF REVIEW

The Wetlands Permit Appeal Regulations at 310 CMR 10.05(7)(j), as well as the requirements of the MWPA and the Wetlands Regulations, govern resolution of the Petitioner's and Intervenors' appeal of the SOC. Under 310 CMR 10.05(7)(j), a party challenging the SOC has the burden of proof on all Issues for Resolution in the Appeal. See 310 CMR 10.03(2); 310 CMR 10.05(7)(j)2.b.iii; 310 CMR 10.05(7)(j)2.b.v; 310 CMR 10.05(7)(j)3.a; 310 CMR 10.05(7)(j)3.b.

---

(1) the Town's allegations of impacts from air emissions and explosions do not fall within the scope of a wetlands permit appeal and (2) resource areas outside of the Project site are not within the scope of the SOC, which focused on the impacts from activities and alterations of resource areas for which the Applicant sought approval. See Massachusetts Department of Environmental Protection's Opposition to the Town of Weymouth Conservation Commission's Motion to Amend Pre-Screening/Pre-Hearing Conference Report and Order, November 14, 2016; see also Applicant's Objection to ConComm's Motion to Amend Pre-Screening/Pre-Hearing Conference Report and Order, November 16, 2016.

The Petitioner and Intervenors were required to "produce [at the Hearing] at least some credible evidence from a competent source in support of [their] position[.]" See 310 CMR 10.03(2); 310 CMR 10.05(7)(j)2.b.iv; 310 CMR 10.05(7)(j)2.b.v; 310 CMR 10.05(7)(j)3.a; 310 CMR 10.05(7)(j)3.b. They were required to present "credible evidence from a competent source in support of each claim of factual error [made against the Department], including any relevant expert report(s), plan(s), or photograph(s)." 310 CMR 10.05(7)(j)3.c. "A 'competent source' is a witness who has sufficient expertise to render testimony on the technical issues on appeal." In the Matter of City of Pittsfield Airport Commission, OADR Docket No. 2010-041, Recommended Final Decision (August 11, 2010), 2010 MA ENV LEXIS 89, at 36-37, adopted by Final Decision (August 19, 2010), 2010 MA ENV LEXIS 31. Whether the witness has such expertise depends "[on] whether the witness has sufficient education, training, experience and familiarity with the subject matter of the testimony." Commonwealth v. Cheromcka, 66 Mass. App. Ct. 771, 786 (2006) (internal quotations omitted); see e.g. In the Matter of Carulli, Docket No. 2005-214, Recommended Final Decision (August 10, 2006)(dismissing claims regarding flood control, wetlands replication, and vernal pools for failure to provide supporting evidence from competent source), adopted by Final Decision (October 25, 2006); In the Matter of Indian Summer Trust, Docket No. 2001-142, Recommended Final Decision (May 4, 2004) (insufficient evidence from competent source showing that interests under MWPA were not protected), adopted by Final Decision (June 23, 2004); In the Matter of Robert Siegrist, Docket No. 2002-132, Recommended Final Decision (April 30, 2003) (insufficient evidence from competent source to show wetlands delineation was incorrect and work was not properly conditioned), adopted by Final Decision (May 9, 2003); Pittsfield Airport Commission, supra, 2010 MA ENV LEXIS 89, at 36-39 (petitioner's failure to submit expert testimony in appeal challenging

Department's Commissioner's issuance of 401 Water Quality Certification Variance to Pittsfield Airport Commission fatal to petitioner's claims in appeal because Variance was "detailed and technical . . . requiring expert testimony on issues . . . implicated by the Variance," including . . . (1) wetland replication, restoration, and enhancement, (2) mitigation of environmental impacts to streams, and (3) stormwater discharge and treatment[,] [and (4)] . . . runway safety and design").

The relevancy, admissibility, and weight of evidence that the parties sought to introduce in the Hearing is governed by G.L. c. 30A, § 11(2) and 310 CMR 1.01(13)(h)(1). Under G.L. c. 30A, § 11(2):

> [u]nless otherwise provided by any law, agencies need not observe the rules of evidence observed by courts, but shall observe the rules of privilege recognized by law. Evidence may be admitted and given probative effect only if it is the kind of evidence on which reasonable persons are accustomed to rely in the conduct of serious affairs. Agencies may exclude unduly repetitious evidence, whether offered on direct examination or cross-examination of witnesses.

Under 310 CMR 1.01(13)(h), "[t]he weight to be attached to any evidence in the record will rest within the sound discretion of the Presiding Officer. . . ."

My review of the evidence is *de novo*. In the Matter of John Soursourian, OADR Docket No. WET-2013-028, Recommended Final Decision (2014), 2014 MA ENV LEXIS 49, at 34-36, adopted as Final Decision, 2014 MA ENV LEXIS 47 (2014). "Hence, if during the pendency of an administrative appeal, '[the Department] becomes convinced' based on a different legal interpretation of applicable regulatory standards, new evidence, or error in its prior determination, 'that the interests of [MWPA] require it to take a different position from one that it had adopted previously [in issuing the SOC],' the Department is authorized to, and should change its position." Id. Additionally, "[t]he Presiding Officer [responsible for adjudicating the administrative appeal] is not bound by MassDEP's prior orders or statements [in the case], and instead is responsible … for independently adjudicating [the] appea[l] and [issuing a

Recommended Final Decision] to MassDEP's Commissioner that is consistent with and in the best interest of the [MWPA, the Wetlands] Regulations, and MassDEP's policies and practices." Soursourian, 2014 MA ENV LEXIS 49, at 36; see also Matter of Francis P. and Debra A. Zarette, Trustees of Farm View Realty Trust, 2018 MA ENV LEXIS 7, Recommended Final Decision (February 20, 2018), adopted by Final Decision March 1, 2018).

VII. STATUTORY AND REGULATORY FRAMEWORK

The MWPA and the Wetlands Regulations have as their purpose the protection of wetlands and the regulation of activities affecting wetlands areas in a manner that promotes the following interests:

(1) protection of public and private water supply;

(2) protection of ground water supply;

(3) flood control;

(4) storm damage prevention;

(5) prevention of pollution;

(6) protection of land containing shellfish;

(7) protection of fisheries; and

(8) protection of wildlife habitat.

M.G.L. c. 131, § 40; 310 CMR 10.01(2). In the Matter of Gary Vecchione, OADR Docket No. WET-2014-008, Recommended Final Decision (August 28, 2014), 2014 MA ENV LEXIS 76, at 6-7, adopted as Final Decision (September 23, 2014), 2014 MA ENV LEXIS 77; In the Matter of Webster Ventures, LLC, OADR Docket No. WET-2014-016 ("Webster Ventures I"), Recommended Final Decision (February 27, 2015), 2015 MA ENV LEXIS 14, at 10-11, adopted as Final Decision (March 26, 2015), 2015 MA ENV LEXIS 10; In the Matter of Elite Home

Builders, LLC, OADR Docket No. WET-2015-010, Recommended Final Decision (November 25, 2015), adopted as Final Decision (December 17, 2015), 22 DEPR 202,204 (2015); In the Matter of Sunset City, Inc., OADR Docket No. WET-2016-016, Recommended Final Decision (March 31, 2017), 2017 MA ENV LEXIS 35, at 9-10, adopted as Final Decision (April 21, 2017), 2017 MA ENV LEXIS 33.

The MWPA prohibits any person from removing, filling, dredging or altering any wetlands resource area, as specified in the statute, unless that person has filed a notice of an intention to conduct such work, and until such person has received a permit to do the work. M.G.L. c. 131, § 40. "Any activity proposed or undertaken within [a protected wetlands] area[,] … which will remove, dredge or alter that area, is subject to Regulation under [the MWPA and the Wetlands Regulations] and requires the filing of a Notice of Intent ("NOI")" with the permit issuing authority. 310 CMR 10.02(2)(a). A party must also file an NOI for "[a]ny activity … proposed or undertaken within 100 feet of [any protected wetlands] " described as "the Buffer Zone" by the Regulations, "which, in the judgment of the [permit] issuing authority, will alter [any protected wetlands] ." 310 CMR 10.02(2)(b).[12] After reviewing a project, the permitting authority, whether it is the local conservation commission or the Department, is required to impose conditions on the project so that it meets the Performance Standards contained in 310 CMR 10.21 through 10.60 and the Stormwater Management Standards provided in 310 CMR

[12] "Alter" means to change the condition of any Area Subject to Protection under M.G.L. c. 131, § 40. Examples of alterations include, but are not limited to, the following:
(a) the changing of pre-existing drainage characteristics, flushing characteristics, salinity distribution, sedimentation patterns, flow patterns and flood retention areas;
(b) the lowering of the water level or water table;
(c) the destruction of vegetation;
(d) the changing of water temperature, biochemical oxygen demand (BOD), and other physical, biological or chemical characteristics of the receiving water.
Provided, that when the provisions of 310 CMR 10.03(6) and 10.05(3) or 333 CMR 11.03(9) have been met, the application of herbicides in the Buffer Zone in accordance with such plans as are required by the Department of Food and Agriculture pursuant to 333 CMR 11.00: *Right of Way Management*, effective July 10, 1987, is not an alteration of any Area Subject to Protection under M.G.L. c. 131, § 40. 310 CMR 10.04

10.05(6)(k) through (q), in order to protect the interests of the MWPA. See 310 CMR 10.05(6)(b) and 310 CMR 10.05(7)(i).

