



The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

July 23, 2010

Thomas S. Burack, Chairman
NH Energy Facilities Site Evaluation Committee
Dept. of Environmental Services
29 Hazen Drive, PO Box 95
Concord, NH 03302-0095

Re: Application of Groton Wind, LLC
Site Evaluation Committee No. 2010-01

Dear Chairman Burack:

Please find enclosed the NH Department of Environmental Services progress report that outlines draft permit conditions and additional data requirements needed to make a final decision for the Alteration of Terrain permit, Wetland permit, and the 401 Water Quality Certificate. Final permit decisions and conditions will be issued to the Site Evaluation Committee no later than October 25, 2010.

If you have any questions, please contact me at 271-2951 or email at: Rene.Pelletier@des.nh.gov

Sincerely,

Rene Pelletier, PG
Assistant Director
Water Division

cc: Michael J. Iacopino, Counsel NHSEC
Jane Murray, Secretary NHSEC
Peter Walker, VHB, Inc.
Michael J. Walls, Assistant Commissioner
Harry T. Stewart, Director, Water Division
Robert Scott, Director, Air Resources Division

ALTERATION OF TERRAIN BUREAU 7/26/10 PROGRESS REPORT

DRAFT PERMIT CONDITIONS:

PROJECT DESCRIPTION:

Construct a power generating wind park that will include the construction of 24 wind turbines (2.0 megawatts each), approximately 12 miles of gravel access drives, a 4,000 square foot operations and maintenance building, stockpile and lay down pad areas, and associated transmission lines. The total area of contiguous disturbance has been calculated to be 115.6 acres (5,036,579 square feet).

PROJECT SPECIFIC CONDITIONS (DRAFT):

1. Activities shall not cause or contribute to any violations of the surface water quality standards established in Administrative Rule Env-Wq 1700.
2. Revised plans shall be submitted for an amendment approval prior to any changes in construction details or sequences. The Department must be notified in writing within ten days of a change in ownership.
3. The Department must be notified in writing prior to the start of construction and upon completion of construction. Forms are available at:
<http://des.nh.gov/organization/divisions/water/aot/categories/forms.htm>.
4. The revised plans dated July 9, 2010 and supporting documentation in the file are a part of this approval.
5. No construction activities shall occur on the project after expiration of the approval unless the approval has been extended by the New Hampshire Energy Facility Site Evaluation Committee (SEC).
6. This permit does not relieve the applicant from the obligation to obtain other local, state or federal permits that may be required (e.g., from US EPA, US Army Corps of Engineers, etc.). Projects disturbing over 1 acre may require a federal stormwater permit from EPA. Information regarding this permitting process can be obtained at:
<http://des.nh.gov/organization/divisions/water/stormwater/construction.htm>.
7. The smallest practical area shall be disturbed during construction activities.
8. The permittee shall employ the services of an environmental monitor ("Monitor"). The Monitor shall be a Certified Professional in Erosion and Sediment Control or a Professional Engineer licensed in the State of New Hampshire and shall be employed to inspect the site from the start of alteration of terrain activities until the alteration of terrain activities are completed.
9. During this period, the Monitor shall inspect the subject site at least once a week, and if possible, during any ½ inch or greater rain event (i.e. ½ inch of precipitation or more within a 24 hour period). If unable to be present during such a storm, the Monitor shall inspect the site within 24 hours of this event.
10. The inspections shall be for the purposes of determining compliance with the permit. The Monitor shall submit a written report to the Department within 24 hours of the inspections. The reports shall describe, at a minimum, whether the project is being constructed in accordance with the approved sequence, shall identify any deviation from the conditions of this permit and the approved plans, and identify any other noted deficiencies.

11. The Monitor shall provide technical assistance and recommendations to the Contractor on the appropriate Best Management Practices for Erosion and Sediment Controls required to meet the requirements of RSA 485-A:17 and all applicable DES permit conditions.
12. Within 24 hours of each inspection, the Monitor shall submit a report with photographic documentation to DES via email (to Denise Frappier at denise.frappier@des.nh.gov and to Craig Rennie at: craig.rennie@des.nh.gov).
13. Prior to beginning construction, the contractor's name, address, and phone number shall be submitted to DES via email (see above).

