ENVIRONMENTAL PROTECTION

WATER MONITORING AND STANDARDS

BUREAU OF MARINE WATER MONITORING

Shellfish Growing Water Classification

Adopted Amendments: N.J.A.C. 7:12-1.4, 1.5, 2.1, 3.2, 4.1, 4.2 and 9.13

Proposed:	December 21, 2009 at 41 N.J.R. 4598(a)
Adopted:	November 24, 2010 by Bob Martin, Commissioner Department of Environmental Protection.
Filed:	November 29, 2010, as R.2011d.003 **without change**
Authority:	N.J.S.A. 13:1D-9 and 58:24-1 et seq.
DEP Docket Number:	20-09-11/743
Effective Date:	January 3, 2011
Expiration Date:	May 14, 2013

The Department of Environmental Protection (Department) is adopting amendments to the Shellfish Growing Water Classification rules at N.J.A.C. 7:12 that reclassify shellfish waters based on water quality surveys conducted by the Department's Bureau of Marine Water Monitoring, modify the provisions regarding immediate temporary suspensions of harvest to provide that temporary restrictions may be imposed short of suspension, and to include the annually updated *Vibrio parahaemolyticus* (a pathogen that infects oysters and can cause illness when the oysters are consumed) management plan as a basis for suspending or restricting shellfish harvest. The amendments also specifically include restoration of shellfish beds among

activities for which special scientific collection permits may be issued to collect shellfish from other than Approved waters, and require the Shellfish Resource Recovery Steering Committee to review applications for scientific collection permits and make a recommendation to the Commissioner. The reclassifications will result in a total upgrade of approximately 1,381 acres of shellfish waters and a total downgrade of approximately 293 acres of shellfish waters, resulting in a net upgrade of approximately 1,088 acres of shellfish waters.

The proposal was published in the New Jersey Register on December 21, 2009, at 41 N.J.R. 4598(a). The comment period closed on February 19, 2010.

Summary of Public Comments and Agency Response:

The Department received written comments from the following persons:

1. Scott R. Bailey, NJ Shellfisheries Council, Delaware Bay Section
2. Deborah Mans and Christopher Len, NY/NJ Baykeeper
3. Cindy Zipf and Heather Saffert, Clean Ocean Action

A summary of the comments and the Department's responses follows. The number(s) in parentheses after each comment identifies the respective commenter(s) listed above.

N.J.A.C. 7:12-1.4 AND -1.5, CLASSIFICATION OF SHELLFISH WATERS AND IMMEDIATE SHELLFISH HARVEST SUSPENSIONS

1. COMMENT: The current rule requires that shellfish waters not subjected to a sanitary survey every 12 years be classified as prohibited. This is not sufficiently protective. The Department should require more frequent sanitary surveys at a frequency of every three years for areas that do not meet requirements of "Approved Areas." N.J.A.C. 7:12-1.4(a)5 should be amended as follows (suggested new text is underscored):

> "All growing areas <u>classified as "Approved Areas"</u> which are not subjected to a sanitary survey every 12 years shall be classified as prohibited. <u>All growing areas not classified as "Approved Areas" which are not subjected to a sanitary survey every 3 years shall be classified as prohibited."</u> (3)

RESPONSE: The commenter's concern about frequency of evaluation of growing areas and the closing of waters not evaluated is addressed by the existing rules at N.J.A.C. 7:12-1.4(a), which incorporates by reference the NSSP Guide for the Control of Molluscan Shellfish. The Guide contains the NSSP Model Ordinance. The Model Ordinance, at Chapter IV @.01C, requires that waters are to be closed when either a sanitary survey (to be done at least once every 12 years) or a triennial reevaluation of the sanitary survey (to be done once every three years) are not completed for those waters. The Model Ordinance further states that if either of these reports is not completed the area shall be placed in the closed status. This requirement covers all shellfish

growing waters, making it unnecessary to distinguish between areas classified as Approved and those not classified as Approved, as the commenter suggests

2. COMMENT: The Shellfish Growing Water Classification rules must expand testing of shellfish to include chemical assessments and standards. At this time, there are no monitoring programs administered by the Department to survey levels of chemical contaminants in shellfish meat (other than blue crab and lobsters) even though there is reason to believe that chemical contamination of shellfish poses a risk to human health. This is particularly crucial since consumers typically eat the whole animal. The Mussel Watch program, managed by the National Oceanic and Atmospheric Administration (NOAA), found that mussels at all sampling sites in New Jersey had elevated concentrations of metal or organic contaminants and categorized the sites as having medium to high levels of several contaminants tested in shellfish tissue at each site. NOAA's additional study of polybrominated diphenyl ethers (PBDEs) indicated high levels at all sites tested along the New Jersey coast (Sandy Hook, Long Branch, and Shark River).