VIII. DISCUSSION AND FINDINGS

A. The Project Will Not Alter The Coastal Bank

The Project includes activities within the 100-foot Buffer Zone to Coastal Bank. The Buffer Zone areas are depicted on Paquette Supplemental Testimony Exhibit 1, Page 2; see also Applicant's Hearing Exhibit 2 (mark-up of Plan Sheet WEYM-A-3002). In Area A, within the existing Metering & Regulating Station, these activities are limited to construction worker foot traffic associated with connecting the compressor station to the existing pipeline system (marked on the Exhibit as "Temporary Project Workspace"). Paquette PFT at ¶ 13; Tr. 2 at 44:18-46:5. In Area B on the eastern side of the peninsula near King's Cove, the proposed work includes temporary construction activity, an internal service road, a portion of the perimeter fence, a very small section of the compressor station courtyard, minimal site grading, storm drainage activities designed to direct runoff away from King's Cove Park and the Coastal Bank, and proposed landscaping. Paquette PFT at ¶ 14. This area is shown on Paquette PFT Ex. 3, Photo 10, dated May 15, 2018. In Area C, project work includes installation of a 1-inch diameter water line and a 6-inch diameter sewer line from the compressor station to tie-in locations within the existing site access road and Bridge Street. Paquette PFT at ¶ 15. No project activities are proposed on any Coastal Bank.

The Petitioner asserts two challenges to the SOC. First, it asserts that the Coastal Bank delineation relied upon in the SOC is incorrect, and, accordingly, the SOC cannot be affirmed. Second, it asserts that the Project is likely to alter the Coastal Bank and does not meet the Performance Standards for the resource area. Petitioner's Closing Brief at 20, 22 and 23-24.

1. The Coastal Bank at the Site Has Been Correctly Delineated

The Petitioner's wetlands expert, Mr. Hughes, took issue with Algonquin's delineation of the Coastal Bank at the Project site, in particular Area B, at King's Cove. There is no dispute that Algonquin did not delineate the boundaries of the Coastal Bank at the Project site according to MassDEP's policy for delineating Coastal Banks, Policy 92-1 ("the Policy") prior to the time it filed its NOI with the Petitioner. Rather, Mr. Paquette delineated the top of Coastal Bank at Area B based on his field observations "because the top of the Coastal Bank was evident based on a clear break in slope, which is generally consistent with the 100-year flood zone boundary for the eastern edge of the peninsula." Paquette Supplemental PFT at ¶ 2; Paquette PFT at ¶ 10. Mr. Hughes correctly noted the importance of understanding existing site conditions in order to evaluate the potential impacts of a project. Hughes PFT at ¶ 6. He opined that the information presented by Algonquin in its NOI supporting materials was incomplete and inaccurate. Id. Specifically, he noted that in addition to Algonquin's delineation being inconsistent with the Policy, Algonquin had described the entire Coastal Bank along King's Cove as being armored with rip rap, thereby not appearing to supply sediment to Coastal Beaches, Coastal Dunes, or Barrier Beaches. In fact, a portion of the Coastal Bank is not armored and is eroding. Hughes PFT at ¶¶ 7-8; Hughes PFT Ex. 3 (photographs of King's Cove shoreline). Hughes noted that portions of the unarmored section of the Coastal Bank are significantly eroded, yet neither the NOI nor the Existing Conditions Plan acknowledged this fact. Id. at ¶ 9.

Mr. Hughes determined the slope of the Coastal Bank in this area using Plan Sheet WEYM-A-3005 (which had been referenced by Mr. Paquette in his PFT) and applying the Policy. He concluded that the top of Coastal Bank is generally ten to fifteen feet landward of where Mr. Paquette located it. Hughes PFR at ¶ 2, Hughes PFR Ex. 2. The consequence is that

the square footage of Buffer Zone presented in the NOI and the SOC is inaccurate. Tr. 1 at 162:10-12. "…[W]here the resource boundaries are is fundamental and foundational in reviewing the effects of the project." Tr. 1 at 162:16-18.

In response to Mr. Hughes's testimony, Mr. Paquette offered Supplemental Testimony on this issue of the Coastal Bank delineation. Mr. Paquette performed a new delineation by strictly applying the Policy's desktop contour guidelines to topographic elevations based on project-generated field survey data supplemented by 2016 USGS LIDAR Data where needed. Paquette SPFT at ¶ 3.[13] Mr. Paquette generated and reviewed eleven Coastal Bank cross-sections and applied the policy's standard "B" to cross-sections 1 through 10 and standard "C" to cross-section 11. Id. He found that the delineation resulting from this new analysis was generally consistent with his original delineation, with a few exceptions, as follows. Only one area of Coastal Bank showed small differences from his initial delineation based on his field observations. Paquette SPFT at ¶ 4; Paquette SPFT Ex. 1, cross-sections 4-6. His new delineation differed from his initial delineation by 9-12 feet based on cross-sections 4-6, but Mr. Paquette concluded that the difference is immaterial and did not change his opinion that the Project does not include any construction or related activity in any area of Coastal Bank and will not affect any Coastal Bank. Paquette SPFT at ¶ 5; Paquette SPFT Ex. 1, pp. 3-4. MassDEP does not dispute the new delineation and recommends that it be accepted. MassDEP's Closing Brief at p. 7. MassDEP concurs with Algonquin that the new delineation does not make a difference to the substantive analysis of impacts to the Coastal Bank because the Project remains a Buffer Zone project. Id.

[13] LIDAR, which stands for *Light Detection and Ranging*, is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth. These light pulses—combined with other data recorded by the airborne system— generate precise, three-dimensional information about the shape of the Earth and its surface characteristics. http://oceanservice.noaa.gov/facts/lidar.html.

On cross-examination at the Hearing, Mr. Hughes did not concede that the difference was immaterial. His point was that the delineation used and approved in the SOC was inaccurate. Tr. 1 at 166:20-24. He acknowledged that he did not have enough information to confirm the accuracy of the revised delineation done by Mr. Paquette. Tr. 1 at 158:16-20.

Based on the foregoing, I find that Mr. Paquette's revised Coastal Bank delineation is accurate. Because my review is *de novo*, I am not reliant on what Algonquin presented to MassDEP in its request for the SOC. I base my determination on the evidence presented at the Hearing. Mr. Paquette performed his delineation in accordance with DEP Policy 92-1's desktop contour guidelines based on project-generated field survey data, supplemented by 2016 USGS LIDAR Data where needed, and he verified his results in the field. The revised plan showing the correct delineation, attached to Mr. Paquette's Supplemental Testimony as Ex. 1, should be incorporated into a Final Order of Conditions for the Project, if approved.

2. The Project activities within the Buffer Zone to the Coastal Bank will not alter any wetland resource areas.

As noted above, no Project activities are proposed on any Coastal Bank. The Petitioner and Intervenors claim that the Project's activities in the Buffer Zone do not meet the Performance Standards for Coastal Bank. The Petitioner asserts that the activities in the Buffer Zone to the Coastal Bank will cause alteration of the Coastal Bank by increasing erosion of the unarmored section. They further assert that Project activities in the Buffer Zone are likely to cause alteration of Land Under Water. Petitioner's Memorandum of Law at p. 7. Algonquin and MassDEP dispute these claims and assert that they are speculative and unsupported by credible evidence.

The Wetlands Regulations pertaining to coastal wetlands are found at 310 CMR 10.21 through 10.37. These Regulations are "intended to ensure that development along the coastline is

located, designed, built and maintained in a manner that protects the public interests in the coastal resources listed in M.G.L. c. 131, § 40." 310 CMR 10.21. The Wetlands Regulations provide the following with respect to Coastal Bank.

Coastal Banks**.** A Coastal Bank is the seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland. 310 CMR 10.30(2).

A particular Coastal Bank may serve both as a sediment source and as a buffer, or it may serve only one role. 310 CMR 10.30(1). Coastal Banks are likely to be significant to storm damage prevention and flood control. Coastal Banks that supply sediment to Coastal Beaches, Coastal Dunes, and Barrier Beaches are per se significant to storm damage prevention and flood control. 310 CMR 10.30(1)(emphasis added). These Coastal Banks, composed of unconsolidated sediment and exposed to vigorous wave action, serve as a major continuous source of sediment for beaches, dunes, and barrier beaches (as well as other land forms caused by coastal processes). The supply of sediment is removed from the Coastal Banks by wave action, and this removal takes place in response to beach and sea conditions. It is a naturally occurring process necessary to the continued existence of Coastal Beaches, Coastal Dunes, and Barrier Beaches which, in turn, dissipate storm wave energy, thus protecting structures of coastal wetlands landward of them from storm damage and flooding. 310 CMR 10.30(1).

Coastal Banks, because of their height and stability, may act as a buffer or natural wall, which protects upland areas from storm damage and flooding. While erosion caused by wave action is an integral part of shoreline processes and furnishes important sediment to down drift landforms, erosion of a Coastal Bank by wind and rain runoff, which plays only a minor role in beach nourishment, should not be increased unnecessarily. Therefore, disturbances to a Coastal

Bank which reduce its natural resistance to wind and rain erosion cause cuts and gullys in the Coastal Bank, increase the risk of its collapse, increase the danger to structures at the top of the Coastal Bank and decrease its value as a buffer. 310 CMR 10.30(1).

