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An Overview of the Procedures Applicable to Marine Construction and Dredging Processes

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MEMORANDUM

TO: Evan Matthews, Port Director, Quonset Development Corporation
FROM: Kirby Aarsheim
SUBJECT: An Overview of the Procedures Applicable to Marine Construction and Dredging Processes

Per your request, I researched the processes that must be considered, and in some cases mandatorily followed, when engaging in a marine construction and or dredging project. I began by examining the triennial review process with particular attention to the agency's review of water quality standards. Next, I summarized the procedures to follow in order to obtain approval for the marine construction project, including RIDEM and CRMC's involvement in the permitting process. In addition, I added a portion on the dredging permit process from RIDEM as well as CRMC's regulations that must be considered. Included in the memo is also a brief note on North Kingstown's Harbor Management Plan and its mention of water quality standards.

For itemized lists of the dredging application requirements please see the attached Appendix A taken from RIDEM's Rules and Regulations for Dredging and the Management of Dredged Material and Appendix B for CRMC's additional dredging and disposal of dredged material requirements.

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I. TRIENNIAL REVIEW PROCESS

A. State Review and Revision

1. State Consultation with Environmental Protection Agency

Pursuant to the Rhode Island Department of Environmental Management (RIDEM) Water Quality Regulations Rule 8(F), water quality standards are subject to approval by the administrator pursuant to Section 303(c) of the Clean Water Act.¹ In accordance with paragraph 303(c)(1) of the Act, the water quality standards shall be reviewed periodically but at least once every three years, and amended as necessary.² The RIDEM recently finalized a modification to the Water Quality Regulations and the amendments became effective June 2, 2009.³ The agency anticipates initiating a "triennial" review of the Water Quality Regulations next year (2010).⁴

The triennial review process is conducted pursuant to Section 303(c)(1) of the Clean Water Act, which states: "The Governor of a State or the State water pollution control agency of such State shall from time to time (but at least once each three year period beginning with the date of enactment of the Federal Water Pollution Control Act Amendments of 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Results of such review shall be made available to the Administrator."⁵ The 3-year period is to be measured from the date of the letter in which the State informs the Environmental Protection Agency (EPA) that revised or new standards have been adopted for the

¹ Rhode Island Department of Environmental Management, *Water Quality Regulations, Rule 8 Surface Water Quality Standards* at *15 (amended May 2009), available at <http://www.dem.ri.gov/pubs/regs/regs/water/h20q09.pdf>.

² *Id.*

³ *See Id.*

⁴ *See Id.*

⁵ Clean Water Act, 33 U.S.C. § 1313 (Effective Oct. 10, 2000).

affected waters and are being submitted for EPA review.⁶ If no changes were made in the standards for those waters, then the 3-year period is to be measured from the date of the letter in which the State informs the EPA that the standards were reviewed and no changes were made.⁷

The first step in the review process is for the State to consult with the EPA regional offices, before the State standards are formally submitted for EPA review.⁸ States will benefit by early consultation with EPA because the agency will assist the State in identifying potential areas of disagreement between the EPA and the State before the issues are formally drafted and submitted for final review.⁹ The next step, as required by Section 303(c)(1), is for the State to hold a public hearing in reviewing and revising water quality standards.¹⁰ The EPA suggests that the State involves the public by including citizens affected by the water quality standards in question, i.e., the regulated community (municipalities and industry).¹¹ States are also urged to engage in inter-governmental coordination with local, State, and Federal agencies.¹² Such intergovernmental coordination is an action that the State of Rhode Island has implemented by having the RIDEM and the Coastal Management Resources Council (CRMC) work together in approval of permits for dredging and other activities conducted in protected waterbodies.

During each 3 year review cycle, States will review the general provisions of water quality standards.¹³ States take into consideration new statutes, regulation or guidance on both a state and federal level, legal decisions involving application of standards and other pertinent

⁶ Water Quality Handbook, *Chapter 6: Procedures for Review and Revision of Water Quality Standards* at *1 (updated January 13, 2009), available at <http://www.epa.gov/waterscience/standards/handbook/chapter06.html>.

⁷ *Id.*

⁸ *Id.* at *3.

⁹ *Id.* at *4.

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

clarifications or revisions.¹⁴ Water quality standards are needed for all “waters of the United States” which, in addition to salt waters, includes all interstate waters, such as wetlands, lakes, rivers, streams, and ponds.¹⁵ States are to ensure that all waters included in the States’ water quality standards have been assigned designated uses and have protective criteria.¹⁶

2. *Rhode Island Water Quality Standards and Uses*

The State of Rhode Island describes the purpose of the water quality standard as defining the water quality goals of a surface waterbody, or portion thereof, by designating the use or uses of the water and by setting criteria necessary to protect the uses.¹⁷ Water quality standards are implemented as an effort to protect public health, safety and welfare and to enhance the quality of water and serve the purposes of the Clean Water Act and Chapter 46-12 of the General Laws of Rhode Island.¹⁸ Water quality standards should aim to improve protection and propagation of fish and wildlife, recreation in and on the water, agriculture and industrial uses and also navigation.¹⁹ Such standards shall accomplish water quality goals for a specific surface water body or waterbody segment while still serving as the regulatory basis for the establishment of water-quality-based-treatment controls and strategies beyond the technology-based levels of treatment required by Sections 301(b) and 306 of the Clean Water Act.²⁰

Surface waters are assigned to classes based on the designated uses for the waterbody.²¹ Uses extending beyond the designated use may be permitted (not including waste assimilation or

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *See* note 1 at *10.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.* at *11.

waste transport); however the water shall be regulated to protect the designated use.²² The water quality standards relevant to ocean waters are the seawater classifications listed as follows:

Class SA - These waters are designated for shellfish harvesting for direct human consumption, primary and secondary contact recreational activities, and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation and industrial cooling. These waters shall have good aesthetic value.

Class SB - These waters are designated for primary and secondary contact recreational activities; shellfish harvesting for controlled relay and depuration; and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value.

Class SB1 - These waters are designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges. However all Class SB criteria must be met.

Class SC - These waters are designated for secondary contact recreational activities, and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value.

Certain Class SA, SB and SB1 waterbody segments may have partial use designations assigned to them as noted in rules 8.B(3) below. In addition, some Class SA waters contain Closed Safety Zones which are waters in the vicinity of an approved sanitary discharge which may be impacted in the event of complete failure of treatment and are therefore, currently prohibited to shellfishing. Although shellfishing use is restricted, all SA criteria must be met.²³

The use classification navigation is designed to protect ships and their crews and to maintain water quality so as to not restrict or prevent navigation.²⁴ The purpose of the protection and propagation of fish, shellfish and wildlife classification is for States to designate aquatic life uses that appropriately address biological integrity and adopt biological criteria necessary to

²² *Id.*

²³ *Id.* at *11-12.

²⁴ Water Quality Handbook, *Chapter 2: Designation of Uses* at *6 (updated January 13, 2009), available at <http://www.epa.gov/waterscience/standards/handbook/chapter02.html>.

protect those uses.²⁵ Recreational uses are typically divided into two primary contact recreation and secondary contact recreation.²⁶ Primary contact recreation protects people from the threat of illness due to activities (such as swimming, water skiing and surfing) involving the potential for ingestion and immersion of water.²⁷ Secondary contact recreation is protective when immersion is unlikely, during activities such as boating, wading and rowing.²⁸ The agricultural use classification describes waters that are suitable for irrigation of crops, consumption by livestock, and other farming uses.²⁹ Finally, the industrial use classification includes industrial cooling and process water supplies which aims to protect industrial equipment from damage by cooling and process waters.³⁰

The following is a list of the specific water use classifications for the waters surrounding the Port of Davisville. The West Passage waters are those in the vicinity of Piers No. 1 and No. 2 at the Davisville Depot, south of a line from the northeast corner of Pier No. 2 (the more northerly pier at the Davisville Depot) to Nun Buoy 14, north of a line from the RIDEM range Marker located on the bulkhead approximately 300 feet south of Pier No. 1 (the more southerly pier at the Davisville Depot) to Nun Buoy 12, including all waters between the above described lines west of the Northeastern end of the bulkhead at Quonset State Airport through Nun Buoy 16, North Kingston (Waterbody ID number RI0007027E-03B).³¹ This area is classified as SB waters, a classification which designates the water be preserved for primary and secondary contact recreational activities, shellfish harvesting, controlled relay and depuration, as well as

²⁵ *Id.* at *3.