The FDA recognizes that shellfish can accumulate "poisonous or deleterious substances" due to their filter-feeding behavior. The FDA has established action levels, tolerances, and guidance levels for such substances to control the levels of contaminants in human food including seafood. Additionally, USEPA has recommended that bivalves be target species for evaluating contaminants. The commenter urges the Department to consider assessing shellfish, such as bivalves, for levels of contaminants of concern including metals, pesticides,

polychlorinated biphenyls (PCBs), PBDEs, dioxins and furans, and polycyclic aromatic hydrocarbons. Surveys and screening should be used to identify areas of concern, establish shellfish consumption advisories, modify classifications of shellfish growing waters, and reduce pollution. Efforts could be coordinated with existing programs such as Mussel Watch by NOAA and National Coastal Condition Assessments by USEPA. (3)

RESPONSE: Monitoring for chemical contaminants is addressed by the existing rules at N.J.A.C. 7:12-1.4(a), which incorporates by reference the NSSP Guide for the Control of Molluscan Shellfish. The Guide contains the NSSP Model Ordinance. The Model Ordinance, at Chapter II @.03, requires States to evaluate whether heavy metals, chlorinated hydrocarbons, and natural toxins are present in levels of public health significance in shellfish meats and to close the associated waters if warranted. The Department and NOAA have conducted surveys of chemical contaminants in shellfish throughout the State's coastal waters. Chemical contaminants surveyed by the Department and NOAA include those listed by the commenter with the exception of dioxins and furans. In addition to the testing described above, the Department is planning to collect shellfish samples for chemical contaminant analysis at locations sampled under USEPA's National Coastal Assessment (NCA) program. The National Coastal Assessment surveys the condition of the Nation's coastal resources by creating an integrated, comprehensive monitoring program among the coastal states. In 2010, NCA sampling involved 29 sites that are distributed throughout New Jersey's estuarine waters. Shellfish tissue samples are compared to the criteria and guidance levels in the most recent edition (2007) of the NSSP Guide for the Control of Molluscan Shellfish. None of the samples collected through

2009 have exceeded these levels. These include samples from Raritan Bay, Sandy Hook Bay, the Navesink River, the Shrewsbury River and numerous other estuarine waterbodies in Ocean, Atlantic and Cape May Counties.

3. COMMENT: Updating the reference at N.J.A.C. 7:12-1.4 to the 2007 "Guide for the Control of Molluscan Shellfish" is an improvement to keep the State program in line with the latest guidance from the FDA's National Shellfish Sanitation Program. However, the phrase "or most recent version" should be added so that if the guide is again updated, its adoption by the State will not be delayed. The *Vibrio parahaemolyticus* Management Plan is a protective addition to the shellfish program. However, the *Vibrio parahaemolyticus* Management Plan was not posted on the State's webpage as referenced in the proposal. (3)

RESPONSE: The existing rule at N.J.A.C. 7:12-1.4 includes the phrase "as amended and supplemented" with reference to the incorporation of the Guide for the Control of Molluscan Shellfish. This phrase accomplishes the immediate updating as the Guide is modified that the commenter suggests.

The 2010 *Vibrio* Management Plan was posted on the Department's web page when it was completed in early June 2010 after extensive discussions with the NJ Shellfisheries Council, USFDA, and the NJ Department of Health and Senior Services, which is a co-author of the *Vibrio* Management Plan. Since the plan is applicable to the oyster harvest only during the Summer months, the *Vibrio* Management Plan is not posted on the Department's website year-

round. The Department's statement in the proposal summary was not clear on this point. The Department notes that the Shellfisheries Council meetings are open to the public and are announced in advance by the NJ Division of Fish and Wildlife on its website, and notification is provided to the Secretary of State, the State House and local newspapers. The commenters are encouraged to attend these meetings next Spring to provide their input regarding the *Vibrio* Management Plan that will be established for the 2011 oyster harvest.