The Performance Standards for a Coastal Bank determined to be a sediment source are found at 310 CMR 10.30(3)-(5). As applicable, they provide:[14]

> 310 CMR 10.30(3):
>
> No new bulkhead, revetment, seawall, groin or other coastal engineering structure shall be permitted on such a coastal bank except that such a coastal engineering structure shall be permitted when required to prevent storm damage to buildings constructed prior to the effective date of 310 CMR 10.21 through 10.37 or constructed pursuant to a Notice of Intent filed prior to the effective date of 310 CMR 10.21 through 10.37 (August 10, 1978), including reconstructions of such buildings subsequent to the effective date of 310 CMR 10.21 through 10.37, provided that the following requirements are met:
> (a) a coastal engineering structure or a modification thereto shall be designed and constructed so as to minimize, using best available measures, adverse effects on adjacent or nearby coastal beaches due to changes in wave action, and
> (b) the applicant demonstrates that no method of protecting the building other than the proposed coastal engineering structure is feasible.
> (c) protective planting designed to reduce erosion may be permitted.
>
> 310 CMR 10.30(4):
>
> Any project on a coastal bank or within 100 feet landward of the top of a coastal bank, other than a structure permitted by 310 CMR 10.30(3), shall not have an adverse effect due to wave action on the movement of sediment from the coastal bank to coastal beaches or land subject to tidal action.

The Performance Standards for a Coastal Bank determined to be a vertical buffer are found at 310 CMR 10.30(6)-(8). Only subsection (6) is applicable to the Project and it provides that:

> Any project on such a coastal bank or within 100 feet landward of the top of such coastal bank shall have no adverse effects on the stability of the coastal bank.

[14] 310 CMR 10.30(5) does not apply to the project because no buildings are proposed within the Buffer Zone to Coastal Bank.

Mr. Hughes testified in support of the Petitioner's claim that the Project does not meet the Performance Standards for Coastal Bank. First, he noted that a portion of the Coastal Bank adjacent to the Project site is collapsing, apparently as the result of recent storms. Hughes PFT at ¶ 10. He observed that between two site visits in November 2016 and April 2018, approximately 5 to 10 feet of Coastal Bank had been undercut and collapsed onto the beach. Id. He opined that "the loss of such a significant portion of the *buffer zone* in a short period of time raises questions as to how stable the construction site is and the safety of the station, particularly in light of sea level rise and the increasing intensity of coastal storms." Id. (emphasis added). He further opined that if left unabated, this erosion will result in the top of Coastal Bank migrating landward towards the proposed facility, and Algonquin will likely "seek to add additional shoreline armoring in the future." Id. at ¶ 11. Such armoring would adversely affect the movement of sediment and is strongly disfavored by the Wetlands Protection Regulations. Id. In his opinion, this would result in a violation of 310 CMR 10.30(4) because the armoring would adversely affect the movement of sediment. In his opinion "there was no justification for siting a new facility within the buffer zone of an eroding Coastal Bank that will require it to construct a new coastal engineering structure." Tr. 1 at 239:4-7.

310 CMR 10.30(3) prohibits new coastal engineering structures.[15] Mr. Hughes noted that the NOI for the Project and Algonquin's SOC Request were both silent on the eroding Coastal Bank because Algonquin mistakenly showed the entire Coastal Bank as armored. As a result, there was no assessment of the erosion. "…[T]o site the compressor station without further understanding the cause of the erosion and how that erosion will likely progress with sea level rise and hurricane inundation is imprudent and will likely require future armoring of the

[15] Algonquin did not propose any coastal engineering structures on the Coastal Bank and the SOC did not approve any. Algonquin does not own the property where the revetment Mr. Hughes discusses exists.

[Coastal] [B]ank or relocation of the facility. The prohibition for new coastal engineering structures should prevent facilities that will likely require a new engineering structure from being approved, and approving such a facility is contradictory to the language of 310 CMR 10.30(5). Hughes PFR at ¶ 4; see also Tr. 1 at 192-197.

Mr. Hughes also testified that the Project will change the drainage features at the site. Currently, water that slowly infiltrates over a flat area has created a condition in which the plants on the Coastal Bank grow and live. According to Mr. Hughes, the Project will change the groundwater dynamics by directing water into stormwater basins and the Project's stormwater management system. Tr. 1 at 176-181. Noting the industrial history of the Project site and the presence of contamination, Mr. Hughes asserted that the infiltration of stormwater runoff in a basin, rather than in a manner spread out across the site, risks creation of a new gradient within the groundwater, which risks creating a flow through groundwater that could lead to adverse consequences from any mobile contaminants that may be present. Hughes PFT at ¶ 14.

Although the Intervenors filed testimony from six witnesses, none of them presented testimony addressing the Performance Standards for Coastal Bank or how the Project fails to comply with them.

Mr. Paquette testified for Algonquin that the unarmored section of the Coastal Bank in Area B is composed of a steep vertical slope with exposed historic fill material including rocks, clinkers and pieces of concrete. The top of the Coastal Bank in this area is well-vegetated with shrubs and trees. Paquette PFT at ¶ 10; Paquette PFT Ex. 3, Photos 7 and 8. He stated that the Project complies with 310 CMR 10.30(3) because Algonquin is not proposing any coastal engineering structure on any Coastal Bank. Id. at ¶ 12. He testified that the Project complies with 310 CMR 10.30(4) because there is no work proposed on any Coastal Bank and the work in the

Buffer Zone is approximately 30-40 feet from Area B at its closest point and is separated from the Coastal Bank by the King's Cove Park. Id. In his opinion, the Project will not have any adverse effects on the stability of the Coastal Bank, and therefore complies with 310 CMR 10.30(6). Id. He based this opinion on the location of the Project work area, the construction work space, and the location of the facilities being proposed in relation to the Coastal Bank. Tr. 2 at 21:2-6. He acknowledged that he is not an engineer and did not do any calculations to evaluate the amount of loading from the facility on the stability of the Coastal Bank. He based his opinion on his professional experience permitting projects. Tr. 2 at 21:7-24. It is Mr. Paquette's opinion that the compressor station and the associated work "is simply too far away from the unarmored sections of the Coastal Bank to have any adverse effect on storm damage prevention or flood control." Paquette PFT at ¶ 16.

He also testified that the King's Cove Coastal bank area is effectively isolated from any on-site compressor station construction activities due to the presence of the elevated King's Cove Park. As well, the SOC requires implementation of erosion and siltation controls during construction around excavated and disturbed areas within the Project Workspace to ensure soils are not transported offsite during rain events pursuant to the NOI erosion control plan and the Atlantic Bridge Project Erosion and Sediment Control Plan. Paquette PFT at ¶ 19.

For MassDEP, Mr. Gilmore testified that none of the project activities are on the Coastal Bank. The erosion control barrier between the proposed construction and the wetland resource areas is intended to contain sediments generated by the construction and prevent them from reaching or impacting the adjacent resource areas. In his opinion, the Project activities will not have an adverse effect on the movement of sediment from the Coastal Bank to the Coastal Beach

or LSCSF, and the Project meets the Performance Standards at 310 CMR 10.30(4). Gilmore PFT at ¶ 10.

In his opinion, the Project meets the Performance Standards at 310 CMR 10.30(6) because the distance of Project activities from the top of the Coastal Bank, the existence of the stone revetment along the face of the Coastal Bank proximal to the construction activities, and the existing pedestrian walkway will prevent the proposed construction activities from having an adverse effect on the stability of the Coastal Bank. Id.; see also Applicant's Hearing Exhibit 1 (mark-up showing area of erosion relative to Buffer Zone). Excepting the alteration to DPA resource area, it is Mr. Gilmore's opinion that the project activities in the Buffer Zone to the Coastal Bank will not alter any wetlands resource areas. As the basis for this opinion, he cites the site topography and the existing revetment; the limited scope of work in the Buffer Zone; and the proposed erosion control barrier. Id.

Findings

A preponderance of the credible evidence discussed above supports a finding that the Project will not alter Coastal Bank and complies with the applicable Performance Standards. I make these findings for the following reasons. First, Algonquin is not proposing any activity on the Coastal Bank and therefore 310 CMR 10.30(3) does not apply to the project. Second, Mr. Hughes's testimony that the Project may require armoring of the Coastal Bank in the future, on property Algonquin does not own, as the result of ongoing erosion on the Coastal Bank, does not bring the Project within the scope of this regulation, is speculative, and therefore insufficient to support the Petitioner's claim. In the Matter of Sawmill Development Corporation, OADR Docket No. 2014-016, Recommended Final Decision (June 26, 2015), 2015 MA ENV LEXIS 63, at 84, adopted as Final Decision (July 7, 2015), 2015 MA ENV LEXIS 62 (petitioners'

expert testimony "that pharmaceuticals, toxins, and other potentially hazardous material would be discharged from effluent generated by . . . proposed [privately owned wastewater treatment facility] . . . was speculative in nature and not reliable"). "Speculation, even by an expert witness, is not 'proof from a competent source.' Matter of Wannie, 2 DEPR at 205-06 (testimony by petitioners' wetland scientist that an area "may" qualify as isolated land subject to flooding "if" it contained the requisite water volume amounted to speculation and failed to sustain burden of going forward) ." In the Matter of Hoosac Wind Project (enXco, Inc., 2007 MA ENV LEXIS 8, Ruling on Motion for Partial Directed Decision (March 7, 2007); Sawmill, supra. Mr. Paquette's testimony demonstrates that the erosion occurring on the unarmored section of the Coastal Bank is too distant from the project activities to be affected by the Project. Third, as described in the Coastal Manual[16] at p. 3-41, the factors that influence the susceptibility of a Coastal Bank to erode, collapse or fail depends on "factors such as the type and proximity of the [P]roject to the top of the [Coastal] [B]ank, and the composition and characteristics of the [Coastal] [B]ank." Here, the activities that will be within the Buffer Zone to the eroding Coastal Bank (in the vicinity of Area B) are limited to temporary construction activity, an internal service road, a portion of the perimeter fence, a very small section of the compressor station courtyard, minimal site grading, storm drainage activities designed to direct runoff away from King's Cove Park and the Coastal Bank, and proposed landscaping. Paquette PFT at ¶ 14. Notably, no building or other large structure will be located in the Buffer Zone. Mr. Hughes failed to offer persuasive testimony that the activities proposed will affect the stability of the Coastal Bank by exceeding its load-bearing capacity. Fourth, Mr. Hughes's testimony that stormwater runoff may impact the

[16] "Applying the Massachusetts Coastal Wetlands Regulation: A Practical Manual for Conservation Commissions to Protect the Storm Damage Prevention and Flood Control Functions of Coastal Resource Areas", published by MassDEP and the Massachusetts Office of Coastal Zone Management (August 7, 2017).