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.* at *5.

³⁰ *Id.*

³¹ Rhode Island Department of Environmental Management, *Water Quality Regulations, Appendix A Water Quality Classification Descriptions* at *A-28 (amended May 2009), available at <http://www.dem.ri.gov/pubs/regs/regs/water/h20q09.pdf>.

fish and wildlife habitat. In addition, SB waters shall be suitable for navigation, industrial cooling and aquacultural uses.³²

The West Passage water, within the vicinity of Quonset Point, are 1500 feet of shore from the western end of the carrier pier to a point 1000 feet north of Quonset Point, North Kingston (Waterbody ID number RI0007027E-03C).³³ This area is classified as SB1 waters which includes the same specifications as SB waters with the exception that in SB1 waters, the primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges.³⁴

The West Passage waters in the vicinity of Quonset Point, exclusive of those waters described above, are considered to be north and east of the intersection of a line extending from Fourth Street, Sauga Point, North Kingston, southeast to the northeastern most point on Fox Island and contain a line drawn from the Wickford Lighthouse to Buoy R 6, west of a line from Buoy R 6 to Nun Buoy 10, south of a line from Nun Buoy 10 through F G Buoy 11 extended to the shore of North Kingstown (Waterbody ID number RI0007027E-03D).³⁵ This area is classified as SB waters, as described above.

The West Passage waters in the vicinity of Quonset Point that are south of a line from the northeastern end of the bulkhead at Quonset State Airport to Nun Buoy 10 and north of a line from Nun Buoy 10 through F G Buoy 11 extended to the shore of North Kingstown (Waterbody ID number RI0007027E-03E, closed safety zone).³⁶ This area is classified as SA waters, which instructs that the water be preserved for shellfish harvesting for direct human consumption,

³² See note 1 at *12.

³³ See note 31.

³⁴ See note 1 at *12.

³⁵ See note 31.

³⁶ *Id.*

primary and secondary contact recreational activities, and fish and wildlife habitat. SA waters shall also be suitable for navigation, industrial cooling, and aquacultural uses.³⁷

The West Passage waters in the vicinity of Quonset Point that lie within the following intersection of lines: south of a line from the Wickford Lighthouse to Buoy R 6; west of a line from Fox Island to Nun Buoy 8; east and north of a line from the Southerly extension of 2nd Street in the Sauga Point area in North Kingstown, to the western extremity of Sand Point on Jamestown (Waterbody ID number RI0007027E-03F, closed safety zone) are classified as SA waters, as described above.³⁸

The above referenced water quality classifications (SA, SB, and SB1) indicate the water quality goals for the listed waterbody. Assessments of present water quality conditions are made on a case-by-case basis through information from the most recent State of the State's Waters 305(b) Report and/or any other applicable data as approved by the Director of RIDEM.³⁹ The 305(b) Report is developed biennially (in even-numbered years) by the RIDEM's Office of Water Resources and distributed to all major Rhode Island public libraries.⁴⁰ Copies are also available for review on the RIDEM website at <http://www.dem.ri.gov/pubs/305b/index.htm>.

The waters of the state were designated in the 1950's and 1960's for the Clean Water Act uses.⁴¹ For salt water areas, the practice of designating waters followed the general process of identifying most waters as SA (used for shellfishing, swimming, aquatic life use, fish consumption).⁴² Waters in the vicinity of a sanitary outfall were classified to account for this

³⁷ See note 1 at *12.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ E-mail from Connie Carey, Principal Environmental Scientist, RIDEM Office of Water Resources, to Kirby Aarsheim, Law Student at Roger Williams School of Law (June 16, 2009, 08:27 EST).

⁴² *Id.*

use.⁴³ Waters at the point of a sanitary discharge were classified as SC but since that was not in accordance with the CWA requirement that all waters shall be designated for swimming, RIDEM re-classified these waters to SB1 during the 1997 triennial review process and incorporated a swimming bacteria standard with Class SB1 waters.⁴⁴ Also, there is generally a buffer classification between SB1 and SA waters, Class SB.⁴⁵

3. Selection of Water Bodies for Review

Water quality standards are commonly reviewed in detail for those waters where combined sewer overflow funding decisions are pending, water quality based permits are scheduled to be issued, CWA goals are not being met, toxins in water have been detected or suspected, or there may be potential impacts on threatened or endangered species.⁴⁶ Other reasons for examining water bodies in detail include human health problems, court orders and economic and social impacts of existing water quality standards.⁴⁷

In addition, States may have other reasons for examining water bodies. For example, pursuant to Rule 19 of RIDEM's Water Quality Regulations, any person may request that the Director modify a water quality standard.⁴⁸ The Director has been granted authority under Rule 2 of RIDEM's Water Quality Regulation as well as under section 46-12-3 (g) of the General Laws of Rhode Island of 1956, as amended, to promulgate water quality standards.⁴⁹ The applicant's request must include a preponderance of clear and scientifically valid evidence having a

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ See note 6 at *6.

⁴⁷ *Id.*

⁴⁸ Rhode Island Department of Environmental Management, *Water Quality Regulations, Rule 19 Modification of Water Quality Standards* at *32 (amended May 2009), available at <http://www.dem.ri.gov/pubs/regs/regs/water/h20q09.pdf>.

⁴⁹ *Id.*

probative value to demonstrate that such modification is consistent with RIDEM regulations.⁵⁰

In addition, a Use Attainability Analyses (UAA) must be conducted for either a request to remove a designated use specified in Section 101(a)(2) of the Clean Water Act (CWA) or to propose a subcategory of uses specified in Section 101(a)(2) of the CWA.⁵¹ Section 101(a)(2) states that the objective of the CWA is to restore and maintain the chemical, physical and biological integrity of the Nation's waters.⁵² The Director shall attempt to institute water quality standards that further the national goal for water quality which provides for protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water.⁵³ In doing so, the Director shall take into consideration environmental, technological social and economic factors.⁵⁴ Furthermore, designation of uses which do not support the protection and propagation of fish and wildlife, and recreation in and on the water (Section 101(a)(2) of the Act), may be granted if the Director is satisfied that the use is supported by a Use Attainability Analyses.⁵⁵

In assessing whether to modify water quality standards, the Director takes into consideration the following criteria: conservation, protection, use and value of the waters for public water supplies, propagation of fish and wildlife, recreational purposes, agricultural, industrial and navigation.⁵⁶ The Director shall also assure that water quality standards provide for the attainment of the water quality standards of downstream waters. Modifying a designated use may result in modifying the applicable criteria of the affected or identified water segment, to

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² Clean Water Act, 33 U.S.C. § 1251 (1972).

⁵³ *Id.*

⁵⁴ *See* note 48.

⁵⁵ *Id.*

⁵⁶ *Id.*

criteria necessary to protect the new designated use of that affected/identified water segment.⁵⁷

However, in no case may criteria be modified if it would adversely affect existing uses or other designated uses.⁵⁸

4. Evaluation of Designated Uses and Criteria

An intensive survey of the water body may not be necessary, depending the adequacy of existing data on the water body being reviewed.⁵⁹ The purposes of evaluating a water body include: pinpointing problems, as well as characterizing present, attainable and precluded uses.⁶⁰ If research reveals that an existing designated use of a water body is impaired, then the agency is to determine the cause by an assessment of the physical conditions and the presence of pollutants.⁶¹ Should the designated use be precluded due to physical limitations of the water body, then the State may modify that standard to create a habitat suitable for species to thrive.⁶²

A key component of the water quality standards review process is whether to consider the suitability of the water body to attain a specific use.⁶³ Suitability is assessed through the professional judgment of the evaluators by reviewing the physical, chemical, and biological characteristics of the water, its geographic setting and scenic qualities and the socioeconomic and cultural characteristics of the surrounding area.⁶⁴ Sometimes, physical factors may preclude the attainment of uses despite improvements in the chemistry of the water.⁶⁵ States also need to give consideration to the incidental uses, such as swimming, that may be made of the water

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *See* note 6 at *6.