N.J.A.C.7:12-2.1 SHELLFISH GROWING WATER CLASSIFICATION - PROHIBITED

4. COMMENT: The fecal pollution causing the downgrade of the Navesink River section and the existing Prohibited areas is unacceptable, especially given the historic efforts dating to 1981 to clean up the river. Total Maximum Daily Loads (TMDLs) for shellfishing impairments due to high total coliform for the Navesink and Shrewsbury Rivers and the watershed management area that encompasses the rivers were approved by USEPA in 2006. The TMDL for the Navesink River suggests several management efforts and describes various government programs to reduce pollution loads, but it does not appear to mandate their implementation. The status of management actions based on the TMDL has not been made available, although the source tracking study recommended in the TMDL was at least completed for part of the river. At the very least, the Department must require that the recommendations of the Upper Navesink River Stormwater Study are implemented in a timely manner. The key recommendations include: improve stormwater infrastructure, maintain dumpsters or refuse containers properly to prevent leakage, and identify and remediate problems in wastewater systems. Although some local

efforts have been made, clearly more needs to be done. The Department must ensure that all of these recommendations, the actions identified in the TMDL, and other potentially relevant efforts are taken now. (3)

RESPONSE: The primary means to implement the TMDLs within the Navesink watershed and elsewhere in New Jersey's coastal waters are actions taken through the Municipal Stormwater Regulation Program. As described in the Implementation Section of the Navesink River TMDL (see http://www.nj.gov/dep/watershedmgt/DOCS/TMDL/Coastal_Pathogen_TMDLs_WMA12.pdf), the Statewide Basic Requirements implement various control measures that should substantially reduce bacteria loadings, including measures to eliminate “illicit connections” of domestic sewage and other waste to the “municipal separate storm sewer systems” (MS4s). Upon implementation, these requirements are expected to be highly effective in controlling inputs of total coliform load into the waterbodies. The Status Report Summary for the Municipal Stormwater Regulation Program can be found at http://www.state.nj.us/dep/dwq/pdf/msrp_summary_report_2008.pdf.

In 2008, the Department conducted a Navesink River Source Track-down Study with input from the Navesink Watershed Partners, which is a group of watershed education and outreach education representatives from more than 40 non-profit organizations, Federal, State, county and local agencies, educational institutions, and private industry. The microbial source track-down study revealed potential human sources from an area near Red Bank. The Town of Red Bank has since taken action to survey and repair a breached municipal sewer line that was linked to

one of the human sources identified though the study. In addition, municipal regulations are being developed in Red Bank to reduce impacts from bacteria-laden materials in dumpsters that are adjacent to the Navesink River.

In addition to the extensive sampling and data analysis performed by Department as part of the NSSP, the Department has been conducting visual assessments of the shorelines to identify and evaluate any physical changes that may be occurring, such as shoreline erosion, new construction, and additional stormwater outfalls. This field observation effort is expected to continue and will supply the Department and the Navesink Watershed Partners with additional information for potential future source track-down and restoration projects.

Another program that addresses the water quality concerns raised by the commenter is the Federally funded New Jersey Clean Vessel Act Program (NJCVA) administered by the Department. More information on this program can be found at http://www.nj.gov/dep/fgw/cvahome.htm. In June 1999, the Department petitioned to have the Navesink River designated as a No Discharge Area (NDA). In August 1999, the USEPA approved the waters of the Navesink waterway as a NDA under the New Jersey Clean Vessel Act Program. The NDA includes all tidal waters which extend from the Navesink River and which extend from the Shrewsbury River, near Sea Bright, upstream to the Swimming River reservoir dam. At the time of the initial designation there were five existing pump-out facilities available to service vessels which use the Navesink River. Currently, there are six fully operational pump-out facilities available at each of the marinas on the Navesink. In addition, in

order to further protect the important shellfish resources and water quality of the Lower Navesink River, in 2000 the funding under the NJCVA was approved for the purchase of a pump-out boat to be operated by Monmouth County. The pump-out boat, the *Royal Flush*, has been in operation for nearly ten years. The *Royal Flush* has removed nearly 55,000 gallons of wastewater from 1,500 recreational boats in recent years based on information reported to the county and the NJCVA. During its ten years of operation, it is estimated that the *Royal Flush* has removed in excess of 200,000 gallons of wastewater from marine vessels operating throughout its service area, which includes the Navesink and Shrewsbury Rivers and the eastern portion of Sandy Hook Bay.