Coastal Bank is unsupported by data or analysis. In sum, I find that the weight of the evidence supports a finding that the Project will not alter the Coastal Bank.

B. The Project Meets the Performance Standards for DPA

The Project site is within the Weymouth Fore River DPA. As such, it is required to comply with the regulation at 310 CMR 10.26. MassDEP concluded that the Performance Standards for DPA were met because none of the Project construction activities will occur in Land Under the Ocean ("LUO"), and the project would not adversely affect the interests of the MWPA. MassDEP Basic Documents, SOC; MassDEP Memorandum of Law at p. 5. The Petitioner avers that the Project does not comply with this regulation because the Project has not been designed using best practical measures to minimize adverse effects on marine fisheries caused by changes in water quality. Petitioner's Memorandum of Law at p. 8. The Petitioner further asserts that the Project does not use any measures to address the eroding Coastal Bank in King's Cove. Id. Additionally, the Petitioner argues that contamination from the site will adversely affect fish populations because the stormwater system allegedly does not comply with the Stormwater Standards and is likely to pollute nearby surface waters. Petitioner's Closing Brief at pp. 25-26.

The regulations at 310 CMR 10.26 provide, in pertinent part, that

> Land under the ocean in designated port areas is likely to be significant to marine fisheries, storm damage prevention and flood control. In designated port areas, salt marshes, coastal dunes, land under salt ponds, coastal beaches, tidal flats, barrier beaches, rocky intertidal shores and land containing shellfish are not likely to be significant to marine fisheries, storm damage prevention or flood control.

310 CMR 10.26(1). When a proposed project in a DPA is on LUO which is determined to be significant to marine fisheries, the following factors are critical to the protection of such interests: (a) water circulation and (b) water quality. Id. 310 CMR 10.26(3) provides that projects

shall be designed and constructed, using best practical measures, so as to minimize adverse effects on marine fisheries caused by changes in:

> (a) water circulation;
> (b) water quality, including, but not limited to, other than natural fluctuations in the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants.
> (4) Projects shall be designed and constructed, using the best practical measures, so as to minimize, adverse effects on storm damage prevention or flood control caused by changes in such land's ability to provide support for adjacent coastal banks or adjacent coastal engineering structures.

Mr. Hughes testified that the Project has the potential to adversely affect LUO in at least three ways. First, he explains that the Project directs most stormwater into an infiltration basin with an overflow outlet into an existing stormwater outfall. In his opinion, the NOI does not clearly describe how the changes to the existing discharge will affect fresh water/salt water mixing at the outfall. A change in freshwater flow rates, duration of flow, or temperature in this discharge are likely to result in a change to the ecology of the area near the outfall, adversely affecting marine fisheries. Hughes PFT at ¶ 17. Second, he opines that underground piping that will be used to connect the compressor station to existing piping at the site will presumably use a permeable bedding material, and is likely to provide a conduit for groundwater to the Fore River from the contaminated compressor station site. Id. at ¶ 18. Third, concentrating stormwater infiltration into one discrete area on site, i.e. the stormwater basin, while the remaining areas see a reduction in infiltration due to impervious cover and slopes, "will likely create a groundwater gradient towards Kings Cove, through a contaminated site. Should this occur, there could eventually be an impact on the water quality and fisheries in Kings Cove." Id. at ¶ 19. In Mr. Hughes's opinion, the project has not been designed using best practical measures and the infiltration of stormwater into fill is certainly not the best practical measure. Id. at ¶ 20. At the Hearing, Mr. Hughes reiterated his opinion that "the [P]roject has a potential of indirectly

affecting [LUO]." Tr. 1 at 209:7-9. Mr. Hughes and Mr. Trainer also opined that the marine fisheries may be contaminated by the metals and PAHs at the site leaching into groundwater. Hughes PFT at ¶¶ 37, 38; Trainer PFT at ¶¶ 30-32.

The Intervenors presented testimony from Ms. West, Ms. DiAngelo and Ms. Wencek. Ms. West's testimony concerned runoff from the existing contamination and emissions of pollutants from the compressor station. She did not state how the Project will change the runoff, and her testimony regarding impacts from air pollution is outside the scope of this wetlands proceeding. While Ms. DiAngelo offered testimony about characteristics of the Fore River Watershed and the Fore River Estuary, she did not offer facts or an opinion relevant to the issues for resolution in this appeal, or probative of any issue. While Ms. Wencek's testimony provides information about the river and the fish populations present, she focused on impacts from potential gas leaks and fumes, which are not within the scope of this appeal. I conclude that none of this testimony is relevant to the issue, and does not satisfy the Intervenors' burden of proof.

Mr. Paquette testified that the Project involves no dredging, filling, removing or altering LUO, and no construction activities are proposed within LUO or any other coastal resource area identified in 310 CMR 10.26(1). Paquette PFT at ¶ 20. Therefore, the Project's activities will not change water circulation or water quality. Paquette PFT at ¶ 16. To rebut Mr. Hughes's contention that a change in stormwater discharge could result in a change in the ecology near the outfall, Mr. Costa testified that the outfall is an estuary which is already subject to salt and fresh water mixing, and changes in peak flow rates and volumes of water passing in and out of the Weymouth Fore River. Costa PFT at ¶ 54. Mr. Costa also concluded that during a 100-year 24-hour rainfall event, the project will result in a reduction in runoff volume to the river of 0.23 acre-feet. Id. In his opinion, the change in volume and flow rate resulting from the Project will be

de minimis and will not affect the ecology of the river. Costa PFT at ¶¶ 54-55. While Mr. Costa admitted that he is not an expert on the effects of stormwater runoff on marine fisheries, Tr. 2 at 143:91-12, he stated at the Hearing that because the volume of water that is changing from pre-construction to post-construction is so small – one-one-thousandth of a percent in a 100-year storm – he can reliably conclude that there will be no impact. Tr. 2 at 145-146. Mr. Costa testified that the stormwater system was designed to avoid anticipated adverse impacts on marine fisheries. Costa PFT at ¶¶ 54-57. This design constitutes "best practical measures. Id. at ¶ 54.

In response to the Petitioner's testimony that marine fisheries may be contaminated by groundwater leaching though the contaminated materials at the site, Ms. Race testified that groundwater samples collected showed detections of metals well below applicable MCP criteria. Race PFT at ¶ 44. The sampling also showed that no Extractable Petroleum Hydrocarbons ("EPH") [17] or Polycyclic Aromatic Hydrocarbons (PAHs)[18] were present above detection limits in the samples analyzed, indicating EPH and PAHs were not present in the groundwater samples analyzed. Ms. Race concluded that the results show that the compounds are not leaching into groundwater, and if the groundwater is not contaminated then the fish or wildlife would not actually have impacts. Tr. 2 at 11-16.

Mr. Costa refuted Mr. Hughes's contention that pipe bedding may serve as a preferential conduit for groundwater from the Project to the river by noting that the existing subsurface soils

[17] EPH are defined as collective fractions of hydrocarbon compounds eluting from n-nonane to n-hexatriacontane, excluding Target PAH Analytes. EPH is comprised of C9through C18Aliphatic Hydrocarbons, C19through C36Aliphatic Hydrocarbons, and C11through C22Aromatic Hydrocarbons.3.11. See https://www.mass.gov/files/documents/2017/12/21/MassDEP%20EPH%20Method%20-%20May%202004%20v1.1.pdf

[18] PAHs are ubiquitous and consistently present in the environment and are typically formed during the incomplete burning of organic material including wood, coal, oil, gasoline and garbage. PAHs are also found in crude oil, coal tar, creosote and asphalt. See https://www.mass.gov/files/documents/2016/08/xl/backtu.pdf

are highly permeable and infiltration rates are significant. He based this conclusion on on-site borings, test pits and permeability testing done by Algonquin. Costa PFT at ¶ 57. "A geotechnical engineer completed on-site permeability testing which estimated infiltration rates of 15 inches per hour to 100 inches per hour." Id., citing MassDEP Basic Documents 2 – Response to Weymouth Conservation Commission, Attachment 2, Appendix C.