WETLANDS BUREAU 7/26/10 PROGRESS REPORT

ADDITIONAL DATA REQUIREMENTS:

In order for DES to render a decision on your application, the information requested below must be addressed in full. DES will make a final determination based upon the information provided in your response.

1. Review of the plans found that the access road near Station (Sta) 152+00 (Sheet C-3.7) comes within 18 feet of an outside meander of Clark Brook. DES is concerned with the long-term stability of having the road in this location, as well as the potential negative impacts to native populations of Eastern brook trout from road sedimentation. In addition, there is a fairly sizable wetland impact (Wetland WA-1) between road Sta 2+00 and 3+00 that appears could be avoided if the road curve is placed further away from Clark Brook. Please consider these design changes to further minimize short-term and long-term wetland and surface water related impacts.
2. Review of Plan Sheet C-4.1 shows what appears to be an intermittent drainage near road Sta 11+50 that is not labeled and accounted for as a stream impact area. Similar concerns were also noted on Sheet C-7.1 at Sta 15+00, Sheet C-7.2 at Sta 41+25 and Sta 36+75, Sheet C-7.3 at Sta 11+00, Sheet C-7.5 at Sta 69+50, Sheet C-8.1 at Sta 18+25, and Sheet C-8.2 at Sta 32+00. Please review the plans and make appropriate revisions as necessary.
3. On Sheet C-4.3, it appears that the road alignment could be modified to further avoid three (3) wetland areas (Wetland EA22 at Sta 36+00, EA24 at 39+50, and EA25 at 42+75) that account for 8,750 square feet of combined impact. In addition, the impact area at Sta 39+50 does not show a road culvert to maintain the hydrological connection. Please consider revising the plans in this location to better meet program requirements.
4. Wetland impact areas could be further avoided if retaining walls are utilized where roadside fill slopes impact wetland resources. Please review the fill slopes along the road alignments and consider retaining walls where applicable.
5. Review of Plan Sheet C-8.4 found an area of road grading and check dams that appear to impact wetlands along Old Coach Road from Sta 55+00 to 57+00. Please review and revise as necessary.
6. It appears that the road alignment on Sheet C-9.1 could be modified to cross Wetland Area NWR8 (Sta 72+50) in a more perpendicular fashion to further reduce the proposed 5,500 square feet of impact. Please revise the plans accordingly.
7. Please address the following concerns that were raised by EPA during the Programmatic General Permit (PGP) review of the file:
 - a) Mitigation package too small
 - b) In-lieu fee payment should be added
 - c) Missing indirect impacts
 - d) Consider vernal pool creation
 - e) Site visit needed
8. Please provide DES with any additional communications with the NH Division of Historical Resources (DHR) to ensure that all requested archeological surveys have been or are proposed to be completed (i.e. Phase IB).

DRAFT PERMIT CONDITIONS:

PROJECT DESCRIPTION:

Dredge and fill 1.63 acres (71,240 square feet) of wetlands and streams (impacting 4,302 linear feet) and temporarily impact .33 acres (14,130 square feet) of wetlands and 320 square feet within a stream, to construct a power generating wind park that will include the construction of 24 wind turbines (2.0 megawatts each), approximately 12 miles of gravel access drives, a 4,000 square foot operations/maintenance building, stockpile and lay down pad areas, and associated transmission lines. Mitigate impacts by collaborating with the Society for the Protection of New Hampshire Forests (SPNHF) to preserve up to 6,578 acres of private woodlands by providing property survey maps, title research, environmental baseline data, and by providing a financial contribution equal to the value of 40 acres of land. In addition, all existing stream crossings along Groton Hollow Rd will be upgraded to meet the new DES Stream Rules.

PROJECT SPECIFIC CONDITIONS (DRAFT):