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *See* note 6 at *7.

notwithstanding the use designation.⁶⁶ In order to protect public health, States are instructed to set criteria to reflect swimming (for example) if it appears that such recreation will take place in the water body.⁶⁷

The common sense and good judgment of State evaluators play an essential role in setting appropriate uses and criteria.⁶⁸ It is important to note that if a change in the designated use is warranted based on a use attainability analysis then a State may decide to modify the uses currently assigned.⁶⁹

Furthermore, the Water Quality Standards Regulation allows States to establish uses that are inconsistent with the section 101(a)(2) goals of the Act if the more stringent technology required to meet the goals will cause substantial and widespread economic and social impact.⁷⁰ The existing water quality standard must be maintained unless the requirements for the standard demonstrate an incremental, substantial and widespread impact on the affected community.⁷¹

States must also evaluate the need for a change in criteria when considering a change in use designations.⁷² If a use is removed, the criteria to protect that use may be deleted or revised in order to protect the remaining uses.⁷³ If a use is added, then the criteria must be updated to accommodate the new use. Certain criteria are deemed essential for inclusion in all State standards, and criteria for CWA section 397(a) toxic pollutants must be addressed in a manner

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *See* note 6 at *8.

⁷³ *Id.*

consistent with Section 303(c)(2)(B).⁷⁴ All State standards contain narrative statements (in addition to numerical limits) that can be used as a basis for regulating discharge into waters.⁷⁵

Rhode Island's narrative water quality criteria include physical, chemical and biological criteria as the parameters of minimum water quality necessary to support the State's surface water use classifications.⁷⁶ Pursuant to RIDEM's Water Quality Standards Rule 8(D), the following minimum criteria are applicable to all waters of the State, unless criteria specified for individual classes are more stringent:⁷⁷

(D) Water Quality Criteria - The following physical, chemical and biological criteria are parameters of minimum water quality necessary to support the surface water use classifications of Water Use Classification and shall be applicable to all waters of the State.

(1). General Criteria - The following minimum criteria are applicable to all waters of the State, unless criteria specified for individual classes are more stringent:

(a). At a minimum, all waters shall be free of pollutants in concentrations or combinations or from anthropogenic activities subject to these regulations that: i. Adversely affect the composition of fish and wildlife; ii. Adversely affect the physical, chemical, or biological integrity of the habitat; iii. Interfere with the propagation of fish and wildlife; iv. Adversely alter the life cycle functions, uses, processes and activities of fish and wildlife; or v. Adversely affect human health.

(b). Aesthetics - all waters shall be free from pollutants in concentrations or combinations that: i. Settle to form deposits that are unsightly, putrescent, or odorous to such a degree as to create a nuisance, or interfere with the existing or designated uses; ii. Float as debris, oil, grease, scum or other floating material attributable to wastes in amounts to such a degree as to create a nuisance or interfere with the existing or designated uses; iii. Produce odor or taste or change the color or physical, chemical or biological conditions to such a degree as to create a nuisance or interfere with the existing or designated uses; iv. Result in the dominance of species of fish and wildlife to such a degree as to create a nuisance or interfere with the existing or designated uses.

(c). Radioactive substances - The level of radioactive materials in all waters shall not be in concentrations or combinations which will likely be harmful to humans, fish and wildlife, or result in concentrations in organisms producing undesirable conditions.

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *See* note 1 at *14.

⁷⁷ *Id.*

- (d). Nutrients - Nutrients shall not exceed the limitations specified in rule 8.D.(2) and 8.D.(3) and/or more stringent site-specific limits necessary to prevent or minimize accelerated or cultural eutrophication.⁷⁸
- (e). Thermal Mixing Zones - In the case of thermal discharges into tidal rivers, fresh water streams or estuaries, where thermal mixing zones are allowed by the Director, the mixing zone will be limited to no more than one quarter (1/4) of the cross sectional area and/or volume of river flow, stream or estuary, leaving at least three quarters (3/4) free as a zone of passage. In wide estuaries and oceans, the limits of mixing zones will be established by the Director.
- (f). Non-thermal Mixing Zones - In the case of non-thermal discharges, in applying these standards the Director may recognize, where appropriate, a limited acute and/or chronic mixing zone(s) on a case-by-case basis. The locations, size and shape of these zones shall provide for the maximum protection of fish and wildlife.
- (g). At a minimum, all mixing zones must: i. Meet the criteria for aesthetics, in accordance with rule 8.D.(1).b; ii. Be limited to an area or volume that will prevent interference with the existing and designated uses in the associated waterbody segment and beyond; iii. Allow an appropriate zone of passage for migrating fish and other organisms, prohibit lethality to organisms passing through the mixing zone, and protect for spawning and nursery habitat; and iv. Not allow substances to accumulate in sediments, fish and wildlife or food chains such that known or predicted safe exposure levels for the health of humans or fish and wildlife will be exceeded.
- (h). For activities that will likely cause or contribute to flow alterations, streamflow conditions must be adequate to support existing and designated uses.⁷⁹

In addition, various types of criteria including laboratory-derived and site-specific criteria are often considered. Site-specific criteria is a method of taking local conditions into account so that the criteria is successful in protecting the designated use without being more or less stringent than necessary.⁸⁰

5. Draft Water Quality Standards, Public Hearing, and Adoption of Revisions

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

After the State evaluates the criteria of reviewable water quality standards, then the State is advised to submit a draft of the water quality standards to the EPA for review.⁸¹ The EPA will review the standards and make comments on proposed revisions to assist the State in producing standards that are in line with EPA requirements.⁸² Once proposed changes to standards are developed, the CWA requires the State to hold a public hearing where the analysis and supporting documentation prepared during the drafting of the proposed water quality standard are made available to the interested public.⁸³ Open discussion of the evidence and analysis supporting the standards will assist the State in making its decision as to whether to go forward with the proposed standards.⁸⁴

Within 30 days of its final administrative action, States are to submit revisions to the water quality standards, supporting analysis and State Attorney General certification that the standards are duly adopted pursuant to State law to the EPA for review.⁸⁵ Final administrative action is to be the last action a State must take before its revisions becomes a rule under State law and then it may officially transmit State-adopted standards to the EPA for review.⁸⁶

B. EPA Review and Approval of the State's New or Revised Water Quality Standards

As previously mentioned, once the State has adopted or revised water quality standards, the State must then (pursuant to CWA Section 303(c)) submit such standards to the EPA for review and approval.⁸⁷ The EPA will then review and either approve or reject the standards

⁸¹ *Id.* at *8.

⁸² *Id.*

⁸³ *Id.* at *9.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

based on whether the standards meet the requirements of the CWA and State Water Quality Standards Regulation.⁸⁸

Some of the elements that the EPA considers upon review include the following: (1) Whether a use attainability analysis (UAA) is available to support the designation of the uses, (2) Whether the State's water quality criteria are sufficient to protect the designated uses, (3) EPA ensures that uses and criteria are consistent throughout the water body and that downstream standards are protected, (4) For waters where uses have not been designated in support of the fishable/swimmable goal of the CWA, EPA determines whether the alternative uses are based on an acceptable UAA and whether such UAAs have been reviewed every 3 years as required by 40 CFR 131.20(a), (5) EPA determines whether the State has included criteria for CWA section 307(a) "priority" pollutants sufficient to satisfy the requirements of CWA section 303(c)(2)(B), (6) EPA reviews comments and suggestions on previous State water quality standards to ensure that any areas for improvement or conditions attached to previous approvals have been acted upon satisfactorily, and (7) EPA reviews whether the policies are consistent with the latest EPA guidance and regulatory requirements.⁸⁹

The EPA Regional Administrator has the responsibility for approving or disapproving water quality standards and is the primary point of contact for the States.⁹⁰ However, the water quality standards are still reviewed concurrently by EPA Headquarters and the regional Administrator.⁹¹ The EPA regional offices must provide copies of State water quality standards to EPA Headquarters for review.⁹² Copies of State water quality standards revisions (draft and final) must be provided to the Director and the Standards and Applied Science Division which

⁸⁸ *Id.*

⁸⁹ *See* note 6 at *8-*9.