Mr. Gilmore testified that proposed construction activities will not occur within LUO of the DPA. "The majority of the proposed activities…will be undertaken within the upland portion of the DPA, and will not impact [LUO]." Gilmore PFT at ¶ 12.The proposed construction activities will not change water circulation or water quality, and will not change the land's ability to provide support for adjacent coastal banks or coastal engineering structures. Id. Based on these observations, in his opinion, the project meets the DPA Performance Standards. Id.

Findings

I find that the Petitioners have not met their burden of proof because the testimony provided by Mr. Hughes is speculative and based on assumptions, and not grounded in scientific facts. In addition, a preponderance of the evidence, discussed above, demonstrates that the proposed Project complies with the DPA Performance Standards. Mr. Hughes did not refute Mr. Costa's conclusion that runoff volume during a 100-year 24-hour rainfall event will be de minimis. Neither Mr. Hughes nor Mr. Trainer rebutted Ms. Race's testimony that contaminants at the site are not leaching into the groundwater, and therefore there will be no impacts on the fisheries. Mr. Hughes's presumption that the bedding material for piping will create a preferential conduit for groundwater that could result in an impact on water quality and fisheries was not only speculative, but was amply rebutted by the testimony of Mr. Costa regarding the highly permeable nature of the existing soils. Mr. Costa's testimony that the project design

constitutes "best practical measures" was not effectively challenged in rebuttal testimony or on cross-examination. The evidence supports a finding that the Project minimizes adverse effects on marine fisheries caused by changes in water circulation and water quality, and has been designed using best practical measures. I find, therefore, that it meets the Performance Standards for DPA.

C. The Project meets the criteria for development within a previously developed Riverfront Area within 310 CMR 10.58(5).

Of the 14,160 square feet of jurisdictional RFA within the Project Workspace depicted on the Plan of Record, approximately 10,200 square feet are within the existing M&R Station. The remaining 3,960 square feet are outside of the fenced metering station. Paquette PFT ¶¶ 22-23. Within the RFA, Algonquin proposes to install portions of the proposed underground and aboveground suction and discharge piping that will connect the compressor station to the I-10 system at the M&R Station. Paquette PFT at ¶ 23. MassDEP determined that the Riverfront Area at the Project site was a previously developed area and met the regulatory description of degraded area in 310 CMR 10.58(5). Special Condition 8 of the SOC requires Algonquin to loam and seed 4,870 square feet of previously developed RFA outside of the existing M&R Station. MassDEP Basic Document 5, SOC.

The Petitioner contends that the NOI did not include information to indicate the area is previously developed; but even if the area is previously developed, it does not meet the definition of "degraded" as used in the regulation. The Petitioner further contends that the Project work does not comply with the regulation because Algonquin did not provide an alternatives analysis; the work will not be an improvement over existing conditions; the work does not meet the Stormwater Standards; Algonquin has not demonstrated compliance with 310 CMR 10.58(5)(f) or (g); and the SOC lacks a required condition related to a Certificate of Compliance required by 310 CMR 10.58(5)(h). Hughes PFT at ¶¶ 25-33. The Intervenors allege that the Project will not

be an improvement over existing conditions and assert, for the first time, in their Closing Brief, that the Riverfront Area setback was incorrectly calculated. I address this last claim as a threshold matter.

1. The Delineation of RFA was Done Correctly.

310 CMR 10.58(2)(c) states: "When a river flows into coastal waters or an embayment, the river shall end at the mouth of coastal river line as delineated on the current mouth of coastal river map series maintained by the Department" (emphasis added). The Intervenors argue in their memoranda of law that the end of the river should be measured from each of the four sides of a box shown on Intervenors' Hearing Exhibit 1, [one of two Mouth of River maps developed by MassDEP] and if done in this fashion, the King's Cove Park and part of the compressor station construction would fall within the RFA. Intervenors' Supplemental Memorandum of Law at p. 3. The Intervenors spent considerable time at the Hearing trying to make this point. Tr. 3 at 56-88. Their argument is without merit, and not supported by the record, and they presented no actual evidence from a wetlands expert to dispute the delineation of the RFA.

To begin, some background on the Mouth of River Maps:

> "On March 1, 2005, DEP published the Massachusetts Mouth of Coastal River Maps. These maps identify the Mouth Of The River (MOR) for coastal rivers in order to provide a clear, consistent, and predictable means of locating all river mouths in the Commonwealth. The MOR lines represent the limit of Riverfront Area jurisdiction under the Wetlands Protection Act. Land upstream of the MOR lines includes Riverfront Areas subject to the protections afforded by the wetlands regulations; any land seaward of the MOR line is not subject to jurisdiction as a Riverfront Area but remains subject to other inland and coastal provisions of the Wetlands Protection Act."

https://www.mass.gov/info-details/wetlands-maps-mouth-of-coastal-river. The maps represent the final Mouth of River maps for each community, and a set of two maps was developed for each community. One map shows the Mouth of River Area and the other shows the Mouth of

River Line. Intervenors Hearing Exhibit 1 is the map showing the Mouth of River Area for the Weymouth Fore River. Intervenors Hearing Exhibit 2 is the other half of the set, showing the Mouth of River Line. There can be no doubt that the maps were produced as a set and are to be read as a set, with one showing the area in which the Mouth of River Line is, and the other showing the actual Mouth of River Line. The cross-examination testimony of Mr. Paquette and Mr. Gilmore at the Hearing serves to confirm this reality. Mr. Gilmore stated that "the other four lines [on Exhibit 1]...have, as you said, no real relevance to the delineation of the mouth of the coastal river, other than to serve as a locus map so that someone can work their way down to find out where the specific mouth of coastal river is." Tr. 3 at 81:18-23. The Intervenors have failed to offer any evidence to support their proposed interpretation of the mouth of river coastal maps. The testimony of Mr. Paquette and Mr. Gilmore and maps themselves make plain that Algonquin's delineation of Riverfront Area, adopted by the SOC, is correct.

2. The RFA Was Previously Developed

MassDEP determined that the Project work in this area is authorized by 310 CMR 10.58(5), which provides that "[n]otwithstanding the [Performance Standards for activities in Riverfront Area in] 310 CMR 10.58(4)(c) and (d), the [Department] may allow work to redevelop a previously developed Riverfront Area, provided the proposed work improves existing conditions." 310 CMR 10.58(5) defines "redevelopment" as "[the] replacement, rehabilitation[,] or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas." The regulation also provides that "[a] previously developed Riverfront Area contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds." 310 CMR 10.58(5).

Mr. Hughes faulted Algonquin for not including in its NOI information to support its assertion that the RFA was previously developed. Hughes PFT at ¶ 25. As discussed below, the administrative record in this appeal now supports such a finding. Mr. Hughes conceded that even if the jurisdictional RFA was previously developed, in his evaluation it is not degraded. He based this opinion on his observations during a site visit on April 18, 2018. Id. at ¶ 26; Hughes PFT Ex. 4 (Photographs of RFA). He observed in the RFA only limited structures and pavement. Much of the area consisted of a thin layer of gravel over a dark soil and some areas of grassy vegetation growing through the gravel at the edges along fencing. In his opinion, dark colored soils are typically consistent with an organic content, which would be considered topsoil in the context of the regulation. Id. Therefore, in his opinion, the area does not meet the definition of degraded in 310 CMR 10.58(5). Id.

Mr. Gilmore testified that the MassGIS 1995 1m GrayScale OrthoPhoto attached to his PFT as Exhibit 2 clearly shows that the site was previously developed and degraded prior to August 7, 1996. The photograph shows that the site appears to be a gravel parking area with a component of the petroleum storage tank distribution system located on it. Gilmore PFT at ¶ 13. Based on this photograph, his review of the June 21, 2016 Temporary Workspace Plan [now superseded by the Plan of Record] and his site inspection, Mr. Gilmore concluded that the RFA was a previously developed area and met the regulatory definition of degraded area in 310 CMR 10.58(5). Id. at ¶ 14. Gilmore Ex. 3 provides an overlay of the current Temporary Workspace Plan and the MassGIS 1995 1m GrayScale OrthoPhoto, and shows that the jurisdictional RFA is developed and degraded.[19] Exhibit 3 appears to depict portions of the gravel parking area with storage units or trailers and vehicles in the RFA. Id. As a result of these observations, Mr.

[19] A portion of the RFA is within Chapter 91 jurisdiction, and not subject to regulation pursuant to 310 CMR 10.58(6)(i).

Gilmore opined that the RFA meets the criteria for redevelopment within a previously developed RFA in 310 CMR 10.58(5). Id. at ¶ 15. Mr. Gilmore also testified, without challenge, that the entire Site is located within a DPA, and DPAs are portions of developed harbors where the land forms have been greatly altered from their natural shape. Gilmore PFD at ¶18. MassDEP argues that this supports its position that the RFA at the site within the DPA is previously developed and degraded. MassDEP's Closing Brief at p. 12.

Algonquin also offered evidence to support MassDEP's finding, through the testimony of Mr. Paquette and Ms. Race. The portion of the Riverfront Area located within the proposed Project Workspace occupies an area that was historically used for coal unloading, staging, and transfer from barges in the Fore River to Edgar Station located south of Bridge Street. Paquette PFT at ¶ ¶ 25-27, Paquette Ex. 6 (EDR Aerial Photo Decade Package of 6 & 50 Bridge Street, North Weymouth); Race PFT at ¶¶10-11. Edgar Station was a coal-fired electric generation facility commissioned in 1925. Paquette PFT ¶26; Race PFT ¶10. The Sanborn Fire Insurance Map[20] from 1927 indicates that significant land filling took place at the M&R Station site between the Weymouth Fore River and King's Cove at this time. Paquette PFT ¶26; Paquette Ex. 7 (Certified Sanborn Map Report); Race PFT ¶11. Coal staging and storage facility is documented at the site through at least 1962, and coal storage appears to have continued until at least 1969 in the vicinity of the M&R Station and Riverfront Area at the site. Paquette PFT ¶26.