1. All work shall be in accordance with plans by Vanasse Hangen Brustlin, Inc. dated February 12, 2010, as received by the NH Department of Environmental Services (DES) on March 29, 2010.
2. Prior to construction, any plan revisions or changes in construction details or sequences shall be submitted to DES for review and approval.
3. Any further alteration of areas on this property that are within the jurisdiction of the DES Wetlands Bureau will require a new application and further permitting by the Bureau.
4. This permit is contingent on approval by the DES Alteration of Terrain Bureau.
5. No construction activities shall occur on the project after expiration of the approval unless the approval has been extended by the New Hampshire Energy Facility Site Evaluation Committee (SEC).
6. This permit is contingent on coordinating additional on-site inspections of the property with the NH Natural Heritage Bureau to assess and mitigate potential impacts on exemplary natural communities within the project area.
7. Appropriate siltation/erosion/turbidity controls shall be in place prior to construction, shall be maintained during construction, and remain in place until the area is stabilized. Silt fence(s) must be removed once the area is stabilized.
8. Discharge from dewatering of work areas shall be to sediment basins that are: a) located in uplands; b) lined with hay bales or other acceptable sediment trapping liners; c) set back as far as possible from wetlands and surface waters, in all cases with a minimum of 20 feet of undisturbed vegetated buffer.
9. Dredged material shall be placed outside of the jurisdiction of the DES Wetlands Bureau.
10. Stream work shall be done during low flow conditions.
11. Culvert outlets shall be protected in accordance with the DES Best Management Practices for Urban Stormwater Runoff Manual (January 1996) and the Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire (August 1992).
12. Proper headwalls shall be constructed within seven days of culvert installation.
13. Within three days of final grading, all exposed soil areas shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tack or netting and pinning on slopes steeper than 3:1.

14. Where construction activities have been temporarily suspended within the growing season, all exposed soil areas shall be stabilized within 14 days by seeding and mulching.
15. Where construction activities have been temporarily suspended outside the growing season, all exposed areas shall be stabilized within 14 days by mulching and tack. Slopes steeper than 3:1 shall be stabilized by matting and pinning.
16. The contractor responsible for completion of the work shall utilize techniques described in the New Hampshire Stormwater Manual, Volume 3, Erosion and Sediment Controls During Construction (December 2008).
17. All activities shall be in accordance with the Comprehensive Shoreland Protection Act, RSA 483-B. The owner is responsible for obtaining any Shoreland Permit that may be required per RSA 483-B, for construction, excavation or fill that will occur within the Protected Shoreland.

Restoration Conditions:

18. This permit is contingent upon the restoration of 14,450 square feet of wetlands and streams that are being temporarily impacted in accordance with the plans received by DES on March 29, 2010.
19. Wetland and stream restoration areas shall be properly constructed, landscaped, monitored and remedial actions taken that may be necessary to create functioning wetland areas similar to those destroyed by the project. Remedial measures may include replanting, relocating plantings, removal of invasive species, changing soil composition and depth, changing the elevation of the wetland surface, and changing the hydrologic regime.
20. The permittee shall designate a qualified professional who will be responsible for monitoring and ensuring that the restoration areas are completed in accordance with the plans. Monitoring shall be accomplished in a timely fashion and remedial measures taken if necessary. The Wetlands Bureau shall be notified in writing of the designated professional prior to the start of work and if there is a change of status during the project.
21. The permittee or a designee shall conduct a follow-up inspection after the first growing season, to review the success of the restoration areas and schedule remedial actions if necessary. A report outlining these follow-up measures and a schedule for completing the remedial work shall be submitted by December 1 of that year. Similar inspections, reports and remedial actions shall be undertaken in at least the second and third years following the completion of each mitigation site.
22. Wetland restoration areas shall have at least 75% successful establishment of wetlands vegetation after two (2) growing seasons, or shall be replanted and re-established until a functional wetland is replicated in a manner satisfactory to the DES Wetlands Bureau.
23. The permittee shall attempt to control invasive, weedy species such as purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*) by measures agreed upon by the Wetlands Bureau if the species is found in the restoration areas during construction and during the early stages of vegetative establishment.
24. A post-construction report documenting the status of the completed project with photographs shall be submitted to the Wetlands Bureau within 60 days of the completion of construction.

Preservation Conditions:

25. This permit is contingent upon collaborating with the Society for the Protection of New Hampshire Forests (SPNHF) to preserve up to 6,578 acres of private woodlands by providing property survey maps, title research, environmental baseline data, and by

providing a financial contribution equal to the value of 40 acres of land, as depicted on plans received by DES on March 29, 2010.