5. COMMENT: The Branchport Creek downgrade from Special Restricted to Prohibited seems overdue given the known, long-term problems from New Jersey Sports and Exposition Authority's (NJSEA) Monmouth Park Racetrack that must be reduced. The Department must ensure that the NJSEA is indeed enforcing Best Management Practices (BMPs) and moving forward with construction activities to reduce stormwater pollution from the Monmouth Park Racetrack to Branchport Creek according to the schedule. The Department must also insist that the NJSEA pay for its environmental violations and pay for water quality monitoring in the racetrack's vicinity for fecal contamination, total suspended solids, total nitrogen, and any other relevant water quality parameters. (3)

RESPONSE: The Department regulates the discharge of stormwater from Monmouth Park through a NJPDES Concentrated Animal Feeding Operations (CAFO) Permit. This Permit,

which was issued to the New Jersey Sports and Exposition Authority (NJSEA) as the owner and operator of Monmouth Park, contains specific best management practices (BMPs) that must be implemented at the facility and prohibits the discharge of all contaminated stormwater from a 25-year, 24-hour storm or less. The Department, during its frequent inspections of the facility, has observed discharges of contaminated stormwater to the Branchport Creek in violation of the Permit.

To address these unpermitted stormwater discharges, the Department and NJSEA finalized an Administrative Consent Order (ACO) in May 2010 under which NJSEA is to construct a collection system that will eliminate all discharges of contaminated stormwater from Monmouth Park's stable area to the Branchport Creek. The ACO imposes deadlines for the completion of various phases of the construction project and includes stipulated penalties should NJSEA fail to comply with the construction schedule. In addition, the ACO requires NJSEA to conduct water quality monitoring in the Branchport Creek in the vicinity of Monmouth Park. The NJSEA has commenced construction, with an anticipated completion date of August 31, 2012.

In addition, several other smaller projects have been completed which will reduce the frequency of discharges of contaminated stormwater during larger storm events. The Department will continue to conduct inspections of Monmouth Park to ensure that the construction is progressing and that the facility continues to fully implement all BMPs in order to reduce the impacts on Branchport Creek.

6. COMMENT: Today, nearly 10,000 days since the nationwide fishable swimmable standard was to be obtained under the Clean Water Act, direct harvest of shellfish from the Raritan Bay is not possible. While over 1,000 acres in Keyport Harbor are being upgraded from Prohibited for shellfish to Special Restricted, the upgrade does not apparently assist in restoration efforts, as 293 acres of the Navesink River are proposed for a downgrade from Special Restricted to Prohibited. This one step forward, two steps back progress cannot continue. As the delegated authority under the Clean Water Act, it is the Department's job to clean these waters. To help move more quickly to upgrades, the Department should institute water quality sampling more frequently than quarterly to obtain more accurate and timely information regarding water quality conditions. (2)

RESPONSE: The current monitoring schedule in the Raritan and Sandy Hook Bays and the Navesink River is about 10 times per year. Samples are scheduled to be collected once a month, weather permitting. (In the winter months, cold and/or stormy weather may prevent sampling.) Although there are improvements within the Bays and River, such as the upgrade in Keyport Harbor in this rulemaking as well as previous upgrades in the Navesink and Shrewsbury Rivers from Special Restricted to Seasonally Approved, the water quality in other areas such as the 293 acres of the Navesink River did not allow for upgrading of the classification but instead required a downgrade. The Department will continue to monitor the waters throughout the Raritan Bay and Sandy Hook Bay as well as the Navesink River area and propose upgraded classifications whenever supported by the water quality data.

The Department is a leader (both locally and nationally) in the development and application of microbial source tracking methods. The Department is currently involved in several source tracking projects around the State. By following up the source tracking with priority remedial actions through the Navesink Watershed Partners (see response to comment 4 above), as well as county and local government agencies, some of these source tracking projects have resulted in significant water quality improvements. This same approach is being applied in the Raritan and Sandy Hook Bays.