Notwithstanding Mr. Hughes observations during his site visit, an overwhelmingly preponderance of the evidence discussed above supports a finding that the RFA at the site is a previously developed RFA that was degraded prior to August 7, 1996, within the meaning of 310 CMR 10.58(5).

[20] Paquette Exhibit 7 indicates that "[t]he Sanborn Library is the largest, most complete collection of fire insurance maps."

3. An Alternatives Analysis Was Not Required

Mr. Hughes testifies that the work in the RFA does not meet the Performance Standards because Algonquin did not submit an alternatives analysis with its NOI and supplemental materials, citing to 310 CMR 10.58(4). Hughes PFT at ¶ 27. 310 CMR 10.58(4)(c), part of the General Performance Standard for work in a RFA, requires an applicant to demonstrate that there are no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the statutory interests of the MWPA. This claim is without merit for the following reasons. First, 310 CMR 10.58(5) specifically exempts projects in a previously developed RFA from the requirement to conduct an alternatives analysis ("Notwithstanding the provisions of 310 CMR 10.58(4)…."). Second, Algonquin did submit an Alternatives Analysis with its NOI. See MassDEP Basic Document 1, Notice of Intent, Attachment A, Project Narrative at p. 3, Section 1.2.

4. The Project Will Improve Existing Conditions.

310 CMR 10.58(5) allows the work in the previously developed RFA "provided the proposed work improves existing conditions." 310 CMR 10.58(5)(a) requires that "[a]t a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the [RFA] to protect the [statutory interests]." In this area, Algonquin proposes to permanently install above-ground and below-ground piping. As noted above, Special Condition 8 of the SOC requires Algonquin to loam and seed 4,870 square feet of temporary workspace; that area is currently gravel. Gilmore PFT at ¶ 18.

The Petitioner contends this standard is not met because there will be permanent alterations of the RFA. In Mr. Hughes's opinion, the temporary impacts within the RFA described in the NOI and SOC are not temporary. "A temporary impact is a disturbance that does

not constitute an alteration because it is fully restored to the pre-existing condition." Hughes PFT at ¶ 29. In his view, the impacts are the installation of the suction and discharge pipes and the bedding material around them. Since those pipes and bedding materials will not be removed, in Mr. Hughes's opinion they constitute permanent alterations of the RFA. Id. at ¶ 30.

Mr. Hughes also questions the restoration requirement of Special Condition 8. First, Special Condition 8 refers to a Plan that is no longer the Plan of Record, and the area of restoration required by the SOC is now mostly or fully within the area subject to c. 91 jurisdiction. Hughes PFR at ¶ 19. He questions MassDEP's authority to require restoration in that area, but even if MassDEP has the authority, he believes it should not be allowed under 310 CMR 10.58(f) since that area of the site is not subject to the RFA Performance Standards, but is within c. 91 jurisdiction. Finally, he does not believe that restoring an area that contains topsoil and which will likely vegetate on its own if left undisturbed will not result in a net improvement over existing conditions. Id.

At the Hearing and in his PFT/PFR, Mr. Gilmore addressed these contentions and persuasively explained why the Performance Standard was met. The Plan of Record dated September 2016 depicts an area of jurisdictional RFA that is larger and in a different location than the jurisdictional RFA in the June 2016 Plan referenced in the SOC. 14,160 square feet of jurisdictional RFA are within the proposed Project area. Mr. Gilmore determined after reviewing aerial photographs that the physical characteristics of the newly defined jurisdictional RFA were not significantly different from the previously defined jurisdictional RFA. He determined that the jurisdictional RFA on the September 2016 Plan is significant to the same statutory interests of storm damage prevention, flood control, pollution prevention and protection of fisheries as that depicted on the SOC Plan. Mr. Gilmore does not believe there will be any permanent change to

the RFA because once the pipes are install below-ground, the area of installation will be backfilled and restored to its current condition of either parking area or gravel driveway parking area. The above-ground piping will be above the surface of the ground. Therefore, in his opinion, the permanent installation of piping is "not going to affect the ability of the area to provide storm damage prevention or flood control, it's not going to affect fisheries resources, and it's not going to affect the ability of the area to prevent pollution." Tr. 3 at 26:2-13; see also Tr. 3 at 22-26. In his opinion, the impact from this work will be no different from a temporary disturbance of the RFA. Because Mr. Gilmore explained that the area of installation will be backfilled and restored to its current condition of either parking area or gravel driveway parking area, I find, based on this testimony that the proposed work will not constitute an alteration of the RFA.

Mr. Gilmore stated that the RFA Redevelopment Performance Standards do not specify to what extent a project shall result in an improvement over existing conditions, but in his opinion, loaming and seeding 4,870 square feet of an area that is currently gravel will result in an improvement. Gilmore PFR at ¶ 18. He explained that the requirement to loam and seed was not mitigation proposed by Algonquin, but MassDEP's requirement for improving the area. Tr. 3 at 28:23-24 – 29:1-2. He believes that the required volume of restoration is adequate given the existing conditions in the area with the M&R Station, associated equipment, and a parking lot, and MassDEP is unlikely to require additional mitigation in the form of loaming and seeding in the RFA. PFT at ¶ 17. Even with the increase in jurisdictional RFA, Mr. Gilmore believes that what is required by Special Condition 8 is adequate. Tr. 3 at 30:11-12. Although he believes a Final Order of Conditions approved in this proceeding could incorporate a Special Condition requiring a greater area of restoration, he noted, as do I, that there is no testimony to support a different requirement. Tr. 3 at 30:1-11.

I found Mr. Gilmore to be a credible witness, based on this more than 30 years of experience implementing the MWPA. He persuasively refuted Mr. Hughes's testimony, both in his PFR and at the Hearing. I find, therefore, that a preponderance of the evidence supports a finding that the Project will improve existing conditions in the RFA.

5. The proposed Project provides stormwater management according to MassDEP's stormwater standards.

Mr. Hughes testified that the Project does not meet the requirement of 310 CMR 10.58(5)(b) because infiltration of stormwater at a disposal site as defined by the MCP does not meet the stormwater standards. Hughes PFT at ¶ 31. 310 CMR 10.58(5) requires that work to redevelop previously developed RFA shall provide stormwater management in accordance with the Stormwater Standards. 310 CMR 10.58(5)(b). Because I have found that the Project does meet the Stormwater Standards, see below at Section D, I find that this requirement in 10.58(5)(b) has been met.

6. 310 CMR 10.58(5)(f) and (g) do not apply to the Project.

Mr. Hughes asserts that Algonquin has not provided any evidence that the proposed work in the RFA complies with 310 CMR 10.58(5)(f) and (g), as required by 310 CMR 10.58(5)(d). Hughes PFT at ¶ 32. Algonquin did not propose either mitigation or restoration in its NOI, which is what these provisions address. The restoration in Special Condition 8 is being imposed on the Project by MassDEP, not proposed by Algonquin. Therefore, these provisions do not apply.

7. 310 CMR 10.58(5)(h) Can be Implemented, if Required, When MassDEP Issues a Certificate of Compliance for the proposed Project

Similar to 310 CMR 10.58(5)(f) and (g), this provision does not apply to the proposed work. The language of the regulation states that it applies to "projects under 310 CMR 10.58(5)(f) or (g)." Notwithstanding its inapplicability to Algonquin's mandated restoration, I

recommend that the Final Order of Conditions include an additional special condition consistent with this provision. Mr. Gilmore agreed with Mr. Hughes that there should be a continuing condition required in the Certificate of Compliance for the Project. Gilmore PFR at ¶ 19.

D. The Project meets the applicable Stormwater Standards

As noted above, storm damage prevention and flood control are among the statutory interests of the MWPA, and the Wetlands Regulations are intended to protect these interests. "Stormwater runoff from rainfall and snow melt 'represents the single largest source responsible for water quality impairments in the Commonwealth's rivers, lakes, ponds, and marine waters.'" Elite Home Builders, supra, 22 DEPR at 205, citing, MassDEP Stormwater Handbook (2008) ("Stormwater Handbook"), Vol. I, ch. 1, p. 1. "New and existing development typically adds impervious surfaces and, if not properly managed, may alter natural drainage features, increase peak discharge rates and volumes, reduce recharge to wetlands and streams, and increase the discharge of pollutants to wetlands and water bodies." Id. As a result, the Department has adopted Stormwater Regulations as part of the Wetlands Regulations at 310 CMR 10.05(6)(k)-(6)(q) to "address water quality (pollutants) and water quantity (flooding, low base flow and recharge) by establishing standards that require the implementation of a wide variety of stormwater management strategies[,] … includ[ing] environmentally sensitive site design and low impact development [("LID")] techniques to minimize impervious surface and land disturbance, source control and pollution prevention, structural [stormwater Best Management Practices ("BMPs")], construction period erosion and sedimentation control, and the long-term operation and maintenance of stormwater management systems." Id. The Department's stormwater regulations at 310 CMR 10.05(6)(k) provide in pertinent part that:

> [e]xcept as expressly provided, stormwater runoff from all industrial, commercial, institutional, office, residential and transportation projects that are

> subject to regulation under [the MWPA] including site preparation, construction, and redevelopment and all point source stormwater discharges from said projects within [a wetlands] Area Subject to Protection under [the MWPA] or within the Buffer Zone shall be provided with stormwater best management practices to attenuate pollutants and to provide a setback from the receiving waters and wetlands in accordance with the [10] Stormwater Management Standards as [set forth in 310 CMR 10.05(6)(k)1-(k)10 and] further defined and specified in the [MassDEP] Stormwater Handbook.