⁹⁰ *Id.* at *9.

⁹¹ *Id.*

⁹² *Id.*

will involve other EPA offices in the review as appropriate.⁹³ Upon review of State water quality standards, three outcomes are generally possible: (1) EPA approval, in whole or in part, of the submitted State water quality standards, (2) EPA disapproval, in whole or in part, of the submitted State water quality standards; and (3) EPA conditional approval, in whole or in part, of the submitted State water quality standards.⁹⁴

Although EPA prefers that States adopt their own standards, EPA may promulgate federal standards under section 303(c)(4) of the CWA when a revised or new water quality standard submitted by a State is not to be consistent with the CWA requirements.⁹⁵ In addition, EPA would be able to promulgate standards for a State that failed to conduct a triennial review if EPA determines that a new or revised standard is necessary to meet the requirements of the CWA.⁹⁶

II. APPROVAL PROCESS FOR MARINE CONSTRUCTION

A. RIDEM Procedures

Applicants seeking approval for activities that will likely cause or contribute pollution to the waters of the State must obtain all required approvals from the RIDEM Director.⁹⁷ The Director has vested authority via the General Laws of Rhode Island.⁹⁸ Depending on the nature of the project, applicants may be required to seek approval from the Rhode Island Pollutant Discharge Elimination System (RIPDES) and Water Resources in accordance with the RIPDES Regulations and Order of Approval from RIDEM.⁹⁹

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ *Id.* at *12.

⁹⁶ *Id.*

⁹⁷ Rhode Island Department of Environmental Management, *Water Quality Regulations, Rule 13 Approvals* at *26 (amended May 2009), available at <http://www.dem.ri.gov/pubs/regs/regs/water/h20q09.pdf>.

⁹⁸ Rhode Island Department of Environmental Management, *Water Quality Regulations, Rule 2 Legal Authority* at *1 (amended May 2009), available at <http://www.dem.ri.gov/pubs/regs/regs/water/h20q09.pdf>.

⁹⁹ See note 97.

In addition, certain activities require approval in the form of a Water Quality Certificate (WQC) which shall have the full force and effect of a permit issued by the Director.¹⁰⁰

Applicants for any project which may result in a discharge to waters of the State and which requires a federal permit must directly apply for a WQC from the RIDEM.¹⁰¹ Also, projects involving one or more of the activities listed below which are within the jurisdiction of the CRMC and which do not require an approval in accordance with the Rhode Island Freshwater Wetlands Act must apply for a WQC.¹⁰² These projects include: dredging and dredged material disposal, filling of waters of the state, residential development of six or more units, any commercial, industrial, state or municipal land development that results in the creation of 40,000 square feet or more of additional impervious area, five or more acres of land disturbance, construction of new facilities or expansion of existing facilities in marinas, flow alterations, harbor management plans for aspects that will impact water quality, and point source discharge pollutants.¹⁰³

The RIDEM provides applicants with forms for WQCs and Orders of Approval Applications to be submitted to the Director and shall contain all information required by the Director.¹⁰⁴ Such documentation shall include when applicable, documentation that the proposed project is consistent with the wastewater facility plan and conforms to State Guide Plan policies, and goals, including basis of design, design assumptions, data, and calculations.¹⁰⁵ The following additional information may also be required: comprehensive engineering report and detailed engineering plans and specifications, timetable for and duration of construction and any

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ Rhode Island Department of Environmental Management, *Water Quality Regulations, Rule 14 Application for Approvals* at *27 (amended May 2009), available at <http://www.dem.ri.gov/pubs/reg/reg/water/h20q09.pdf>.

¹⁰⁵ *Id.*

information deemed necessary by the Director to fully assess the impact of the proposed activity upon the waters of the State or to support any changes in the scope of the project, actual or anticipated.¹⁰⁶ The applicant may be required to support by a preponderance of clear and scientifically valid evidence having a probative value demonstrating, to the satisfaction of the Director, that the activity will not violate the surface water quality standards established by these Water Quality Regulations, and amendments thereto.¹⁰⁷

All engineering plans and specifications required for construction approval must be certified by a professional engineer registered in the State pursuant to Chapter 5-8 of the General Laws of Rhode Island of 1956, as amended.¹⁰⁸ It is noted that failure to submit the information noted above, pursuant to Rule 13 and Rule 14 of RIDEM Water Quality Regulations, shall result in a valid cause for denial of the application.¹⁰⁹

Once the application is complete and submitted for approval, the RIDEM will review the application and notify the applicant in writing as to whether the agency finds the application to be totally complete.¹¹⁰ In any areas where the RIDEM holds the application as deficient, the applicant will be required to correct the deficiencies and the application process will be suspended until the application is corrected.¹¹¹ At any time during review, the Director may request that additional information be submitted, he may issue an approval requiring such terms, conditions, management practices and operation requirements that he finds necessary to comply

¹⁰⁶ *Id.* at *28.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ Rhode Island Department of Environmental Management, *Water Quality Regulations, Rule 15 Procedures of Review for Applications for Orders of Approval and Water Quality Certifications* at *29 (amended May 2009), available at <http://www.dem.ri.gov/pubs/regs/regs/water/h20q09.pdf>.

¹¹¹ *Id.*

with the requirements of applicable state or federal laws, or deny the application for failure to satisfy any conditions explained in RIDEM's Water Quality Regulations.¹¹²

When the Director finds that the WQC is complete, notice of the proposed project shall be provided to all abutters of any property upon which the activity will occur and to any persons, agencies or organizations that the Director believes may be impacted.¹¹³ If the Director finds that it is not feasible to notify any impacted party, then the RIDEM may require the applicant to publish notice of the plan in the local and/or state newspaper.¹¹⁴ Following such notification of the project, a thirty day comment period shall be made available for parties to provide written comments and/or request a hearing on the project in which to provide oral comments.¹¹⁵ A hearing will be conducted if twenty five or more persons or a governmental subdivision requests such a hearing.¹¹⁶ The Director will consider all written comments and oral comments made during the hearing and formulate a final agency decision on the application.¹¹⁷

A project approval demonstrates that the applicants have complied with all terms and conditions however it does not relieve the applicant of the continuing responsibility to comply with any applicable rule of the RIDEM's Water Quality Regulations or applicable sections of the CWA.¹¹⁸ In addition, issuance of an approval by the RIDEM does not excuse any applicant of the requirement to obtain the necessary permits and approvals from other federal, state, or regional agencies.¹¹⁹

¹¹² *Id.*

¹¹³ *Id.* at 30.

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ Rhode Island Department of Environmental Management, *Water Quality Regulations, Rule 16 Effect of Approval* at *30 (amended May 2009), available at <http://www.dem.ri.gov/pubs/regs/regs/water/h20q09.pdf>.