26. The conservation easements to be placed on the preservation areas shall be written to run with the land, and both existing and future property owners shall be subject to this easement.
27. The plan noting the conservation easement with a copy of the final easement language shall be recorded with the Registry of Deeds Office for each appropriate lot. A copy of the recording from the County Registry of Deeds Office shall be submitted to the DES Wetlands Bureau prior to the start of construction.
28. The applicant shall prepare a report summarizing existing conditions within the conservation area. Said report shall contain photographic documentation of the easement area, and shall be submitted to the DES and the grantee prior to construction to serve as a baseline for future monitoring of the easement area.
29. The conservation easement area shall be surveyed by a licensed surveyor, and marked by monuments prior to construction.
30. There shall be no removal of the existing vegetative undergrowth within the easement area and the placement of fill, construction of structures, and storage of vehicles or hazardous materials is prohibited.

Date: 7/21/10

RE: Draft Conditions for 401 Water Quality Certification
Groton Wind, LLC
Proposed 48-MW Wind Farm
Groton, NH

The following status report regarding 401 Water Quality Certification (WQC) for the (Groton Wind, LLC proposed 48-MW Wind Farm in Groton, NH is submitted by the DES Watershed Management Bureau in accordance with RSA 162-H:6-a, V which states

“All participating state agencies shall report their progress to the subcommittee within 90 days of the acceptance of the application, outlining draft permit conditions and specifying additional data requirements necessary to make a final decision”.

Background

As specified in Section 401 of the Clean Water Act (CWA) and in RSA 485-A:12, III, any applicant for a Federal license or permit to conduct an activity including but not limited to, the construction or operation of facilities which may result in a discharge to navigable waters, shall provide the licensing or permitting agency a certification from the State that the discharge will comply with State water quality standards. Section 401 of the CWA also requires States to “establish procedures for public notice in the case of all applications”. Public notice procedures in New Hampshire include issuance of a draft 401 WQC for a 30 day public comment period.

401 WQC is required for this project because it requires a federal Section 404 permit from the U.S. Army Corps of Engineers (ACOE) for proposed work in wetlands. There are two types of Section 404 permits; an individual 404 permit and a general 404 permit (called the Programmatic General Permit or PGP in New Hampshire). Projects which require an individual 404 permit must submit an application for and receive a 401 WQC from DES. The PGP is issued every 5 years at which time a general 401 WQC is issued (i.e., the PGP 401 WQC). Projects that fall under the PGP are covered by the PGP 401 WQC unless DES decides additional conditions are necessary to ensure attainment of water quality standards. In such cases, DES may modify the PGP 401 WQC for that particular project, or include applicable conditions in the DES Alteration of Terrain permit (if applicable).

The ACOE has not yet decided if this project will require an individual or general (PGP) 404 permit. In accordance with RSA 162-H:6-a, VI, DES must issue a final decision to the subcommittee on all DES permits, including 401 WQC, by October 23, 2010 (180 days from April 26, 2010). In the event this project requires an individual section 404 permit and, in order to meet the October deadline, the DES Watershed Management Bureau is proceeding with preparing a draft 401 WQC for public comment in August. This will allow sufficient time for DES to solicit public comment, respond to comments and issue a final 401 WQC before the October deadline. If, prior to issuance of the draft for public comment, the ACOE decides this project is covered by the PGP, DES may instead include applicable conditions in the AoT permit and not issue a modified 401 WQC. If, however, the ACOE decides this is a PGP after the 401 WQC is issued for public comment, DES will likely proceed with issuance of a modified version of the PGP 401 WQC.

Additional data requirements needed to make a final 401 WQC decision

- o Application for 401 WQC
- o Specifics on a few stormwater best management practices such as where rubber diverters in roads are proposed.
- o A list with the locations of the culverts proposed for the Activity for which the DES Stream Crossing Rules (Env-Wt 900) will be followed. If there are any proposed culverts for which Env-Wt 900 will not be followed, please provide an explanation why it is not feasible to follow the Stream Crossing Rules in these locations.

Draft 401 WQC Conditions

Based on the information provided to date, draft 401 WQC conditions are provided below. These conditions may change and/or new conditions added as DES continues its review. As previously mentioned, if the ACOE decides that this project is a PGP prior to issuing the draft 401 WQC for public comment in August, DES will likely include applicable conditions in the Alteration of Terrain permit instead of issuing a modified 401 WQC.