To manage stormwater at the compressor station site, Algonquin has proposed a stormwater management system that will include deep sump hooded catch basins, sediment forebays, and a stormwater infiltration basin that will provide 44% pretreatment prior to infiltration and 89% Total Suspended Solids ("TSS") removal of stormwater runoff from all proposed impervious surfaces. Costa PFT at ¶ 6. The stormwater management system is required to comply with the ten stormwater management standards in the regulation. To demonstrate compliance with the standards, Algonquin submitted with its NOI a Stormwater Design and Mitigation Report prepared by VHB, dated February 18, 2016. MassDEP Basic Documents 1, NOI, Attachment H. Algonquin subsequently revised the February 18, 2016 Stormwater Report in response to the Petitioner's request, to include a revised specification for oil/debris to a non-metal product; increase the inspection schedule of BMPs from annually to quarterly; and update the hydraulic calculations to include the abutting MWRA parcel. Costa PFT at ¶ 5. The revised Stormwater Report, dated April 19, 2016, was submitted to the Petitioner. MassDEP Basic Documents 2, response to Weymouth Conservation Commission, Attachment 2. The Stormwater Report includes the MassDEP checklist for Stormwater Report; a Stormwater Report Narrative; Demonstration of Compliance with MassDEP Stormwater Management Standards; computations and supporting information, figures, tables and appendices. Id.

The Petitioner and the Intervenors contend that the stormwater management system fails to comply with Stormwater Management Standards 3 and 5; they presented no evidence related

to any of the other eight Standards and therefore I find, as a matter of law, that Algonquin's proposed Stormwater Management System, as documented in the Stormwater Report, complies with Stormwater Management Standards 1, 2, 4, and 6-10. See 310 CMR 10.05(7)(j)3.b. and 310 CMR 10.05(7)(j)3.c.ii. The Petitioner and the Intervenors had the burden of proving that the proposed Stormwater Management System does not comply with these standards. See 310 CMR 10.03(2); 310 CMR 10.05(7)(j)2.b.iii; 310 CMR 10.05(7)(j)2.b.v; 310 CMR 10.05(7)(j)3.a; 310 CMR 10.05(7)(j)3.b. As discussed below, they have not met their burden. On the other hand, the evidence presented by Algonquin and MassDEP demonstrates compliance with these Standards.

1. The proposed Project's Stormwater Management System Complies with 310 CMR10.05(6)(k)(3)

Standard 3 at 310 CMR 10.05(6)(k)(3) provides:

> Loss of annual recharge to ground water shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from the pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.

The MassDEP Hydrology Handbook for Conservation Commissioners, § 8.3 (2002) further explains.

> The development of sites generally involves the creation of impervious surfaces such as roofs and pavements. These surfaces reduce the amount of water that can infiltrate into the ground. The goal of this standard is to address the adverse impacts that result from the loss of natural infiltration. Reduced infiltration results in the loss of water available for recharge to groundwater. Reduced recharge can potentially result in lower local and regional groundwater levels, thus affecting wetland resource areas. Maintaining local and regional groundwater levels has become a critical issue in many areas of Massachusetts.

The Stormwater Handbook, V. 1, Ch. 1, pp. 5-6 describes the intent of this standard as follows:

> The intent of this standard is to ensure that the infiltration volume of precipitation into the ground under post-development conditions is at least as much as the infiltration volume under pre-development conditions. Standard 3 requires the restoration of recharge, using infiltration measures and careful site design. Through judicious use of low impact development techniques and other approaches that minimize impervious surfaces and mimic natural conditions, new developments can approximate pre-development recharge for most storms.

Mr. Hughes testified that data from the six test pits within the proposed area of the infiltration basin all show fill underlying a layer of loam. Three of the test pits document the presence of slag within the fill. None of the six test pits extended past the fill. In addition, the soil investigations regarding the petroleum release reported in 2016 found a pool of petroleum-saturated soil at the Site in the vicinity of the proposed infiltration basin. Hughes PFT at ¶ 40; see also Trainer PFT, Ex. 2 Figures 2 through 4C. In Mr. Hughes's opinion, siting an infiltration basin in these conditions is clearly not "in accordance with the Massachusetts Stormwater Handbook." Id at ¶ 41. The Stormwater Handbook, Volume 2, Chapter 2 at p. 90 states "Never locate infiltration basins above fill." Mr. Hughes stated that "[t]he NOI submission from May 10, 2016 states that '[c]oal, coal ash, coal slag, and clinkers have been identified in soil beneath the property ranging up to depths 0-25 feet below existing grade.' This is supported by the test pit results noted above. Since the test pits do not confirm the extent of fill below the basin, and since the surrounding area into which infiltrated water will travel consists of solid waste, fill, and hazardous chemicals, the design does not conform to Standard 3." Id. at ¶ 42.

In response, Mr. Costa testified that Standard 3 requires projects to infiltrate stormwater. Costa PFT at ¶ 22. Mr. Costa is responsible for the grading, stormwater management and erosion control design for the proposed Project. According to Mr. Costa, the United States Environmental Protection Agency has reported that infiltration basins such as that being proposed have the highest pollutant removal rates of any stormwater Best Management Practice

("BMP"). Id. at ¶ 23. Mr. Costa originally testified, based on the opinion of Ms. Race that the fill at the site was "Historic Fill" as defined by the Massachusetts Contingency Plan, 310 CMR 40.000, and not solid waste or hazardous waste, that it was common to place infiltrating stormwater BMPs in fill. Id. at ¶¶ 24-25. In such a circumstance, the guidance in Volume 3, Chapter 1, Standard 3 of the Stormwater Handbook requires conducting a soil textural analysis of the fill and the underlying parent materials, and Algonquin conducted such an analysis. Id. at ¶ 27-31. Boring logs consistently noted a clay layer at approximately 20 feet below ground surface, which is below the seasonal high and observed groundwater levels. Based on this fact, Mr. Costa opined that "stormwater will not flow through that layer and therefore it should not be part of the stormwater basin's hydrologic analysis." Id. at ¶31. Based on this, he concluded that the stormwater management design complies with Standard 3 because the system was conservatively designed using the half of the field-tested in-situ permeability rate in the most restrictive soil layer prior to discharge of stormwater to groundwater. Id.

Mr. Gilmore concurred with Mr. Costa that the proposed Project complied with Standard 3 because the recharge calculations in Appendix C of the Stormwater Report "demonstrate that the post-development volume of recharge is more than four times the total required recharge volume for the project site." Gilmore PFT at ¶ 20.

Subsequent to the August, 2018 Hearing, MassDEP's Bureau of Waste Site Cleanup ("BWSC") conducted an audit of Algonquin's response actions at the project site. See Notice of Audit Findings/Notice of Noncompliance ("NOAF/NON"), Release Tracking Nos. 4-0026230 and 4-0026243, April 16, 2019. BWSC disagreed with Algonquin's conclusion that the fill material at the site was "Historic Fill". BWSC determined that the fill material originated from operations or activities at the location of emplacement and was a manufacturing waste. BWSC

also determined that Algonquin had not evaluated the extent of light non-aqueous phase liquid ("LNAPL") west of two monitoring wells. The Petitioner moved to admit the NOAF/NON as part of the administrative record in this case, relevant to the issue of stormwater. As noted above at page 3, the parties submitted additional testimony on this issue and I conducted an additional half-day Hearing.

The NOAF/NON did not change Mr. Costa's opinion that the stormwater management system proposed for the Project complies with Standard 3. First, he noted that the Stormwater Handbook requires compliance with the standard only to the "maximum extent practicable", including at locations where an area classified as contaminated is present at or adjacent to the proposed recharge location. Costa Supplemental PFT ("SPFT") at ¶¶ 6, 7. For such sites, the Stormwater Management Standards require a soils assessment and a mounding analysis to evaluate the viability of infiltration. He reiterated the pollutant reduction benefits of infiltration in reducing discharge of TSS, phosphorus, metals, and other chemical components of stormwater flow into surface waters, and stated that infiltrating Stormwater BMPs are preferred and commonly placed into fill materials, "subject to appropriate evaluation as required by the Stormwater Handbook." Id. at ¶ 8.

Because of the LNAPL and certain contaminants in fill at the Project site, Algonquin is required to replace the annual stormwater recharge volume using infiltration measures only to the "maximum extent practicable", meaning Algonquin must make all reasonable efforts to meet the Standard. Id. at ¶ 9. A mounding analysis Mr. Costa conducted in June, 2018 (Costa PFT Ex. 2), indicated that the groundwater mound created by the recharge from the proposed basin may, under certain circumstances, extend laterally over the area of LNAPL. Id. at ¶ 12. Algonquin's environmental consultant, TRC Environmental, Inc. ("TRC"), used the mounding analysis to

evaluate whether the LNAPL would migrate as a result of the mounding, and concluded that the groundwater mound will not mobilize the LNAPL, estimating the distance of potential LNAPL migration as less than one inch. Id. at ¶ 13. TRC also conducted a leachability evaluation of arsenic, PAHs and other metals, and concluded that they do not readily leach from soil to groundwater. Id. at ¶ 14. Based on these evaluations, Mr. Costa concluded that the proposed stormwater infiltration basin is properly designed in accordance with Standard 3 because it meets all design parameters for infiltration basins, and infiltration of the required recharge volume will not cause or contribute to groundwater contamination. Id. at ¶ 15.