¹¹⁹ *Id.*

B. CRMC Involvement

Applicants that plan to develop within, above or beneath the tidal waters below the mean high water mark extending out to the extent of the state’s jurisdiction in the territorial sea and on coastal areas or areas which are directly associated with contiguous areas necessary to preserve the integrity of coastal resources must receive consent on behalf of the CRMC before proceeding.¹²⁰ In an effort preserve the state’s coastal resources, the CRMC assigned a water “Type” to state waters based on the characteristics of the adjacent shoreline.¹²¹ The state’s Coastal Resources Management Program (CRMP or “Red Book”) defines the categories of water as: Type 1: Conservation Areas, Type 2: Low-Intensity Use, Type 3: High-Intensity Boating, Type 4: Multipurpose Waters, Type 5: Commercial and Recreational Harbors, and Type 6: Industrial Waterfronts and Commercial Navigational Channels.¹²²

The Port of Davisville was classified as Type 6 Industrial Waterfront waters in the 1970’s, when the CRMP was written.¹²³ The goals for Type 6 waters are to encourage and support modernization and increase commercial activity related to shipping and commercial fisheries.¹²⁴ The highest priority uses of these waters under the CRMC jurisdiction are for berthing, loading and unloading and servicing commercial vessels, construction and maintenance of port facilities navigation channels and berths, and construction and maintenance of facilities to support commercial shipping and fishing activities.¹²⁵ Activities that substantially interfere with

¹²⁰ Coastal Resources Management Council, *The State of Rhode Island Coastal Resources Management Program – Guidelines for Participants* at *1 (revised December 2008), available at <http://www.crmc.state.ri.us/regulations/RICRMP.pdf>.

¹²¹ *Id.*

¹²² *Id.*

¹²³ Coastal Resources Management Council, *The State of Rhode Island Coastal Resources Management Program – Section 200.6 Type 6 Industrial Waterfronts and Commercial Navigation Channels* at *1 (revised December 2008), available at <http://www.crmc.state.ri.us/regulations/RICRMP.pdf>.

¹²⁴ *Id.*

¹²⁵ *Id.*

the highest priority uses are prohibited.¹²⁶ Furthermore, the CRMC notes that the agency will support port development in the marine industries by participating wherever possible in the joint long-range planning and development activities with other state and local agencies.¹²⁷

It is the CRMC's policy to require a public access plan, in accordance with Section 335 of the CRMP, as part of any application for a commercial or industrial development or redevelopment project in or impacting coastal resources.¹²⁸ Public access to the shore provides the public with a legally enforceable right to reach and enjoy the coastal areas of the state.¹²⁹ There are certain activities which require the private use of public trust resources and the exclusion of public access is permitted, such activities include, among other things, commercial and industrial development and redevelopment projects and expansions to marinas.¹³⁰

Applicants aiming to construct commercial and/or industrial structures located within tidal waters must obtain a structural perimeter limit (SPL) which defines and limits the area that said structures can be located.¹³¹ Either an applicant shall apply to the CRMC to obtain establishment of a structural perimeter or the CRMC shall establish a SPL when an application is already under review.¹³²

Additional prerequisites for the CRMC application process include obtaining a letter from local authorities certifying that the proposed activities conform to the local zoning ordinance, and if the project does not conform to the applicable ordinance then the applicant

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ Coastal Resources Management Council, *The State of Rhode Island Coastal Resources Management Program – Section 300.3 Residential, Commercial, Industrial, and Recreational Structures* at *1 (October 14, 2008), available at <http://www.crmc.state.ri.us/regulations/RICRMP.pdf>.

¹²⁹ Coastal Resources Management Council, *The State of Rhode Island Coastal Resources Management Program – Section 335 Protection and Enhancement of Public Access to the Shore* at *1 (September, 8, 1997), available at <http://www.crmc.state.ri.us/regulations/RICRMP.pdf>.

¹³⁰ *Id.*

¹³¹ *See* note 123.

¹³² *Id.*

must obtain official relief from the ordinance standards.¹³³ Other prerequisites consist of fulfilling the various requirements of RI State Building Code (RISBC) pertaining to construction within flood hazards zones, obtaining a permit from RIDEM if the construction will involve a sewage disposal system, and applicants shall demonstrate that all state safety codes, fire codes, and environmental requirements have been met.¹³⁴ Applicants must also have any connections to public water supplies authorized by the appropriate authorities and must demonstrate that adequate transportation to support the operations will be available.¹³⁵

Industrial structures and operations in tidal waters must have a defined structural perimeter for in water facilities.¹³⁶ All new or modified structure perimeters limit lines shall be a maximum of ten feet outside of the structure.¹³⁷ However, vessels may be berthed at a facility outside of the structural perimeter as long as the Director at RIDEM has approved the activity.¹³⁸

III. DREDGING PROCESS OVERVIEW

A. Pre-Application Process

Under Rule 9(E)(2)(g) of the RIDEM's Water Quality Regulations, discharges of dredged material are allowed in Class AA, A or SA waters or into water designated Class B, C, SB or SC.¹³⁹ New discharges into SA and SB waters shall be allowed under Rule 9 provided that the discharge will not impair existing uses or attainment of designated uses.¹⁴⁰ New discharges into waters that are not public drinking water supplies may include discharges of dredged material

¹³³ See note 128 at *2.

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.* at *3.

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ Rhode Island Department of Environmental Management, *Water Quality Regulations, Rule 9 Effect of Activities on Water Quality Standards* at *23 (amended May 2009), available at <http://www.dem.ri.gov/pubs/regs/regs/water/h20q09.pdf>.

¹⁴⁰ *Id.*

(Rule 9(E)(2)(g)) and other new discharges provided the applicant demonstrates to the satisfaction of the Director that the discharge serves a compelling public purpose which provides benefits to the public as a whole as opposed to individual or private interests, there are no reasonable alternative means of, or location for, serving the compelling public purpose cited, and the discharge will not impair existing uses nor attainment of designated uses (Rule 9(E)(2)(1)).¹⁴¹

The RIDEM highly recommends that applicants engage in the pre-application process before submitting an application for permission to dredge. Pre-application opportunities consist of consulting with the RIDEM, CRMC and any other agencies with jurisdiction to provide applicants with guidance and assistance in preparing a complete application that is in accordance with the timelines set forth in both state and federal statutes.¹⁴² When initiating the pre-application process, the applicant shall provide notice of a preliminary proposal to dredge to CRMC.¹⁴³ DEM will then schedule a meeting in which the RIDEM, CRMC and the applicant to designate a single point of contact to navigate the applicant through the approval process.¹⁴⁴

During the pre-application meetings, applicants will receive guidance for initial assessments, pollutant transport analysis, background studies and other studies that may be required for project approval.¹⁴⁵ Applicants should submit a proposed Sediment Sampling Plan at least seven days prior to the initial pre-application meeting.¹⁴⁶ The Sediment Sampling Plan must provide the following information: (1) Site plan of the area to be dredged, including topography and bathymetry, (2) The proposed depth of dredging, (3) Location of all proposed sample collection points, which must be representative of the material(s) to be dredged, sample

¹⁴¹ *Id.*

¹⁴² State of RI and Providence Plantations Department of Environmental Management, *Rules and Regulations for Dredging and the Management of Dredged Material* at *6 (February 2003), available at <http://www.dem.ri.gov/pubs/regs/regs/water/dred0203.pdf>.

¹⁴³ *Id.* See attached Appendix B for CRMC's dredging application checklist.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* at *7.

¹⁴⁶ *Id.*

points are to include areas impacted by past spill events or otherwise known or suspected to contain contamination, and areas near outfalls, fueling docks or pumps, (4) Proposed testing parameters and protocols in accordance with the analysis of dredged material, and (5) Proposed sampling procedures and sample handling protocols.¹⁴⁷ Each core sample shall be described and samples must be taken to the proposed depth of dredging including any overdraft, depending on the dredging methodology anticipated.¹⁴⁸

The RIDEM also recommends that applicants characterize the material to be dredged prior to the pre-application process so that the applicant can consult with the RIDEM about the need for additional information that can be included prior to the final submission for approval.¹⁴⁹ Any dredged material proposed for upland disposal or beneficial use should be tested analytically for grain size analysis, polychlorinated biphenyls, total petroleum hydrocarbons, total metals analysis for arsenic, cadmium, chromium, copper, lead, mercury nickel and zinc, and semi volatile organic compounds.¹⁵⁰ Upland areas are defined as all areas of the state that are not within the coastal zone; beneficial use is described as the use of dredged material in an environmentally protective manner for some productive purpose, such as landfill cover, coastal habitat restoration or construction.¹⁵¹ Depending on the characteristics and location for upland disposal or beneficial use, the applicant may be required to engage in additional testing of the dredged material.