N.J.A.C. 7:12-3.2, SHELLFISH GROWING WATER CLASSIFICATION - SPECIAL RESTRICTED

7. COMMENT: It is important that Keyport Harbor is being upgraded from Prohibited to Special Restricted based on decreased coliform levels; however, contaminant accumulation in shellfish and the current lack of contaminant advisories for shellfish other than lobster and crabs is a concern. Last year, the USEPA designated an area in Lawrence Harbor, which is close to Keyport Harbor, as a Superfund Site and public health hazard due to lead slag deposited in the area. Very high levels of lead were found as well as elevated levels of antimony, arsenic and copper. Initial sampling confirmed the presence of lead in mussels and clams. The extent of contamination resulting from contaminant transport by currents from the lead slag sites still remains to be determined. The National Oceanic and Atmospheric Administration (NOAA) has identified medium to high levels of contaminants, including mercury, lead, tin, butylins and polychlorinated biphenyls (PCBs) and others in mussel samples from Raritan Bay and off Sandy

Hook, in the Mussel Watch Program. In addition, the most samples in the nation identified as "high" for flame retardant chemicals, polybrominated diphenyl ethers (PBDEs), were from the Hudson River and Raritan Bay. (3)

RESPONSE: While New Jersey bases its shellfish water classifications on the total coliform criterion of the National Shellfish Sanitation Program, the Department does evaluate toxicity data that are available from samples it has collected, or from other sources, in its annual review of the coastal water quality for shellfish water classifications. These toxicity data are compared with applicable FDA tissue criteria or guidance levels. When a parameter is found to exceed these criteria or guidance levels, the Department will investigate for potential risks that are associated with shellfish consumption and close the area to shellfish harvest as needed.

The toxicity data evaluated within Shellfish Growing Area NE-1 (Raritan/Sandy Hook Bay) shows that, while heavy metals (mercury, lead, copper, chromium, arsenic, nickel, and cadmium), PAHs, and PCBs were present in shellfish tissues, all parameters except lead were below their respective FDA criteria or guidance levels. Elevated levels of lead were found in tissue samples (*Mytilus edulis*) collected in 1987, 1988, 1990, and 2004 at the Mussel Watch-Sandy Hook site. It should be noted that blue mussels tend to accumulate most toxicants at a higher rate than either hard or soft clams. The area where the mussels were found to be contaminated has been and remains classified Prohibited for shellfish harvesting.

In response to these findings, the Department conducted multiple studies in this shellfish growing area to determine the contaminant levels in clams. The data from hard clams collected

in 2006 from the Raritan and Sandy Hook Bays indicate the presence of heavy metals, PCBs, and PAHs in tissue samples, but no values were found in excess of FDA guidance criteria. In April 2009, the Department's Office of Science evaluated the NOAA report on PBDEs in sediment and bivalves and concluded that the PBDEs detected in New Jersey mussels were well below levels of human health concern.

N.J.A.C. 7:12-9.13, SCIENTIFIC COLLECTION AND NON-HUMAN CONSUMPTION PROGRAM

8. COMMENT: The Shellfish Resource Recovery Steering Committee (SRRSC) will help the shellfish industry continue to thrive by allowing projects that are scientifically sound as well as not creating an attractive nuisance of shellfish seed being sited in polluted waters that may tarnish the good reputation of the industry from a public health perspective. The commenter is concerned, however, that the SRRSC will not have any specific industry representation. A New Jersey Shellfisheries Council member from each of the sections of the Council (i.e., the Atlantic and Delaware Bay sections) should have a seat on the SRRSC. This will help the SRRSC include the concerns of the constituency that is affected by the SRRSC's decisions. The diversification of the SRRSC may also increase understanding of the shellfish industry, which will lead to greater acceptance of the SRRSC's recommendations. (1)