On the basis of Mr. Costa's testimony, and in the absence of any opposing testimony from an expert with comparable experience designing stormwater management systems, I find that a preponderance of the evidence demonstrates compliance with Stormwater Standard 3 because the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Stormwater Handbook.

2. The proposed Project's Stormwater Management System Complies with 310 CMR10.05(6)(k)(5)

Stormwater Management Standard 5 at 310 CMR 10.05(6)(k)5 provides in relevant part that:

> [f]or land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable …

(emphasis supplied). The Wetlands Regulations at 310 CMR 10.04 define "land uses with higher potential pollutant loads" or "LUHPPL" as including "a disposal site." The Stormwater Management Handbook at Volume 1, Chapter 1, Page 12 states that this means "disposal site" as defined in M.G.L. c.21E and the MCP. The Handbook also provides that "a stormwater

discharge from a [LUHPPL] … requires treatment by the specific structural BMPs determined by MassDEP to be suitable for treating discharges from such use," and that "[l]ike all stormwater discharges, stormwater discharges from [LUHPPL] require the use of a treatment train that provides 80% TSS removal prior to discharge." Id., at p. 13. The Handbook requires that "this treatment train … provide for at least 44% TSS removal prior to discharge to the infiltration BMP and shall also be designed to treat 1.0 inch of runoff times the total impervious area at the post-development site. " Id.

The Petitioner and the Intervenors assert that the Project site is a LUHPPL. The Petitioner asserts this to be the case because the Project site is a "disposal site."[21] The Intervenors assert it to be the case because the Project operations will require above-ground storage tanks to store hazardous materials. Algonquin argued in its Closing Brief that "neither the proposed land use as a natural gas compressor station, nor the Historic Fill in which the infiltration basin will be sited, qualify the Project as a LUHPPL. In light of the NOAF/NON's determination that the site does not contain "Historic Fill", but is a "disposal site", I find that the evidence supports a finding that the Project site could be designated as LUHHPL.

Whether the Project site is designated as a LUHPPL or not makes little difference in the determination of this issue because the evidence supports a finding that the stormwater management system complies with Standard 5. Although Mr. Hughes opined that siting a

[21] 310 CMR 40.006 defines "Disposal Site" as any structure, well, pit, pond, lagoon, impoundment, ditch, landfill or other place or area, excluding ambient air or surface water, where uncontrolled oil and/or hazardous material has come to be located as a result of any spilling, leaking, pouring, abandoning, emitting, emptying, discharging, injecting, escaping, leaching, dumping, discarding or otherwise disposing of such oil and/or hazardous material. The term shall not include any site containing only oil or hazardous materials which: are lead-based paint residues emanating from a point of original application of such paint; resulted from emissions from the exhaust of an engine; are building materials still serving their original intended use or emanating from such use; or resulted from release of source, byproduct or special nuclear material from a nuclear incident, as those terms are defined in 42 U.S.C. § 2014, if such release was subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under 42 U.S.C. § 2210.

stormwater infiltration basin in contaminated soil violates the standard, Mr. Costa persuasively testified that the stormwater management system was conservatively designed and will meet all LUHPPL requirements, because it:

> 1) Provides stormwater Best Management Practices (BMPs) of at least 44% TSS removal prior to discharge to the infiltration BMP [Massachusetts Stormwater Handbook - Volume 1, Chapter 1, Page 14];
>
> 2) Implements a source control program – Quarterly inspections and maintenance, as necessary, for each stormwater BMP [Massachusetts Stormwater Handbook - Volume 1, Chapter 1, Page 14];
>
> 3) Treats a water quality volume of 1.0 inch of runoff multiplied by the total impervious area at the post-development site [Massachusetts Stormwater Handbook - Volume 1, Chapter 1, Page 14];
>
> 4) Provides a treatment train of appropriate pretreatment devices including deep sump hooded catchbasins and sediment forebays [Massachusetts Stormwater Handbook - Volume 1, Chapter 1, Page 14]; and
>
> 5) Provides a proposed BMP that is selected from the Stormwater Standards Volume 1, Chapter 1, Standard 5 Table – Infiltration Basin and designed in accordance with the specifications and sizing methodologies in the Handbook. [Massachusetts Stormwater Handbook - Volume 1, Chapter 1, Page 14]

Costa PFT at ¶ 51. Based on this detailed and specific testimony about how the system is designed to meet the LUHPPL requirements, I find that the Project complies with Stormwater Standard 5 at 310 CMR 10.05(6)(k)(5).

E. The SOC adequately addressed the proposed Project site's status as a Disposal Site[22]

As discussed above, the characterization of the fill as "Historic Fill" or otherwise does not make a difference to the Project's compliance with the Stormwater Management Standards. A preponderance of the evidence demonstrates that Algonquin's stormwater management system complies with those standards. By requiring compliance with those standards, the Wetlands

[22] This issue improperly characterized the entire property now owned by Algonquin as a "disposal site"; that was incorrect. Only portions of the property are considered "disposal sites" within the meaning of M.G.L. c. 21E and the MCP.

Regulations account for the existing site conditions. Specific questions of compliance with the MCP are beyond the scope of a wetlands proceeding. Further, MassDEP's issuance of the NOAF/NON demonstrates that the Bureau of Waste Site Cleanup is addressing compliance with the MCP, and can likewise be expected to address any 21E-related issues that arise during construction of the proposed Project. Because the SOC contains General Condition 3, which requires compliance with other applicable laws and regulations, including G.L. c. 21E and the MCP, I find that the SOC adequately addresses the Project site's status as a "disposal site."

CONCLUSION

Based on the foregoing, I find that MassDEP properly issued the SOC. I recommend that MassDEP's Commissioner issue a Final Decision affirming this Recommended Final Decision and approving the Final Order of Conditions attached to MassDEP's Closing Brief, and recommend the addition of a new Special Condition that prohibits alterations of, and requires maintenance of, the restoration area in the Riverfront Area, as a continuing condition.

Date: October 16, 2019

Jane A Rothchild
Presiding Officer

NOTICE- RECOMMENDED FINAL DECISION

This decision is a Recommended Final Decision of the Presiding Officer. It has been transmitted to the Commissioner for his Final Decision in this matter. This decision is therefore not a Final Decision subject to reconsideration under 310 CMR 1.01(14)(d), and may not be appealed to Superior Court pursuant to M.G.L. c. 30A. The Commissioner's Final Decision is subject to rights of reconsideration and court appeal and will contain a notice to that effect.

Because this matter has now been transmitted to the Commissioner, no party shall file a motion to renew or reargue this Recommended Final Decision or any part of it, and no party shall communicate with the Commissioner's office regarding this decision unless the Commissioner, in his sole discretion, directs otherwise.

SERVICE LIST

IN THE MATTER OF: **ALGONQUIN GAS TRANSMISSION LLC**

Docket No. WET-2016-025 **Weymouth**

REPRESENTATIVE	PARTY
J. Raymond Miyares, Esq. Rebekah Lacey, Esq. Ivria G. Fried, Esq. Miyares and Harrington, LLP 40 Grove Street, Suite 190 Wellesley, MA 02482 ray@miyares-harrington.com rlacey@miyares-harrington.com ifried@miyares-harrington.com	PETITIONER Town of Weymouth Conservation Commission
Joseph Callanan, Esq. Town Solicitor Town of Weymouth 75 Middle Street Weymouth, MA 02189 jcallanan@weymouth.ma.us	PETITIONER Town of Weymouth Conservation Commission
Michael H. Hayden, Esq. Morrison Mahoney LLP 250 Summer Street Boston, MA 02210-1181 mhayden@morrisonmahoney.com	INTERVENORS
Margaret Bellafiore 49 Caldwell Street Weymouth, MA 02191 Margaret@mobius.org	INTERVENORS
Ralph Child, Esq. Marilyn Newman, Esq. Nicholas C. Cramb, Esq. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. One Financial Center Boston, MA 02111 RChild@mintz.com MNewman@mintz.com nccramb@mintz.com	APPLICANT Algonquin Gas Transmission LLC

Michael Dingle, Esq., Litigation Manager DEPARTMENT
MacDara Fallon, Esq., Senior Counsel
MassDEP Office of General Counsel
One Winter Street
Boston, MA 02108
Mike.Dingle@state.ma.us
macdara.fallon@state.ma.us

Cc:
Daniel Gilmore, Biologist
Wetlands & Waterways Program
MassDEP Southeast Regional Office
20 Riverside Drive
Lakeville, MA 02347
daniel.gilmore@state.ma.us

Shawn Walsh, Chief Regional Counsel
MassDEP/Southeast Regional Office
Office of General Counsel
20 Riverside Drive
Lakeville, MA 02347
shawn.walsh@state.ma.us

Leslie DeFilippis, Paralegal
MassDEP/Office of General Counsel
One Winter Street
Boston, MA 02108
Leslie.defilippis@state.ma.us