In drafting an applicant plan for in-water disposal of dredged material, the applicant shall consult documents developed by the United States Army Corps of Engineers (USACE) and the EPA including, Evaluation of Dredged Material Proposed for Ocean Disposal Testing Manual,

¹⁴⁷ *Id.* *7-*8.

¹⁴⁸ *Id.* at *9.

¹⁴⁹ *Id.* at *7.

¹⁵⁰ *Id.* at *8.

¹⁵¹ *Id.* at *3 -*5.

Guidance for Performing Tests on Dredged Material Proposed for Ocean Disposal (Regional Implementation Manual), and Evaluation of Dredged Material Proposed for Discharge in Water of the U.S. Testing Manual.¹⁵²

B. Application Contents

To be accepted as a complete, applications must include at a minimum the following criteria: (1) Site plans, (2) Results of the approved Sediment Sampling Plan, (3) Description of the proposed dredging process, method and equipment, (4) Professional Engineer conducted calculations of the estimated amount of dredged material, (5) Plans of the area to be dredged that include existing and proposed contours of the dredging area, (6) Description of aquatic resources in the area, (7) Starting and anticipated completion dates, (8) Method of transport and disposal techniques for the dredged material, (9) Consistency of the proposed project with beneficial use and disposal priorities, and (10) Location of dredged material disposal.¹⁵³

Quonset Development Corporation's (QDC) desired dredged material disposal shall consist of maximizing the in-water disposal and only disposing of contaminated sediments on shore.¹⁵⁴ In addition, QDC is interested in setting up a reclamation project for sandy sediments that could be dewatered and used as construction fill.¹⁵⁵ This plan incorporates a combination of in-water and upland disposal of dredging material; therefore, criteria of both techniques must be considered. For upland disposal and in-water disposal, QDC must conduct research and include its finding in the dredging application. The RIDEM requires that applicants provide

¹⁵² *Id.* at *9.

¹⁵³ *Id.* at *10-*11.

¹⁵⁴ E-mail from Evan Matthews, Port Director, Quonset Development Corporation, to Kirby Aarsheim, Law Student at Roger Williams School of Law (June 30, 2009, 11:57 EST).

¹⁵⁵ *Id.*

documentation of uses and classification of groundwater and surface water at or around the disposal location for upland disposal and beneficial use of dredged material sites.¹⁵⁶

Applications that include a plan for in-water disposal will be evaluated in coordination with the USACE and the CRMC and must be in accordance with the guidelines listed in Section 404(b)(1) of the Clean Water Act.¹⁵⁷ Section 404(b)(1) states that sites for disposal of dredging materials in navigable waters “shall be specified for each such permit by the Secretary through the application of guidelines developed by the Administrator, in conjunction with the Secretary which guidelines shall be based upon criteria comparable to the criteria applicable to the territorial seas, the contiguous zone and the ocean under section 403(c).”¹⁵⁸ In addition, applications for in-water disposal must also include, among other requirements, a description of aquatic resources in the proposed disposal area, the past history of the disposal area, a description of how the material will be deposited in the disposal location, and a plan for monitoring water quality impacts from the disposal activities.¹⁵⁹

The criteria of the material and sites proposed for disposal of the dredged material as well as additional requirements for applications that include in-water and upland disposal can be found in RIDEM’s Rule and Regulations of Dredging and the Management of Dredged Material. In addition to providing information regarding the disposal of dredged material, the applicant must also include specifications relating to the dewatering of dredged materials and the dredged material handling facilities.¹⁶⁰

¹⁵⁶ See note 142 at *11.

¹⁵⁷ *Id.* at *16.

¹⁵⁸ Clean Water Act, 33 U.S.C. § 1344 (1972).

¹⁵⁹ See note 142 at *16.

¹⁶⁰ See *Id.* at *17-*18. Refer to Appendix A for a complete list of RIDEM’s requirements for dredging and disposal of dredged material.

C. CRMC Involvement

Before the CRMC can even consider granting approval for a dredging project, the applicant must first obtain a dredging permit from the RIDEM.¹⁶¹ Pursuant to Rhode Island General Law 46-6.1-7, applicants must then obtain the CRMC's approval for dredging and dredged material disposal.¹⁶² The CRMC will support necessary maintenance dredging activities in Type 6 Industrial Waterfront waters (the designated use for the Port of Davisville) as long as environmentally friendly disposal procedures have been arranged.¹⁶³ For larger volumes of disposal, the CRMC prefers that organizations engage in offshore open water disposal.¹⁶⁴ For small amounts of material, the agency encourages organizations to use near or onshore methods to dispose material such as the creation of wetlands, shellfish habitat and beach nourishment.¹⁶⁵ The CRMC follows the prescribed processes set forth by USACOE for both upland and in-land dredging material disposal.¹⁶⁶

In addition to CRMC and RIDEM approval, applicants must also obtain permits for maintenance and improvement dredging and disposal from the USACOE.¹⁶⁷ Additional prerequisites to approval for a dredging application include the following: (1) Applicants must obtain a suitability determination from the Army Corps of Engineers, (2) Fulfillment of the Freshwater Wetlands Act requirements, (3) The disposal method of dredged material meets

¹⁶¹ Coastal Resources Management Council, *The State of Rhode Island Coastal Resources Management Program – Section 300.9 – Dredging and Dredged Materials Disposal* at *2 (September 25, 2007), available at <http://www.crmc.state.ri.us/regulations/RICRMP.pdf>.

¹⁶² *Id.* at *1.

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ *Id.* at *2.

applicable zoning ordinances, and (4) Pre-application meeting has been set.¹⁶⁸ Refer to Appendix B for CRMC's additional dredging and disposal of dredged material requirements.

IV. NORTH KINGSTOWN'S HARBOR MANAGEMENT PLAN AND ISSUES RELATING TO WATER QUALITY STANDARDS

The Harbor Management Plan for North Kingstown includes a summary of the history of the Navy's use of Quonset Point. The Plan also mentions the Navy's production of two cargo piers, a carrier pier, an airport, sewage treatment plant and numerous buildings and facilities that were constructed on land filled by dredged materials.¹⁶⁹ An assessment of the water quality points at issue are included in detail in the Plan. The Town acknowledges the CRMC's designation of the Port of Davisville as a Type 6 Industrial Use designation.¹⁷⁰ The area surrounding the existing piers is classified as water where shellfishing is prohibited, but it is later included that the area of water adjacent to the bulkhead in question is classified as SA, waters suitable for shellfish harvesting for direct human consumption.¹⁷¹

The water quality of North Kingstown continues to be impacted by population increases and development in the area. The effects of altered water quality include increased algal growth, decreased water transparency, a decline in the biological and recreational quality of the waters and destruction of fish and shellfish habitat.¹⁷² The Town aims to minimize water pollution and regulate inorganic waste disposal through Town Ordinances and the North Kingstown Storm

¹⁶⁸ *Id.*

¹⁶⁹ Town of North Kingstown, *Harbor Management Plan and Harbor Ordinances*, at *11 (November 19, 2007 draft), available at <http://www.northkingstown.org/planningdept/Harbor%20Management/Plan/HMP%20saved%2011-26-07-ljc%20-%20PRINT%20ME.pdf>.

¹⁷⁰ *Id.* at *27.

¹⁷¹ *Id.* at *24.