RESPONSE: The members of the Shellfisheries Council, which is established by statute (see N.J.S.A. 50:1-18), are appointed by the Governor and must be licensed and practicing

shellfishermen. The Council is charged with formulating comprehensive policies for the preservation and improvement of the shellfish industry and resources of the State, and, among other duties, advises the Commissioner regarding shellfish resource management, including issues such as resource recovery and shellfish gardening. The SRRSC was established under the Shellfish Growing Water Classification rules in 1990 (see 22 N.J.R. 3508(a)), and is described in the definition of "SRRSC" at N.J.A.C. 7:12-1.2. The SRRSC comprises State regulators from the NJ Department of Environmental Protection (DEP) and the NJ Department of Health and Senior Services (DHSS) who have regulatory responsibilities for shellfish resource recovery programs, including shellfish gardening. Representation from DEP on the SRRSC includes, for example, staff of the Shellfisheries, Land Use Regulation, Marine Enforcement, and Water Monitoring and Standards programs because each program either issues a permit necessary for the shellfish activities to take place, or is involved in enforcement related to the permitted activities. As a committee of regulators, the SRRSC's role will be to determine if proposed shellfish activities meet the various programs' regulatory standards in order to make a recommendation to the DEP Commissioner regarding issuance of a scientific collection permit. Participation by members of the regulated community (Shellfisheries Council members) in the review by a committee of regulators (the SRRSC) of applications leading to a recommendation to approve or deny a permit is not appropriate. However, to help address the commenter's concerns, the SRRSC will inform the Shellfisheries Council about any SRRSC recommendation regarding a scientific collection permit so that the Council may make its own recommendation to the Commissioner reflecting any industry concerns.

9. COMMENT: To the extent that the proposal adds another layer of regulation, in the form of the Shellfish Resource Recovery Steering Committee (SRRSC) to review all applications for a scientific collection permit, the implementation of shellfish habitat restoration projects will be hindered. Adding this unknown committee that operates behind closed doors with no public notice requirements to the review process not only denies applicants access to transparent decision-making, but also makes it easier for leadership within the Department to avoid taking responsibility for permit decisions that are strikingly anti-environment. (2)

RESPONSE: As explained in response to Comment 8, the SRRSC was established under these rules in 1990. Its mandate to make recommendations to the DEP Commissioner regarding scientific collection permit applications will help streamline the process by coordinating the review of the proposed activities by various Department regulatory programs and the Department of Health and Senior Services Shellfish Program. Shellfish gardening and restoration permits were previously reviewed individually by the regulatory programs that issue the respective permits required for gardening activities (e.g., waterfront development permits from the Division of Land Use Regulation for structures, scientific collection permits from the Division of Fish and Wildlife to allow placement of shellfish in the waters to grow, and scientific collection permits under these rules to allow removal of shellfish grown in the waters). Because each permit is dependent on the issuance of the other permits, ineffective communication among the programs has sometimes led to delays in the reviews. Requiring that the SRRSC review and recommend a decision to the Commissioner will provide a more efficient process and enhance intra- and interagency coordination. Under the new process, the Department will offer applicants for

shellfish restoration permits the opportunity to meet with the SRRSC to discuss the public health aspects of their applications prior to the SRRSC providing a recommendation to the Commissioner. For purposes of providing public notice regarding SRRSC actions under these rules, the Department intends to publish in the DEP Bulletin notice of applications for and decisions on scientific collection permits for shellfish activities, consistent with the current practice of the Department with regard to waterfront development permits for shellfish activities.

Federal Standards Statement

Executive Order No. 27 (1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), require State agencies which adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis. The adopted amendments are developed under public health control procedures of the National Shellfish Sanitation Program (NSSP). The NSSP is a tripartite cooperative program consisting of the States, shellfish industry and the Federal Food and Drug Administration. This cooperative program is managed through the Interstate Shellfish Sanitation Conference, which developed the sanitary control procedures defined in the Guide for the Control of Molluscan Shellfish. Each shellfish producing state has the responsibility to adopt laws and regulations consistent with the guidelines of the NSSP. The Food and Drug Administration is responsible for reviewing the State's shellfish control program to ensure that it is consistent with national standards applicable to all other state shellfish control programs. These adopted amendments implement the NSSP guidelines and contain no standards or requirements that exceed the standards or requirements

imposed by Federal Law. Executive Order No. 27(1994) and N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c.65) do not require further analysis.

Full text of the adoption follows:

(No change from proposal.)

Based on consultation with staff, I hereby certify that the above statements, including the Federal Standards Statement addressing the requirements of Executive Order No. 27 (1994), permit the public to understand accurately and plainly the purposes and expected consequences of these adopted amendments. I hereby authorize this adoption.

DATE: _____ _____

Bob Martin, Commissioner
Department of Environmental Protection