DRAFT WATER QUALITY CERTIFICATION CONDITIONS

- E-1. The Activity shall not cause or contribute to a violation of surface water quality standards. If DES determines that surface water quality standards are being violated as a result of the Activity, DES may modify this 401 Certification to include additional conditions to ensure the Activity complies with surface water quality standards, when authorized by law, and after notice and opportunity for hearing.
- E-2. The Applicant shall allow DES to inspect the Activity and its effects on affected surface waters at any time to monitor compliance with the conditions of this 401 Certification.
- E-3. The Activity for this 401 Certification is based on plans and information submitted to DES in March 2010 in support of 401 Certification, Alteration of Terrain and Wetlands Dredge and Fill permits, as well as subsequent documentation submitted in response to DES requests for additional informational. The Applicant shall consult with DES regarding any proposed modifications to the Activity, including construction or operation, to determine whether this 401 Certification requires modification in the future.
- E-4. The Applicant shall comply with the conditions of the DES Wetlands Bureau Permit issued for the Activity by the DES Wetlands Bureau, including any amendments. The conditions shall become conditions of this 401 Certification upon issuance of this 401 Certification. This 401 Certification approval is contingent upon issuance of the DES Wetlands Bureau permit.
- E-5. The Applicant shall comply with the conditions of the DES Alteration of Terrain Program Permit issued for the Activity by the DES Terrain Alteration Bureau, including any amendments. The conditions shall become conditions of this 401 Certification upon issuance of this 401 Certification. This 401 Certification approval is contingent upon issuance of the DES Alteration of Terrain Program permit.

- E-6. Unless otherwise authorized by DES, the Applicant shall keep a sufficient quantity of erosion control supplies on the site at all times during construction to facilitate an expeditious (i.e., within 24 hour) response to any construction related erosion issues on the site.
- E-7. The Applicant shall develop and submit a Construction BMP Inspection and Maintenance Plan to DES for approval at least 90 days prior to construction. Unless otherwise authorized by DES, the plan shall incorporate all elements described in Appendix A (items A through I). The Applicant shall then implement the approved plan.
- E-8. The Applicant shall prepare a turbidity sampling plan to confirm that measures to control erosion during construction are not causing or contributing to surface water quality violations. Unless otherwise authorized by DES, the turbidity sampling plan shall include the turbidity monitoring elements specified in the February 2, 2009 DES Inter-Department Communication entitled "Amendment of the November 16, 2006 Guidance for BMP Inspection and Maintenance and Turbidity Sampling and Analysis Plans for I-93 Expansion Project Water Quality Certification" which includes guidance regarding sampling station number and locations, sampling frequency, sampling duration, size of storms that need to be sampled, how soon after the start of precipitation sampling should begin, quality assurance quality control provisions, and turbidity meter specifications. The plan shall be submitted to DES for approval at least 90 days prior to construction. The Applicant shall then implement the approved plan. Unless otherwise authorized by DES, the turbidity sampling results along with station ID, date, time, other field notes, and a description of corrective actions taken when violations of state surface water quality criteria for turbidity are found, shall be submitted to DES via electronic mail within 48 hours of collection.
- E-9. Unless otherwise authorized by DES, the Applicant shall develop and submit a monitoring plan to DES for approval at least 90 days prior to construction. The purpose of the plan is to confirm that operation of the Activity is not causing or contributing to violations of state surface water quality standards. The plan shall include the parameters to be sampled, the location, timing and frequency of sampling, sampling and laboratory protocols, quality assurance / quality control provisions as well as when data will be submitted to DES. The applicant shall consult with DES and submit the monitoring data in a format that can be automatically uploaded into the DES Environmental Database. Once approved by DES, the Applicant shall implement the sampling plan.
- E-10. In order to ensure the long-term effectiveness of approved permanent stormwater practices, the Applicant shall develop an Inspection and Maintenance (I & M) plan approved by DES. Unless otherwise authorized by DES, the I & M plan shall comply with the requirements of the Alteration of Terrain regulations (Env-Wq 1500), section Env-Wq 1507.08 Long Term Maintenance. Prior to construction, the Applicant shall submit the I & M plan to DES for approval and then implement the approved plan.
- E-11. The Applicant shall prepare and submit a Spill Prevention, Control, and Countermeasures plan (SPCC) for the Activity in accordance with federal regulations (40 CFR part 112). The plan shall include a certification by a Professional Engineer licensed in the State of New Hampshire. The Applicant shall submit the plan to DES Watershed Management Bureau for review and approval at least 90 days prior to the installation of the first turbine. The SPCC Plan shall include, but not be limited to, operating procedures to prevent oil spills, control measures installed to prevent oil from entering surface waters,

countermeasures to contain, clean up and mitigate the effects of an oil spill, and facility inspections. The Applicant shall then implement the approved plan and maintain records demonstrating compliance with the plan. Such records shall be made available to DES within 30 days of receiving a written request by DES.