¹⁷² *Id.*

Water Management Plan.¹⁷³ The Town's goal is to maintain and improve the water quality and aesthetic values of the community for fishing, shell fishing, and recreational uses.¹⁷⁴

The Town's Harbor Management Plan lists Quonset Business Park as an area of "water quality concern," an area where the conditions and activities have potential to contribute to water quality degradation.¹⁷⁵ The Quonset Business Park had been subject by the Navy to indiscriminate dumping of various materials and substances throughout the site, and the Navy has been charged with site reparation and is identified as a Superfund site on the National Priority List.¹⁷⁶ Since much of Quonset Business Park has been designated for industrial purposes, it is anticipated the burden will be placed upon the Town and State to assure that appropriate technology, zoning and regulation is imposed to minimize further negative impacts to the water quality.¹⁷⁷

Furthermore, the Town maintains that it is committed to improving water quality throughout its rivers, estuaries and harbors in according with RIDEM and CRMC.¹⁷⁸ To ensure current water quality standards are maintained and improved, the Town will conduct periodic monitoring and testing ensuring that all new and significantly expanded mooring areas do not cause significantly adverse effects on water quality.¹⁷⁹ Another initiative of the Town is to protect existing shellfish resources.¹⁸⁰ A few of the suggested methods for regulating are as follows: establish mooring fields away from areas conducive to shellfish propagation, increase setback requirement for waterfront development, and restrict boating activities as necessary to

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.* at *16.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *See Id.* at *17.

¹⁷⁹ *Id.*

¹⁸⁰ *Id.* at *20.

decrease turbidity and physical destruction where significant shallow-water habitat is identified.¹⁸¹

The Town drafts the Plan in accordance with RIDEM and CRMC regulations. The issuance of an approval by RIDEM does not excuse any applicant of the requirement to obtain the necessary permits and approvals from other agencies; that requirement most likely includes approval from the Town. Also, correspondence with RIDEM staff revealed that RIDEM reviews harbor management plans and certain marine construction projects under the water quality permit program.¹⁸² However, not all recommendations in the Harbor Management Plan are a water quality concern.¹⁸³ Permit decisions follow from a determination of compliance with DEM regulations.¹⁸⁴ Where the Plan requirements and water quality requirements overlap, permit decisions should be consistent with the Harbor Management Plan.¹⁸⁵

IV. CONCLUSION

Appealing the SA water quality standard will be difficult because as it would be almost impossible to convince RIDEM to downgrade an SA classification to SB or SC. RIDEM does not explicitly prohibit dredging or marine construction activities in SA waters, but permit approval depends largely on how such activities will impact the waters, particularly the shellfish that the SA classification aims to preserve. Although historically, QDC has been unable to convince RIDEM to permit dredging and marine construction in the SA area, the alternative is to apply for the necessary permits. QDC may want to research the impact that building a pier will

¹⁸¹ *Id.*

¹⁸² E-mail from Russell J. Chateaufneuf, P.E. Chief, Groundwater & Wetlands Protection, R.I. Department of Environmental Management, to Kirby Aarsheim, Law Student at Roger Williams School of Law (Aug 12, 2009, 9:56 AM EST).

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

have on the marine environment in that area. Research suggesting that a pier may have long-term benefits to marine life, particularly shellfish, may be beneficial QDC's plight for marine construction approval. QDC may need to hire experts in the field to analyze whether a newly constructed pier could be used as an artificial reef for shellfish.

On the other hand, QDC may want to analyze the quality of shellfish living in the currently designated SA waters. The goal of an SA designation is to ensure that the environment is suitable for shellfish harvesting. Although it is uncertain what expert researchers may uncover, any information regarding the impact that the existing port activities have on shellfish life may be used as evidence that the SA waters in front of the bulkhead may not be suitable for harvesting. In addition, CRMC's classification of the Port of Davisville as a Type 6 Industrial use area is in direct conflict with RIDEM's SA designation. The Port will probably have CRMC's support in the position that the area should be used for industrial use and not solely for the preservation of shellfish habitat.

As previously noted, applicants should schedule a pre-application meeting with CRMC and RIDEM before any action whatsoever is taken towards developing a marine construction or dredging plan. The pre-application meeting will help the dredging permit applicant navigate the permit process, and offer guidance on the permitting processes for RIDEM, CRMC and USACOE. There is an immense amount of requirements that must be followed during the initial pre-application stage, especially when the actual permit applicant is being drafted. Utilizing the knowledge of staff at the relevant agencies may reduce the possibility of creating an application that contains incorrect or missing information so that application may have an increased likelihood of being approved.

Appendix A

The following information has been taken directly from RIDEM's Rules and Regulations for Dredging and the Management of Dredged Material.¹⁸⁶

Application Site Plan Requirements

All site plans must be at least 8-1/2" x 11" in size but no larger than 24" x 36". If plans larger than 8-1/2" x 11" are utilized, one set of plans reduced to 8-1/2" x 11" are required with the CRMC application package.

All site plans depicting projects submitted for review and/or approval must have all markings permanently fixed. Site plans which are pieced together with tape or contain markings of pen, pencil, crayon, markers or other items which can be changed or altered at a later date are not acceptable. Blue-line or black-line prints or photocopies of originals are acceptable.

All site plans must contain a title block, original date of the plan and latest revision date of the plan if applicable. The title block must include the name of the person or party involved, the proposed project title if any, the principal street/road abutting the site, the tax assessor's plat and lot number(s), the city or town, the name of the preparer and the scale of the plan.

All site plans must be prepared by a licensed or registered professional and must contain the stamp of the professional affixed to each sheet prepared along with the date and the signature of the Professional. Only one datum for the project shall be utilized. The applicant shall also provide proof of property ownership.

All site plans containing more than one (1) sheet must be numbered consecutively.

For all projects, site plans must depict at minimum, the following:

- Magnetic North Arrow;
- Entire property boundary outline and dimension;
- Insert map showing location of site in the community;
- A locus using USGS quadrangle map;
- All streets and rights of way within 50 feet of the property lines of the proposed activity with fixed reference points including utility poles, house numbers, stone walls, bulkheads, buildings, edge of woods/fields, trails, parking areas, above and underground utilities, drainage structures and any other infrastructure on-site or within 50 feet of the property lines(s).
- Fixed referenced points including, but not limited to, stone walls, buildings, structures, fences, edge of fields/woods, trails, bulkheads, access roads, and parking lots;
- Scale of plans; with graphic scale if plans are reduced;
- A legend which explains all markings and/or symbols.
- Surface Water Bodies

¹⁸⁶ State of RI and Providence Plantations Department of Environmental Management, *Rules and Regulations for Dredging and the Management of Dredged Material*, Appendix A *26-*29, February 2003, <http://www.dem.ri.gov/pubs/regs/regs/water/dred0203.pdf>.

- Delineation of all freshwater and coastal wetland jurisdictional areas of the DEM, Council and ACOE within 100 feet of the property lines of the project;
- Any jurisdictional area that extends beyond the property line shall be shown for 100 feet beyond the property line
- Existing and proposed utilities and drainage facilities;

For projects proposing dredging, the following must be included:

- The area to be dredged with separate plans showing the existing and proposed contours of the dredging area;
- Cross sectional views in two directions with a maximum spacing of 200' of the area to be dredged showing the existing and proposed contours of the dredging area;
- In-water facilities, such as docks, piers, floats, etc. within 100 feet of the property line including all moorings;
- Location of federal navigation projects, such as channels, anchorage areas, etc.;
- Mean high and mean low water elevations;
- The datum used to reference all grades and depths;
- Location of aquatic resources in the area such as shellfish beds, eel grass beds, migratory pathways, habitat for finfish.
- Location of sampling points.

For projects proposing dewatering, the following must be included:

- Separate site plans that detail the existing conditions and topography at two-foot intervals and proposed site conditions and topography at two-foot intervals. All existing topography and proposed grading shall be shown 50 feet beyond the property lines;
- The existing plans shall detail the groundwater classification of the site, zoning designations and the FEMA limits and elevations.
- Proposed limits of disturbance of the dredge area including all sides slopes of the dewatering area, of any stock pile area, construction vehicle access/storage;
- Existing and proposed contour lines at two foot intervals;
- Proposed limits of disturbance;
- Temporary and permanent erosion and sediment controls;
- Temporary and permanent stormwater and water quality management controls and best management practices;
- Location of all proposed dewatering basins, settling basins, and storage areas for all dredged material;
- Cross-sectional views of the settling basins, including wall construction and volume calculations;
- Details of the berms, overflow and outlet weirs and runoff collection systems associated with the proposed basins and all point source discharge locations. The selection and design of settling basins shall be consistent with the USACE publication entitled Engineering and Design, Confined Disposal of Dredged Material, Engineer Manual No. 1110-2-5027.
- Location of any pier or dock proposed for transfer or off-loading of dredged material from scows to land and their position relative to the dredge site and the proposed

dewatering location including certification by a professional that such facilities are adequate for the proposed purpose;

- All access roads to be utilized by trucks for offloading, transferring or removing dredged material to the dewatering location(s) and final disposal location(s);
- Certification by a Professional Engineer that all adjacent structures (within 25 feet of the limit of disturbance) have the capacity to withstand the proposed dredging/dewatering operations and that the stability has been investigated and will not be effected.

For projects proposing in-water disposal of dredged material, the following must be included:

- Site plans of the disposal area showing existing bottom contours and those that will result from disposal activities, including the geographic extent of filling, mean high and low water marks, and the datum used to establish all grades;
- Cross sectional plans of the area where disposal will take place. Plans must show existing and proposed contours.

For projects proposing upland disposal or beneficial use of dredged materials, the following must be included:

- Location of the disposal/beneficial use area including area 100 feet beyond the proposed limits of disposal/reuse;
- Separate plans detailing the existing and proposed conditions including contours of two-foot intervals. This is not required for landfill disposal but is required for all types of upland disposal/beneficial use;
- Cross sections of the upland disposal/reuse in two directions at 200' maximum spacing;
- Method of placement of dredge material at the site including access points and any disturbance placement may cause.
- Existing and proposed contours of the disposal/beneficial use area;
- Groundwater classification of the disposal/beneficial use area;
- The edge and elevation of any flood plain and the limit of any floodway; (on the project datum);
- The location of all wells; within 2000 feet;
- Zoning approval from municipality;
- Temporary and permanent erosion and sediment controls;
- Temporary and permanent stormwater and water quality management controls and best management practices;

For projects involving freshwater wetlands, the following must be included:

- The edge of any swamp; marsh; bog; pond; emergent, submergent, shrub, or forested wetland; or any special aquatic site;
- The edge of any river, stream, intermittent stream, area subject to flooding and/or storm flowage;
- The edge of any fifty- foot (50') perimeter wetland;
- The edge of any one hundred foot (100') or two hundred foot (200') riverbank wetland;
- The edge and elevation of any flood plain and the limit of any floodway; Note: The Department may grant an exception to this requirement when pre-determined 100-year flood elevations are not available from published sources including previous engineering

studies, and a registered professional engineer provides clear and convincing documented evidence that the project site is above any probable 100-year flood elevation;

- The name of any surface or flowing water body or any other wetland where applicable
- Where changes to existing grades are proposed, the plan shall show both existing and proposed contour line elevations at maximum intervals of two (2') feet. Where no changes to grades are proposed, include a notation which so indicates;
- Profiles and/or cross sections drawn to scale;
- Proposed limits of all vegetative clearing and surface or subsurface disturbance;
- Temporary and permanent erosion and sediment controls;
- Temporary and permanent stormwater, flood protection and/or water quality management controls, and best management practices;
- Proposed measures to conduct, contain or otherwise control the movements of surface water, groundwater, or stormwater flows; and the ultimate destination of such flows;
- Construction activities either above or below the earth's surface which may affect any wetland including the height of planned buildings.

For rehandling facility projects, the following must be included:

- All existing and proposed private wells within 2000 feet;
- All existing and proposed infrastructure, including roadways; surface and subsurface utilities; sewer and sanitary lines, water quality structures;
- All existing and proposed site drainage facilities, both above surface and subsurface;
- Proposed locations of loading and unloading areas;
- Proposed location of processing, tipping, sorting, and treatment areas;
- Cross sections of proposed storage basins, berms;
- Cross sections and/or details for any proposed structure;
- Proposed sedimentation and erosion controls;
- Proposed weighing facilities (if any);
- On-site traffic patterns;
- Proposed landscaping.

Appendix B

The following material has been taken directly from CRMC's The State of Rhode Island Coastal Resource Management Program, Section 300.9 Dredging and Dredged Materials Disposal.¹⁸⁷

All applications submitted to the Council for dredging and disposal shall demonstrate that they have met all applicable sections of the CRMC/DEM dredging application checklist.

1. For dredging:

- (a) Bottoms of dredged areas shall slope downward into the waterway so as to maximize tidal flushing.
- (b) Bottom slopes at the edges of dredged areas shall have a maximum slope of 50 percent.
- (c) Dredging shall be planned so as to avoid undermining adjacent shoreline protection facilities and/or coastal features.
- (d) Shellfish dredged from waters classified SB or lower shall not be made available for human consumption or bait.
- (e) All dredging at any marina shall be bounded to the footprint of the Marina Perimeter Limit (MPL). Side slopes associated with such dredging shall be allowed to extend beyond the MPL and then only when all adjacent structures are not impacted.

2. For dredged materials disposal in open water:

- (a) Dredged materials may not be placed in areas determined by the CRMC to be prime fishing grounds.
- (b) Measures must be employed and described to ensure that all dredged materials will be dumped solely within the confines of an approved site.
- (c) Hydrographic conditions at the approved disposal site must be such that the disposed dredged materials will remain within the disposal area and that re-suspension of bottom sediments will be minimal.
- (d) Following disposal operations involving polluted materials, clean coarse-grained materials may be required be deposited to cap the spoil mound and minimize the release of any potential contaminants to the water column. The cap shall have a minimum thickness of 6 inches.
- (e) The applicant shall provide for an environmental monitoring program designed to detail physical conditions and biological activity at and near the site for a period of at least one year. The results of such programs shall be made public. This shall not apply to disposal into the CAD cell. However, if the monitoring of the disposal of dredged materials at a site is to be performed

¹⁸⁷ Coastal Resources Management Council, *The State of Rhode Island Coastal Resources Management Program – Section 300.9 – Dredging and Dredged Materials Disposal*, *3-*4 Adopted September 25, 2007, <http://www.crmc.state.ri.us/regulations/RICRMP.pdf>.

by, and/or in conjunction with, a state or federally-sponsored monitoring program, then the applicant shall adhere to the requirements of such state-or-federally-sponsored program.

3. For dredged materials disposal in the creation of wetlands, aquatic habitat, or island:

(a) Disposal sites must be in sheltered environments which are approved by the Council for such purposes and are not prone to extensive wave or current energies yet subject to sufficient tidal action to provide adequate flushing.

(b) Dredged materials must be pumped or placed into a containment area that will permit sediment consolidation and prevent erosion.

(c) The applicant must provide for an environmental monitoring program designed to detail physical conditions and biological activity at and near the site for a period of at least one year. The results of such a program shall be made public.

(d) All applicable requirements of Section 300.2 shall be met.

4. For upland disposal:

(a) Dewatering of dredged materials shall occur within a properly designed dewatering facility.

(b) After dewatering, dredged materials placed on uplands adjacent to tidal waters shall be vegetated or otherwise permanently stabilized. Surface slopes of the disposal area shall be graded so as to prevent surface ponding.

(c) Where dredged materials are placed behind a wall or bulkhead: (1) the structure shall be suitably engineered to resist the pressures of the dredged material; (2) the material, including fines, shall be prevented from seeping through the wall or bulkhead by the placement of an adequate filtering device; and (3) all applicable standards listed for shoreline protection facilities (Section 300.7) shall be met.

(d) All applicable requirements of Section 300.2 shall be met.

5. Disposal for beach nourishment:

(a) The placement of dredged materials on a beach is a preferred disposal alternative, providing that the materials in question are predominantly clean sands possessing grain size and such other characteristics to make them compatible with the naturally occurring beach material.

(b) In areas where the processes of littoral drift would result in significant re-entry of dredged sediments into a navigable waterway, dredged materials must be placed on the downdrift side of the inlet.

(c) All applicable requirements of Section 300.2 shall be met.