- E-12. The Applicant shall submit a plan to prevent water quality violations due to discharges of concrete wash water during construction. The Applicant shall submit the plan to DES Watershed Management Bureau for review and approval at least 90 days prior to placement of any concrete within the Activity area. The Applicant shall then implement the approved plan.
- E-13. As proposed by the Applicant, unless otherwise authorized by DES, herbicides and pesticides shall not be used on the site for the construction or operation of the Activity.
- E-14. Unless otherwise authorized by DES, fertilizers shall only be applied once on soils disturbed during construction to support the initial establishment of vegetation. Prior to fertilizer application, soils shall be tested to determine the minimum amounts of lime, nitrogen (N), phosphorus (P) and potassium (K) needed to support vegetation. Lime application rates, fertilizer selection (in terms of N, P and K content) and fertilizer application rates shall be consistent with the soil test results. Fertilizers shall not contain any pesticides. Where possible, fertilizer with slow release nitrogen shall be used. Soil test results, the name, brand and nutrient content (N, P and K) of fertilizer and application rates for lime and fertilizer shall be provided to DES within 30 days of receiving a request from DES. As proposed by the Applicant, unless otherwise authorized by DES, no fertilizers shall be used for the Activity following construction.
- E-15. As proposed by the Applicant, unless otherwise authorized by DES, no de-icing agents (including use of sands containing chloride) shall be used on the Activity either during construction or once the Activity is in operation.
- E-16. Unless otherwise authorized by DES, the Applicant shall limit forest clearing within a 50-foot buffer of Clark Brook to 0.2 acres (<1% change from pre-Activity conditions) and within a 50-foot buffer of all perennial streams to 3.6 acres (5% change from pre-Activity conditions).
- E-17. The terms and conditions of this 401 Certification may be modified and additional terms and conditions added as necessary to ensure compliance with New Hampshire surface water quality standards, when authorized by law, and after notice and opportunity for hearing.

Appendix A: Details of construction BMP inspection, reporting requirements, and turbidity monitoring

In light of the sensitive resources within the project area and scale of the proposed Activity, the following additional construction BMP inspection and reporting requirements and turbidity monitoring are considered necessary to prevent construction related surface water quality violations.

- A. Weekly Erosion Control Meeting: The Applicant's prime Contractor for the Activity (prime Contractor) shall hold weekly erosion control meetings with the Monitor. Minutes of the meeting shall be kept on file and made available to DES upon request.
- B. Inspection Frequency
 1. Daily Inspections: The prime Contractor shall inspect all erosion control measures every day that work is conducted from the time construction commences and earth is disturbed until construction is complete.
 2. Weekly Inspections: After construction has commenced and earth has been disturbed, the Monitor shall conduct weekly erosion control site inspections to verify all erosion control measures are maintained properly to protect surface waters and wetlands. The Monitor shall document and report its findings, including recommendations for maintenance of BMPs or the addition of new control measures to the prime Contractor.
 3. Pre-storm inspections: The Monitor shall print the 5-day forecast once daily (7-9 am) for the duration of the project. All forecasts shall be clearly marked with the date and time, kept on file, provided to the prime Contractor. In addition, the 5-day forecast on the day of the weekly meeting shall be attached to the weekly meeting minutes distributed by the Monitor. Inspection shall occur within 24 hours prior to the start of any rain event of 0.5 inches or more in a 24-hour period that is predicted to occur during the workweek. A normal workweek is Monday through Friday. Holidays and weekends are included as part of the normal workweek when work is anticipated to occur on those days. If the predicted event occurs outside of the normal workweek, the inspection shall occur on the normal workday just before any scheduled days off, such as holidays and weekends. Unless otherwise approved by DES, the Accuweather website (<http://home.accuweather.com/index.asp?partner=accuweather>) shall be used for the purpose of predicting future precipitation amounts. Future precipitation amounts on the Accuweather web site may be determined by typing in the location of the project (city, state and/or zip code), clicking on the link for Days 1-5 forecasts and then clicking on the day(s) of interest.
- C. Emergency Inspections During Storm Events: Inspections shall occur during the daylight hours (Monday through Sunday, including holidays) during storm events whenever plumes are visible or if turbidity sampling indicates water quality standards are exceeded due to turbid stormwater from the construction site. Inspections and corrective action shall be implemented during the daylight hours (Monday through Sunday, including holidays) until turbidity water quality standards are met.

- D. Post Storm Inspections: Inspections shall occur on the first workday following storms of greater than 0.5 inches in a 24-hour period. Precipitation amounts shall be based on precipitation recorded at a rain gauge installed at the construction site or other approved method. Inspections and corrective action shall be implemented during the daylight hours (Monday through Sunday, including holidays) until turbidity water quality standards are met.
- E. Winter Shutdown Inspections: Inspections during winter shut down shall occur as specified in the NPDES General Permit for Stormwater Discharges from Construction Activities (commonly known as the Construction General Permit)
- F. Provisions for Handling Emergencies: Contact information shall be provided to DES for at least two people that DES can contact at any time regarding construction related stormwater concerns. The Applicant shall prepare an Emergency Procedures Plan describing procedures to address and correct emergency, construction related stormwater issues in an expeditious manner. The plan shall include the responsibilities of key individuals, the availability of equipment, and the availability of erosion control and BMP supplies. All emergency erosion control and BMP supplies must be kept on-site.
- G. Inspection and Maintenance Plans and Reports: Written inspection and maintenance reports shall include the items stipulated in the EPA NPDES General Permit for Stormwater Discharges from Construction Activities, as well as the predicted 24-hour rainfall for pre-storm inspection reports, measured rainfall amounts for post-inspection reports. The reports shall also indicate if erosion control measures "pass" or "fail". Unless otherwise authorized by DES, the reports shall be submitted to DES by electronic mail (email) within 24 hours of each inspection.
- H. Weather Station Specifications: Unless otherwise authorized by DES, the Applicant shall be responsible for maintaining a weather station that can measure rainfall to an accuracy of 0.01 inches, monitor temperature to an accuracy of 1 degree Fahrenheit or Celsius, and has hourly data storage and download capabilities.
- I. Precipitation Notification Plan: The Applicant shall specify how the Monitor, and others, will be notified when precipitation has occurred that will trigger the need for inspections and/or turbidity sampling. Automatic notification is preferred. If considered necessary and feasible by DES, the weather station shall be equipped to send automatic email notifications to notify the Monitor when construction BMP inspections and/or turbidity sampling is necessary. Should automated email notification be considered necessary, it shall be capable of the following: Start of rain event: Once 0.25 inches of rain or rain-mix precipitation has been measured an automated email notification will be sent to the prime Contractor, the Monitor, and any other interested parties. The email shall provide hourly rainfall, and time of rainfall for the previous 24 hours. End of rain event: Once six hours without rain or rain-mix precipitation has passed an automated email notification will be sent to the prime Contractor, the Monitor and DES. The email shall provide hourly rainfall and time of rainfall from the start of the rain event to the end of the rain event, including the six hour "dry" period.
- J. Turbidity Monitoring: To confirm that construction best management practices (BMPs) for controlling erosion are performing as intended, turbidity monitoring is needed. Unless otherwise authorized by DES, the Applicant shall submit a Turbidity Sampling Plan that includes the turbidity monitoring elements specified in the February 2, 2009

DES Inter-Department Communication entitled "Amendment of the November 16, 2006 Guidance for BMP Inspection and Maintenance and Turbidity Sampling and Analysis Plans for I-93 Expansion Project Water Quality Certification". This document includes guidance regarding sampling station number and locations, sampling frequency, sampling duration, size of storms that need to be sampled, how soon after the start of precipitation sampling should begin, quality assurance quality control provisions, and turbidity meter specifications.

The above construction inspection/maintenance, turbidity monitoring and reporting requirements, combined with a requirement that a sufficient quantity of erosion control supplies shall be kept on site to expeditiously respond to erosion control issues, should be sufficient to ensure and confirm that proposed erosion control measures during construction are not causing or contributing to surface water quality violations.

Similar inspection, maintenance and monitoring can be required to ensure that permanent erosion control measures continue to function properly after construction.